Appendix TR-1

Transportation Impact Report

Transportation Impact Report
Jackson Township Specific Plan

prepared for:
Sacramento County
Community Development PERD

Prepared by
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1. INTRODUCTION

1.1 STUDY DEFINITION

This transportation analysis discusses existing and cumulative transportation and circulation conditions associated with the implementation of the Jackson Township Specific Plan development. In addition, the report discusses the combined effects of implementing the following four developments (FOUR PROJECTS):

- West Jackson Highway Master Plan (West Jackson)
- Jackson Township Specific Plan (Jackson Township)
- NewBridge Specific Plan (NewBridge)
- Mather South Specific Plan Amendment (Mather South)

The FOUR PROJECTS are located adjacent to each other in the Jackson Road corridor. Because of this proximity and the concurrent entitlement process, the transportation analysis addresses the combined effects of the FOUR PROJECTS on existing and cumulative transportation and circulation conditions.

Figure 1.1 illustrates the location of the Jackson Township project. The Jackson Township project is located in unincorporated Sacramento County, generally east of the City of Sacramento and south of the City of Rancho Cordova and Mather Airport. It is bounded on the south by Jackson Road (SR 16) and on the west by Excelsior Road. The north boundary is near the future Kiefer Boulevard, while the east boundary is west of Eagles Nest Road.

For more details of the West Jackson, NewBridge, and Mather South projects, please refer to Section 4.1.

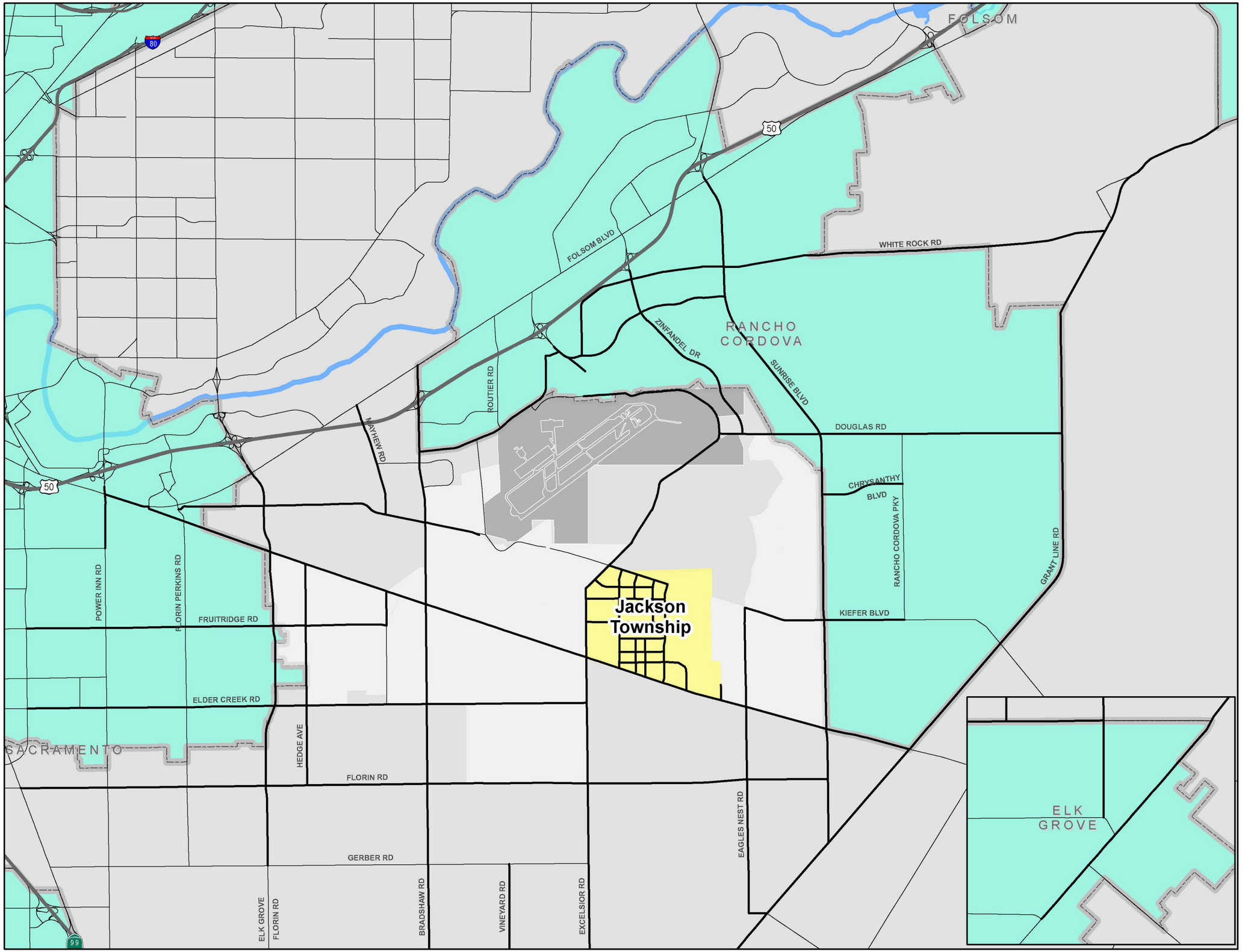
Other development projects in the vicinity are included in the California Environmental Quality Act (CEQA) cumulative analysis scenarios and are discussed in Section 6.1.1.

The transportation analysis documented in this report includes consideration of vehicular traffic impacts on roadway and intersection capacity and safety, transit impacts, and bicycle and pedestrian facility impacts. Quantitative transportation analyses have been conducted for the following scenarios, summarized in **Table 1.1**:

- Existing (without FOUR PROJECTS)
- Existing Plus Jackson Township Project
- Existing Plus FOUR PROJECTS (West Jackson, Jackson Township, NewBridge, and Mather South developments)
- MTP Cumulative (without FOUR PROJECTS)
- MTP Cumulative Plus FOUR PROJECTS
- CEQA Cumulative (without FOUR PROJECTS)
- CEQA Cumulative Plus FOUR PROJECTS
- CEQA Cumulative Plus Jackson Township Project

The scenarios followed by the notation “(without FOUR PROJECTS)” contain no development, beyond existing levels, within the boundaries of the West Jackson, Jackson Township, NewBridge, and Mather South projects.

FIGURE 1.1
JACKSON TOWNSHIP PROJECT
PROJECT LOCATION



Legend

- JT Study Roadway Segments
- Freeways
- Other Major Roadways

Name

- Jackson Township Project
- Cities
- Mather Airport

DKS

Table 1.1: Analysis Scenarios			
Scenario	**Land Use**	**Base Transportation Network**	**Project Improvements**
Existing	Existing	Existing	None
Existing Plus Jackson Township	Existing Plus Jackson Township	Existing	Jackson Township Project
Existing Plus FOUR PROJECTS	Existing Plus West Jackson, Jackson Township, New Bridge, and Mather South	Existing	West Jackson Project Jackson Township Project NewBridge Project Mather South Project
MTP Cumulative	2035 Development Levels without FOUR PROJECTS	Year 2035 (Based on 2012 MTP)	None
MTP Cumulative Plus FOUR PROJECTS	2035 Development Levels plus West Jackson, Jackson Township, New Bridge, and Mather South	Year 2035 (Based on 2012 MTP)	West Jackson Project Jackson Township Project NewBridge Project Mather South Project
CEQA Cumulative	2035 Development Levels (SACOG Projections), Build Out of Additional Readily Foreseeable Projects in Study Area, without FOUR PROJECTS	Year 2035 (Based on 2012 MTP) Plus Improvements Fully Funded by Additional Readily Foreseeable Projects in Study Area	None
CEQA Cumulative Plus FOUR PROJECTS	2035 Development Levels (SACOG Projections), Build Out of Additional Readily Foreseeable Projects in Study Area, plus West Jackson, Jackson Township, New Bridge, and Mather South	Year 2035 (Based on 2012 MTP) Plus Improvements Fully Funded by Additional Readily Foreseeable Projects in Study Area	West Jackson Project Jackson Township Project NewBridge Project Mather South Project
CEQA Cumulative Plus Jackson Township Project	Estimation of Jackson Township Project Impacts based upon CEQA Cumulative Plus FOUR PROJECTS scenario		
Source: *DKS Associates, 2018.*			

1.2 STUDY AREA

For transportation analysis purposes, a set of existing, proposed, and future intersections, roadway segments, and freeway facilities were selected based upon the anticipated volume of additional traffic, the distributional patterns of traffic, and known locations of operational difficulty. The Sacramento County Department of Transportation, Caltrans, City of Sacramento, City of Rancho Cordova, City of Elk Grove, City of Folsom, and Capital Southeast Corridor Joint Powers Authority were consulted. **Figures 1.2 through 1.4** illustrate the study area, which was agreed to by all of the above jurisdictions and agencies.

1.3 ANALYSIS METHODOLOGY

1.3.1 Forecasting

In this transportation analysis, the forecasting of travel patterns and volumes for each of the scenarios was developed through utilization of the Sacramento Area Council of Governments' (SACOG's) SACSIM travel model. SACSIM is an "activity-based" model that tracks the travel of individuals throughout the day in trip "tours", and allocates household and employment to the parcel level. This allows the model to capture smaller-scale land use changes and differences. SACSIM is sensitive to the local physical environment, including the presence (or absence) of pedestrian and bicycle facilities, the patterns of local street networks (e.g., grid vs. cul-de-sacs), and the density, proximity and mix of surrounding land uses (i.e. employment destinations, schools, retail, parks, etc.). SACSIM forecasts automobile, transit, bicycle, and walk trips. SACSIM requires a detailed definition of household population/demographics and employment by type at a parcel-level of geography. During the analysis, SACOG staff assisted in developing household population and demographics within the study area, and was consulted to ensure consistency with the latest and most appropriate modeling procedures and databases.

1.3.2 Operations Analysis

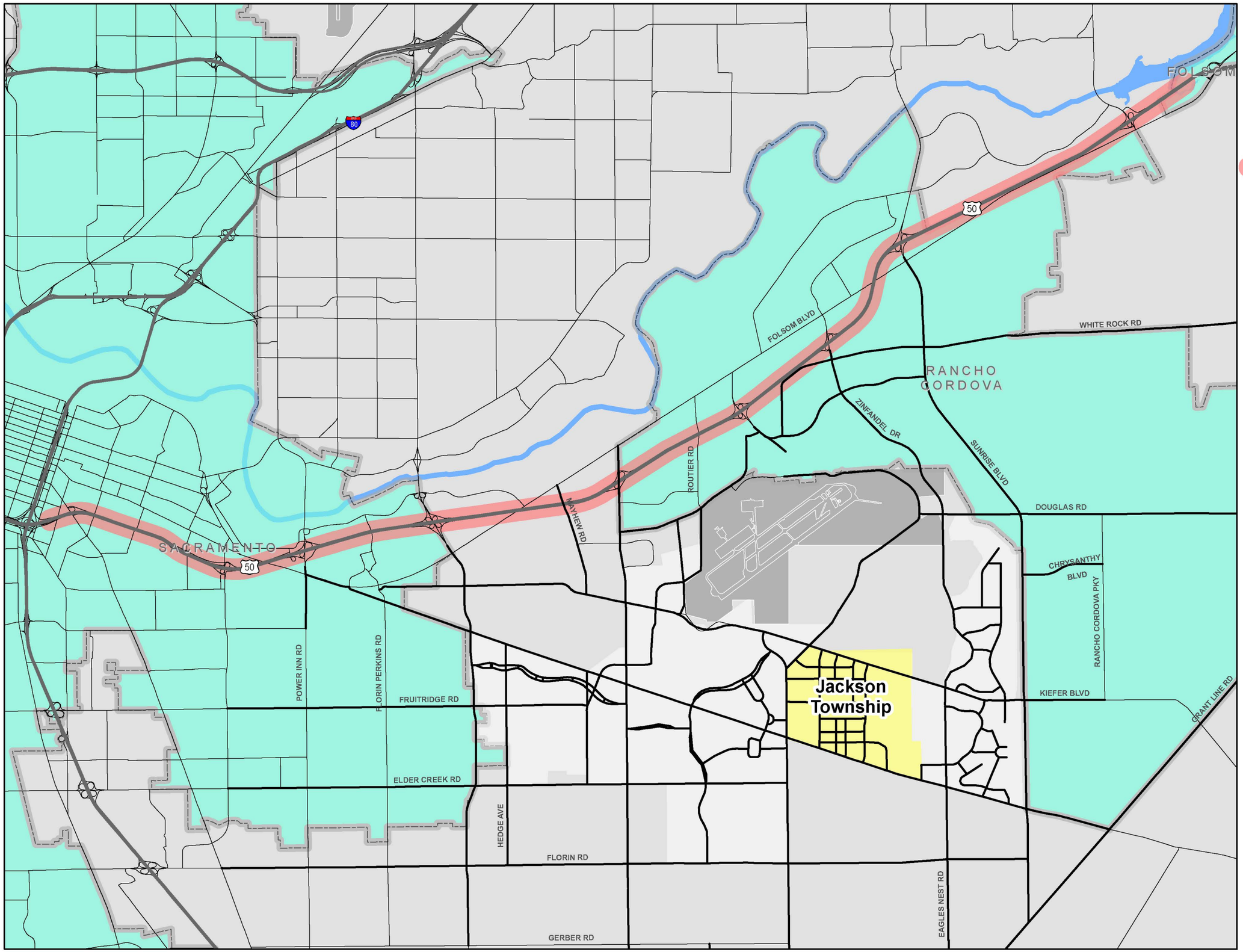
Field reconnaissance was undertaken to ascertain the traffic control and capacity characteristics of each of the study area intersections, roadway segments, and freeway elements. Combined with known or projected traffic volumes, these characteristics enable the calculation of performance measures. Levels of service are a quantitative stratification of performance measures that represent quality of service. There are six levels of service, ranging from A to F. LOS A represents the best operating conditions from the traveler's perspective and LOS F the worst. The specific performance measures that define LOS vary by type of transportation facility, and are discussed in the following sections.

FIGURE 1.2
STUDY AREA MAP
ROADWAY SEGMENTS

Legend

- Study Roadway Segments
- Other Project Roadways
- Freeways
- Other Major Roadways
- Jackson Township Project
- Cities
- Mather Airport

FIGURE 1.3
FREEWAY STUDY AREA



Legend

- Freeway Study Area
- Study Roadway Segments
- Freeways
- Other Major Roadways

Name

- Jackson Township Project
- Cities
- Mather Airport

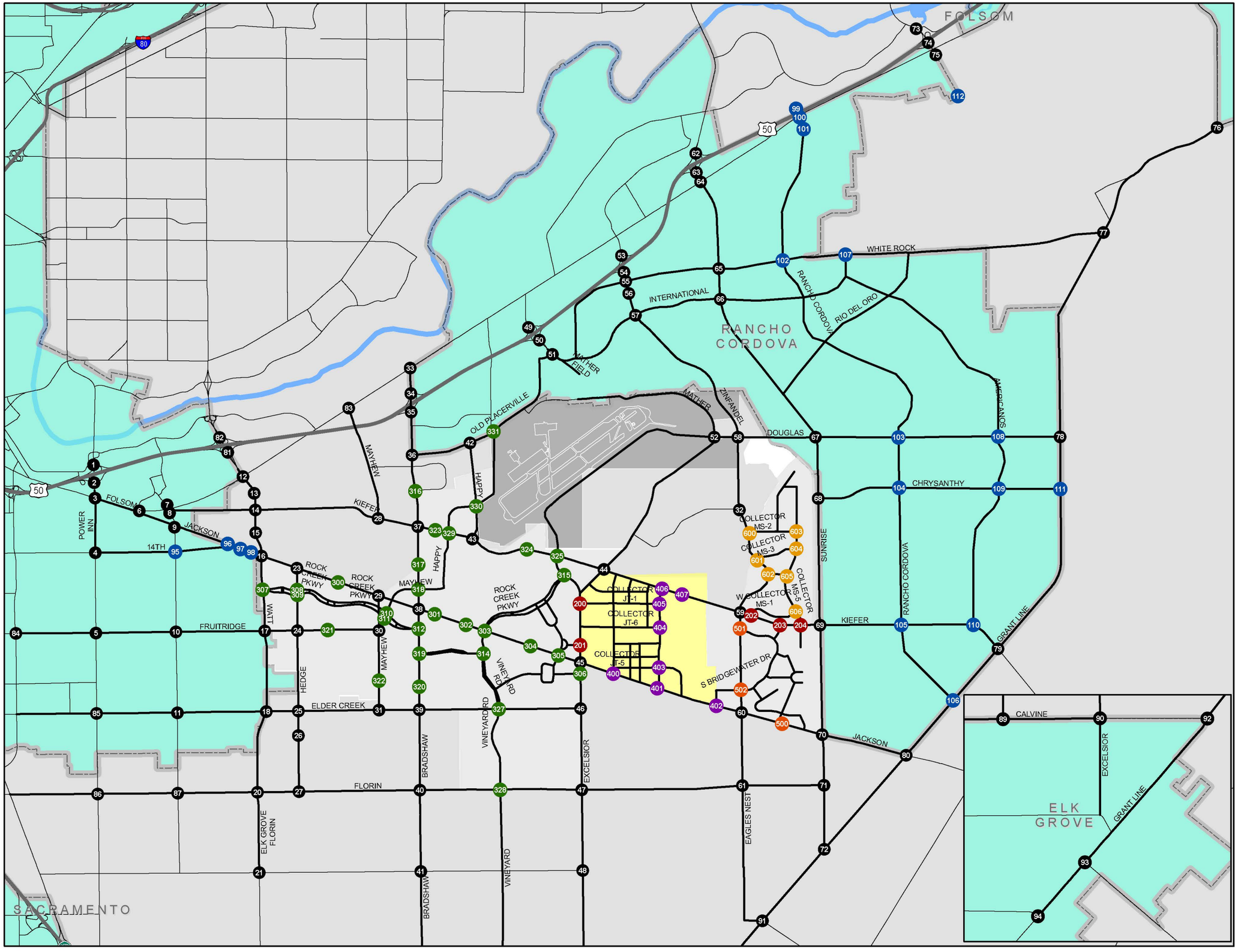


FIGURE 1.4
STUDY AREA MAP
INTERSECTIONS

Legend

- Existing
- Future Outside Project Boundaries
- Shared Between Two Projects
- West Jackson
- Jackson Township
- NewBridge
- Mather South
- Study Roadways
- Freeways
- Other Major Roadways
- Jackson Township Project
- Cities
- Mather Airport

DKS

1.3.2.1 Roadway Segment Analysis

Level of service analyses were conducted for roadway segments in the study area based upon daily traffic volumes, number of traffic lanes between intersections, and roadway characteristics. In this methodology, study area roadways are stratified into "capacity class" categories for level of service determination, as shown in **Tables 1.2, 1.3 and 1.4**, for Sacramento County and the City of Sacramento, respectively. The Sacramento County criteria were also utilized for segments in the City of Rancho Cordova and City of Elk Grove, as these jurisdictions utilize the same roadway segment level of service criteria.

The capacity class categories are based upon the nature of traffic flow along the facility, including number of interruptions due to intersection control and "side-friction" due to driveways and local streets. For each capacity class, relationships were developed between daily traffic volumes and roadway level of service.

Tables 1.2 and 1.3 summarize the maximum daily traffic volumes associated with each level of service designation and capacity class combination. Although the segment-based level of service calculations are based upon daily traffic volumes, the resultant levels of service are representative of peak hour conditions. While a roadway segment's daily capacity could theoretically be very high if traffic were spread evenly throughout the 24-hour period, this is clearly not a realistic condition. The daily roadway segment capacity methodology takes into account typical peak hour volume profiles, as well as the effects of signalized intersections in reducing the roadway's carrying capacity. With good signal timing, spacing, and additional intersection capacity improvements (e.g. additional turn lanes, overlap phasing), a segment would be able to carry more vehicles than one having less-than-ideal intersection conditions.

1.3.2.2 Intersection Analysis

For signalized and unsignalized intersections, operational analyses were conducted using a methodology outlined in the Transportation Research Board's *Highway Capacity Manual, 2000* (HCM 2000) and *Highway Capacity Manual, 2010* (HCM 2010). The HCM 2010 methodology was used in all locations except where signalized intersection characteristics deemed the methodology inappropriate. These locations include intersections with unconventional signal phasing, and locations adjacent to light rail tracks where additional delay occurs due to light rail operations. In the selected locations, the HCM 2000 methodology was employed.

The methodology utilized is known as an "operational analysis". This procedure calculates an average control delay per vehicle for each movement at an intersection, and assigns a level of service designation based upon the average delay per vehicle. **Table 1.5** presents the level of service criteria for signalized and unsignalized intersections based on the HCM methodology.

Table 1.2: Daily Volume Threshold For Roadway Segments (Sacramento County)						
Roadway Capacity Class	**Number of Lanes**	**Daily Volume Threshold (Level of Service)**				
		LOS A	**LOS B**	**LOS C**	**LOS D**	**LOS E**
Residential	2	600	1,200	2,000	3,000	4,500
Residential Collector with Frontage	2	1,600	3,200	4,800	6,400	8,000
Residential Collector without Frontage	2	6,000	7,000	8,000	9,000	10,000
Arterial, Low Access Control	2	9,000	10,500	12,000	13,500	15,000
	4	18,000	21,000	24,000	27,000	30,000
	6	27,000	31,500	36,000	40,500	45,000
Arterial, Moderate Access Control	2	10,800	12,600	14,400	16,200	18,000
	4	21,600	25,200	28,800	32,400	36,000
	6	32,400	37,800	43,200	48,600	54,000
Arterial, High Access Control	2	12,000	14,000	16,000	18,000	20,000
	4	24,000	28,000	32,000	36,000	40,000
	6	36,000	43,000	48,000	54,000	60,000
Rural, 2-lane Highway	2	2,400	4,800	7,900	13,500	22,900
Rural, 2-lane Road, 24' - 36' of pavement, Paved Shoulders	2	2,200	4,300	7,100	12,200	20,000
Rural, 2-lane Road, 24' - 36' of pavement, No Shoulders	2	1,800	3,600	5,900	10,100	17,000

Roadway Capacity Class	**Stops per Mile**	**Driveways**	**Speed**
Arterial, Low Access Control	4 +	Frequent	25 – 35 mph
Arterial, Moderate Access Control	2 – 4	Limited	35 – 45 mph
Arterial, High Access Control	1 - 2	None	45 – 55 mph

Note: *LOS = level of service*

Source: *Traffic Impact Analysis Guidelines, County of Sacramento Department of Transportation, July 2004.*

Table 1.3: Daily Volume Threshold For Roadway Segments (City of Sacramento)						
Roadway Capacity Class	**Number of Lanes**	**Daily Volume Threshold (Level of Service)**				
		LOS A	**LOS B**	**LOS C**	**LOS D**	**LOS E**
Arterial, Low Access Control	2	9,000	10,500	12,000	13,500	15,000
	4	18,000	21,000	24,000	27,000	30,000
	6	27,000	31,500	36,000	40,500	45,000
Arterial, Moderate Access Control	2	10,800	12,600	14,400	16,200	18,000
	4	21,600	25,200	28,800	32,400	36,000
	6	32,400	37,800	43,200	48,600	54,000
Arterial, High Access Control	2	12,000	14,000	16,000	18,000	20,000
	4	24,000	28,000	32,000	36,000	40,000
	6	36,000	43,000	48,000	54,000	60,000
Collector, minor	2	5,250	6,125	7,000	7,875	8,750
Residential	2	3,000	3,500	4,000	4,500	5,000

Roadway Capacity Class	**Stops per Mile**	**Driveways**	**Speed**
Arterial, Low Access Control	4 +	Frequent	25 – 35 mph
Arterial, Moderate Access Control	2 – 4	Limited	35 – 45 mph
Arterial, High Access Control	1 - 2	None	45 – 55 mph

Note: *LOS = level of service*

Source: *City of Sacramento Traffic Impact Analysis Guidelines, 1996; City of Sacramento, Department of Transportation Staff, 2007.*

Table 1.4: Daily Volume Threshold For Roadway Segments (Connector JPA)						
Roadway Capacity Class	**Number of Lanes**	**Daily Volume Threshold (Level of Service)**				
		LOS A	**LOS B**	**LOS C**	**LOS D**	**LOS E**
Expressway (Connector)	4	43,200	50,400	57,600	64,800	72,000
	4+2 HOV	64,800	75,600	86,400	97,200	108,000

Note: *LOS = level of service*

Source: *Capital SouthEast Connector Joint Powers Authority*

Table 1.5: Level of Service Criteria (Intersections)		
Level of Service (LOS)	**Total Delay Per Vehicle (seconds)**	
	Signalized Intersections	**Unsignalized Intersections**
A	≤ 10	≤ 10
B	> 10 and ≤ 20	> 10 and ≤ 15
C	> 20 and ≤ 35	> 15 and ≤ 25
D	> 35 and ≤ 55	> 25 and ≤ 35
E	> 55 and ≤ 80	> 35 and ≤ 50
F	> 80	> 50
Source: *HCM 2010 Highway Capacity Manual, Transportation Research Board, Washington, D.C., 2010.*		

1.3.2.3 Traffic Signal Warrant Analysis

Traffic signals are valuable devices for the control of motor vehicle, pedestrian, and bicycle traffic. However, because they assign the right-of-way to the various traffic movements, signals exert a profound influence on traffic flow. Properly located and operated control signals may provide for the orderly movement of traffic (motor vehicle, pedestrian, and bicycle), increase the traffic-handling capacity of an intersection, and reduce the frequency of certain types of crashes. After extensive study and analysis, the Federal Highway Administration and Caltrans developed traffic signal warrants. These warrants define minimum conditions under which signal installations may be justified. Traffic control signals should not be installed unless one or more of the signal warrants are met. However, the satisfaction of a warrant or warrants is not in itself justification for a signal. Every situation is unique and warrant guidelines must be supplemented by the review of specific site conditions and the application of good engineering judgment. Installation of a traffic signal should improve the overall safety and/or operation of an intersection and should be considered only when deemed necessary by careful traffic analysis and after less restrictive solutions have been attempted.

1.3.2.4 Freeway Analysis

Freeway mainline segments, ramp junctions, and weaving segments were analyzed utilizing methodologies outlined in the HCM 2010. **Table 1.6** presents the level of service criteria for the freeway mainline, freeway ramp junctions, and freeway weaving segments.

1.4 LEVEL OF SERVICE POLICIES

For analysis purposes, each of the study area roadway segments, intersections, and freeway elements was assigned to a particular jurisdiction (County of Sacramento, City of Sacramento, City of Rancho Cordova, City of Elk Grove, City of Folsom, or Caltrans) for purposes of specifying acceptable traffic operating conditions (level of service) and standards of significance for impact determination. In cases where transportation elements are located on a jurisdictional boundary, the more conservative (e.g., LOS D rather than LOS E) policy was utilized.

1.4.1 County of Sacramento

The County of Sacramento has the following level of service policy:

> *Plan and design the roadway system in a manner that meets Level of Service (LOS) D on rural roadways and LOS E on urban roadways, unless it is infeasible to implement project alternatives or mitigation measures that would achieve LOS D on rural roadways or LOS E on urban roadways. The urban areas are those areas within the Urban Service Boundary as shown in the Land Use Element of the Sacramento County General Plan. The areas outside the Urban Service Boundary are considered rural.*[1]

1 Sacramento County General Plan, amended November 9, 2011, Circulation Element Policy CI-9.

Table 1.6: Level of Service Criteria (Freeway)			
Level of Service (LOS)	**Maximum Density (Passenger Cars Per Mile Per Lane)**		
	Mainline	**Ramp Junctions**	**Weaving Segments**
A	≤ 11	≤ 10	≤ 10
B	> 11 and ≤ 18	> 10 and ≤ 20	> 10 and ≤ 20
C	> 18 and ≤ 26	> 20 and ≤ 28	> 20 and ≤ 28
D	> 26 and ≤ 35	> 28 and ≤ 35	> 28 and ≤ 35
E	> 35 and ≤ 45	> 35	> 35
F	> 45	Demand Exceeds Capacity	Demand Exceeds Capacity
Source: *HCM 2010 Highway Capacity Manual, Transportation Research Board, Washington, D.C., 2010.*			

The county roadway segments and intersections in the study area are located within the Urban Service Boundary. Therefore, the LOS E standard applies.

1.4.2 City of Sacramento

The Mobility Element of the City of Sacramento 2030 General Plan outlines goals and policies that coordinate the transportation and circulation system with planned land uses. The City of Sacramento has the following level of service policy relevant to this study:

> ***Policy M 1.2.2 LOS Standard.*** *The City shall allow for flexible Level of Service (LOS) standards, which will permit increased densities and mix of uses to increase transit ridership, biking, and walking, which decreases auto travel, thereby reducing air pollution, energy consumption, and greenhouse gas emissions.*
>
> …
>
> *b.* ***Level of Service Standard for Multi-Modal Districts*** *– The City shall seek to maintain the following standards in the Central Business District, in areas within ½ mile walking distance of light rail stations, and in areas designated for urban scale development (Urban Centers, Urban Corridors, and Urban Neighborhoods as designated in the Land Use and Urban Form Diagram). These areas are characterized by frequent transit service, enhanced pedestrian and bicycle systems, a mix of uses, and higher density development.*
>
> - *Maintain operations on all roadways and intersections at LOS A-E at all times, including peak travel times, unless maintaining this LOS would, in the City's judgment, be infeasible and/or conflict with the achievement of other goals. LOS F conditions may be acceptable, provided that provisions are made to improve the overall system and/or promote non-vehicular transportation and transit as part of a development project or a City-initiated project.*
>
> *c.* ***Base Level of Service Standard*** *– the City shall seek to maintain the following standards for all areas outside of multi-modal districts.*
>
> - *Maintain operations on all roadways and intersections at LOS A-D at all times, including peak travel times, unless maintaining this LOS would, in the City's judgment, be infeasible and/or conflict with the achievement of other goals. LOS E or F conditions may be accepted, provided that provisions are made to improve the overall system and/or promote non-vehicular transportation as part of a development project or a City-initiated project.*

d. ***Roadways Exempt from Level of Service Standard*** *– The above LOS standards shall apply to all roads, intersections, or interchanges within the City except as specified below. If a Traffic Study is prepared and identifies a significant LOS impact to a roadway or intersection that is located within one of the roadway corridors described below, the project would not be required in that particular instance to widen roadways in order for the City to find project conformance with the General Plan. Instead, General Plan conformance could still be found if the project provides improvements to other parts of the city wide transportation system in order to improve transportation-system-wide roadway capacity, to make intersection improvements, or to enhance non-auto travel modes in furtherance of the General Plan goals. The improvements would be required within the project site vicinity or within the area affected by the project's vehicular traffic impacts. With the provision of such other transportation infrastructure improvements, the project would not be required to provide any mitigation for vehicular traffic impacts to the listed road segment in order to conform to the General Plan.*

- *12th/14th Avenue: State Route 99 to 36th Street*
- *24th Street: Meadowview Road to Delta Shores Circle*
- *65th Street: Folsom Boulevard to 14th Avenue*
- *Alhambra Boulevard: Folsom Boulevard to P Street*
- *Arcade Boulevard: Marysville Boulevard to Del Paso Boulevard*
- *Arden Way: Capital City Freeway to Ethan Way*
- *Blair Avenue/47th Avenue: S. Land Park Drive to Freeport Boulevard*
- *Broadway: 15th Street to Franklin Boulevard*
- *Broadway: 58th to 65th Streets*
- *El Camino Avenue: Stonecreek Drive to Marysville Boulevard*
- *El Camino Avenue: Capital City Freeway to Howe Avenue*
- *Elder Creek Road: 65th Street to Power Inn Road*
- *Florin Perkins Road: 14th Avenue to Elder Creek Road*
- *Florin Road: Greenhaven Drive to I-5; 24th Street to Franklin Boulevard*
- *Folsom Boulevard: 34th Street to Watt Avenue*
- *Freeport Boulevard: Broadway to Seamas Avenue*
- *Fruitridge Road: Franklin Boulevard to SR 99*
- *Garden Highway: Truxel Road to Northgate Boulevard*
- *Howe Avenue: American River Drive to Folsom Boulevard*
- *J Street: 43rd Street to 56th Street*
- *Mack Road: Meadowview Road to Stockton Boulevard*
- *Martin Luther King Boulevard: Broadway to 12th Avenue*
- *Marysville Boulevard: I-80 to Arcade Boulevard*
- *Northgate Boulevard: Del Paso Road to SR 160*
- *Raley Boulevard: Bell Avenue to I-80*
- *Roseville Road: Marconi Avenue to I-80*

- *Royal Oaks Drive: SR 160 to Arden Way*
- *Truxel Road: I-80 to Gateway Park*[2]

1.4.3 City of Rancho Cordova

The City General Plan Circulation Element has the following level of service policy:

> ***Policy C.1.2*** *- Seek to maintain operations on all roadways and intersections at Level of Service D or better at all times, including peak travel times, unless maintaining this Level of Service would, in the City's judgment, be infeasible and / or conflict with the achievement of other goals. Congestion in excess of Level of Service D may be accepted in these cases, provided that provisions are made to improve traffic flow and / or promote non-vehicular transportation as part of a development project of a City-initiated project.*[3]

1.4.4 City of Elk Grove

The City General Plan Circulation Element has the following level of service policy:

> ***CI-13*** *- The City shall require that all roadways and intersections in Elk Grove operate at a minimum Level of Service "D" at all times.*[4]

1.4.5 City of Folsom

Policy 17.17 of the City of Folsom General Plan identifies the minimum acceptable level of service for traffic operations in the City. Specifically, this policy states:

> *The City should strive to achieve at least a traffic Level of Service 'C' throughout the City.*[5]

As part of the Folsom South of U.S. Highway 50 Specific Plan, the level of service policy for the portion of the City of Folsom to be located south of US 50 is amended as follows:

> *The City should strive to achieve at least a traffic Level of Service "C" within the Folsom South of US 50 Specific Plan. For roadways and intersections within the Specific Plan, LOS "D" conditions may be considered on a case by case basis if improvements required to meet LOS "C" exceeds the "normally accepted maximum" improvements established by the City.*[6]

2 Sacramento 2030 General Plan, Master Environmental Impact Report, Certified March 3, 2009.
3 City of Rancho Cordova General Plan Circulation Element, June 26, 2006.
4 Elk Grove General Plan Circulation Element, Adopted November 19, 2003, Reflects Amendments through July 22, 2009.
5 City of Folsom General Plan, 1993.
6 Folsom South of U.S. Highway 50 Specific Plan DEIR/DEIS, June 2010.

1.4.6 Caltrans

The standards for Caltrans' facilities in the study area are detailed in the U.S. 50 Corridor System Management Plan (CSMP)[7]. Typical Concept LOS standards in Caltrans District 3 are LOS "D" in rural areas and LOS "E" in urban areas. The 20-Year Concept LOS for U.S. 50 in the study area is LOS F, because improvements necessary to improve the LOS to E are not feasible due to environmental, right-of-way, financial, and other constraints. Although the US 50 CSMP allows LOS F, standards of significance hold that any increase in mainline volume greater than 5% would constitute an impact.

1.4.7 Capital SouthEast Connector Joint Powers Authority (Connector JPA)

The Capital SouthEast Connector Joint Powers Authority (JPA) was formed in December 2006 and includes the cities of Elk Grove, Folsom and Rancho Cordova, and El Dorado and Sacramento Counties. Under a policy set forth by the JPA, signalized intersections along the Connector facility are required to operate at level of service "C" or better (with LOS "D" being allowed in the Sheldon area). The Connector JPA's intersection LOS policy does not apply to roadway segments.

1.5 SIGNIFICANCE CRITERIA

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in a significant adverse impact on the environment. The standards of significance in this analysis are based upon current practice of the appropriate regulatory agencies.

1.5.1 Roadways Segments and Intersections

Table 1.7 summarizes the significance criteria for intersections and roadway segments for Sacramento County, the City of Sacramento, the City of Rancho Cordova, the City of Elk Grove, and the City of Folsom.

1.5.2 Freeway Facilities

Caltrans considers the following to be significant impacts:

- Off-ramps with vehicle queues that extend into the ramp's deceleration area or onto the freeway.

- Project traffic increases that cause any ramp's merge / diverge level of service to be worse than the freeway's level of service.

- Project traffic increases that cause the freeway level of service to deteriorate beyond level of service threshold defined in the Caltrans Route Concept Report for the facility.

7 Highway 50 Corridor System Management Plan, May 2009.

- The expected ramp queue is greater than the storage capacity.

Further, it is Caltrans' position that on segments of the SHS main line where the existing LOS is at or below the Concept LOS, any land use development should not directly or cumulatively lower the existing LOS and/or increase the V/C ratio now or in the future on the identified highway segments by 5 percent or greater. Any impacts exceeding this 5 percent threshold will be viewed by Caltrans as significant and warrant appropriate mitigation.

Table 1.7: Level of Service Standards and Thresholds of Significance						
Jurisdiction	**Area**	**LOS Policy**	**Thresholds of Significance**			**Notes**
			Signalized Intersection	**Unsignalized Intersection**	**Roadway Segment**	
County of Sacramento	Inside Urban Service Boundary	E	> 5 seconds (intersection average)	> 5 seconds (movement / approach) and meet traffic signal warrant	> .05 V/C	
	Outside Urban Service Boundary	D				
City of Sacramento	Base	D	≥ 5 seconds (intersection average)		≥ .02 V/C	Deficient LOS may be accepted provided provisions are made to improve the overall system and / or promote non-vehicular transportation
	Exempt Areas	E / F				
City of Elk Grove	All	D	≥ 5 seconds (intersection average)		≥ .05 V/C	
City of Folsom	Base	C	≥ 5 seconds (intersection average)		Not Applicable	
	South of US 50 Specific Plan	D				
City of Rancho Cordova	All	D	> 5 seconds (intersection average)	> 5 seconds (movement / approach) and meet traffic signal warrant	> .05 V/C	
Connector JPA	Base	C	> 5 seconds (intersection average)	N/A	≥ .05 V/C	Roadway segments above capacity should be grade separated
	Sheldon	D		N/A	≥ .05 V/C	Roadway segments above capacity should be grade separated, unless both intersections operate acceptably

1.5.3 Bicycle and Pedestrian Facilities

Impacts to bicycle and pedestrian facilities are considered significant if the proposed project would:

- Eliminate or adversely affect an existing bikeway or pedestrian facility in a way that would discourage its use;
- Interfere with the implementation of a planned bikeway as shown in the Bicycle Master Plan, or be in conflict with the Pedestrian Master Plan; or
- Result in unsafe conditions for bicyclists or pedestrians, including unsafe bicycle / pedestrian, bicycle / motor vehicle, or pedestrian / motor vehicle conflict.

1.5.4 Transit

Impacts to the transit system are considered significant if the proposed project would:

- Adversely affect public transit operations; or,
- Fail to adequately provide access to transit.

1.5.5 Rural Roadway Functionality

Of specific concern in the study area of this project is the functionality of substandard rural roadways. The County's current rural roadway standard consists of two-twelve foot wide travel lanes and six-foot wide paved shoulders. Therefore, any rural roadway not fitting this definition can be considered substandard.

Many of the existing rural roadways in the study area have travel lanes as narrow as 10 feet wide with no roadside shoulders. These roadways were constructed many years ago and tended to serve as roadway connections between small towns and communities and to serve as farm to market roadways. While these narrow roadways have adequately served the travel demand of the historical past, they are not intended to serve the greater travel demands that nearby residential and commercial development may impose.

The County expects that the functionality of these roadways will change with nearby development, the increase in population, the introduction of various modes of travel in the study area, and the addition of project traffic on these substandard roadways. No longer will these roadways only serve farm to market and small communities. With these changes in functionality of the roadway comes the possibility of increased interactions between varying modes of travel (i.e. pedestrians, bicyclists, etc.) as well as the increased interaction between a greater number of vehicles on substandard roads.

General Plan Policy CI-1 states *Provide complete streets to provide safe and efficient access to a diversity of travel modes for all urban, suburban and rural land uses within Sacramento County. Within rural areas of the County, a complete street may be accommodated through roadway shoulders of sufficient width or other means to accommodate all modes of travel.*

General Plan Policy CI-7 states *Plan and construct transportation facilities as delineated on the Transportation Plan of the Sacramento County General Plan. Transportation facilities shall be consistent with the Sacramento County, Municipal Services Agency Improvement Standards…*

General Plan Policy CI-10 states *Land development projects shall be responsible to mitigate the project's adverse impacts to local and regional roadways.*

Therefore, the County has applied an impact standard to these substandard roadways as follows:

Impacts to substandard rural roadway functionality are considered significant if the proposed project would:

- Cause the substandard rural roadway to exceed an average daily traffic volume of 6,000 daily vehicles; or

- Add 600 or more new daily vehicle trips to a substandard rural roadway that already carries 6,000 or more daily vehicles.

Significant impacts shall be mitigated by requiring reconstruction of the substandard rural roadway to the County standard of 12-foot vehicle lanes with 6-foot paved shoulders.

1.6 DEVELOPMENT OF MITIGATION MEASURES

This transportation analysis includes the development of mitigation measures for those impacts that have been determined to exceed the level of service policies. Important considerations in the development of such mitigation measures are feasibility, consistency with the General Plan and secondary impacts. While most impacts could theoretically be mitigated by adding more traffic lanes, grade separations, new roadways, and other similar measures, such mitigation may not be consistent with public policy, and could result in secondary impacts to the environment and other users.

The Sacramento County General Plan Circulation Element provides guidance regarding the development of mitigation measures. In particular, the Circulation Element specifies the maximum number of through lanes for major County roadways. The General Plans of the other jurisdictions in the study area provide similar guidance. In general, for those impacts that exceed the level of service policies, mitigation measures have been developed for the widening of roadway segments to accommodate additional travel lanes up to the maximum number of lanes designated in the general plans.

Similarly, the County and other jurisdictions have typical intersection cross-sections. In general, on each approach to an intersection on a four-lane or six-lane roadway, the typical cross-section includes two left turn lanes, the appropriate number of through lanes (two or three), and a single right turn lane. Exceptions to the typical intersection geometry will be considered on a case-by-case basis and in special circumstances. Mitigation measures that exceed the typical intersection geometry will be noted as so.

In the development of mitigation measures, the number of roadway segment lanes and intersection lanes has been expanded, where appropriate, to reduce impacts. In most cases, the mitigation measure does not exceed the maximum number of roadway lanes identified in the General Plans nor exceeds the typical intersection geometry. In some cases, mitigation measures consistent with the General Plan and the typical intersection geometry may not reduce the impact consistent with the level of service policies. In these cases, an alternative mitigation measure may be considered that may necessitate an amendment to the County's General Plan or deviate from the typical intersection geometry. In other cases where the roadway is already constructed to the full General Plan designation or an intersection is already constructed to the standard intersection geometry and no alternative mitigation measure is feasible, no mitigation measure may be available to reduce the impacts.

1.7 HIGH CAPACITY INTERSECTIONS

The Sacramento County General Plan recognizes that at-grade intersections may not be able to accommodate all traffic demands along the County's busiest roadways. In selected locations, the General Plan designates High Capacity Intersections. A high capacity intersection would utilize special treatments to increase the capacity of the intersection to reduce congestion and travel delay. Since each intersection has unique travel movements, volumes and existing context sensitive conditions, the special treatments utilized at each high capacity intersection will vary to meet the specific needs of each intersection. The range of special treatments is quite wide, ranging from the restriction of certain turning movements to various combinations that could include grade separating certain movements. Special treatments such as the following could be utilized at a high capacity intersection:

- Restricting turning movements
- Median U-turns
- Roundabouts
- Split intersections
- Quadrant roadway intersections
- Bowtie intersections
- Directional flyovers
- Center turn overpass
- Grade separated roundabout
- Diverging diamond grade separation
- Compact diamond grade separation
- Single point urban grade separation
- Traditional urban grade separation

Implementation of a high capacity intersection treatment could result in secondary impacts, including right-of-way, pedestrian and bicycle impacts, restrictions to local access, fiscal, and many others. As there are many possible solutions that would provide an acceptable LOS at any location, each with related impacts, this transportation analysis cannot identify specific high capacity intersection solutions. While high capacity intersections could theoretically mitigate any of the identified LOS impacts, the feasibility of such measures has not been established at this time.

2. EXISTING CONDITIONS

2.1 ROADWAY SYSTEM

Figure 2.1 illustrates the existing roadway network.

2.1.1 Regional Access

Regional automobile access to the site is provided by the freeway system and by State Route 16.

U.S. Highway 50 (US 50) is an east-west freeway that extends from the Interstate 80 (I-80) junction in West Sacramento to Canal Street in the City of Placerville, where it continues as a highway across the Sierra Nevada to South Lake Tahoe and Nevada. Primary access to US 50 is via a series of interchanges, including (from west to east) Howe Avenue, Watt Avenue, Bradshaw Road, Mather Field Road, and Sunrise Boulevard. To the west, US 50 provides access to Central City Sacramento, SR 99, I-5, and I-80. To the east, US 50 provides access to eastern Sacramento County, the cities of Rancho Cordova and Folsom, and El Dorado County.

State Route 16 (SR 16) is a Caltrans facility. In the vicinity of the site, SR 16 is located on **Jackson Road**, which is the southern boundary of the Jackson Township project site. The roadway generally travels from west-northwest to east-southeast from Folsom Boulevard to the west into Amador County to the east. It is generally a two-lane roadway with some widening at intersections. To the west, SR 16 continues to US 50 via Folsom Boulevard and Howe Avenue in the City of Sacramento.

2.1.2 Local Access

Direct access to the site is provided primarily via Jackson Road, Excelsior Road, and the future Kiefer Boulevard.

Excelsior Road is a north-south roadway that forms the western boundary of the project site. To the north, Excelsior Road extends into the Independence at Mather community. Beyond the community, the roadway becomes Mather Boulevard. To the south, Excelsior Road extends to Sheldon Road in the City of Elk Grove. Excelsior Road is a two-lane roadway.

Kiefer Boulevard is an east-west roadway that crosses the northern portion of the Jackson Township project site. The roadway consists of two segments, divided by Mather Field. The western segment extends from Florin-Perkins Road in the City of Sacramento through the Rosemont community to Happy Lane. This segment has two to four through lanes. East of Mather Field, the roadway begins at Eagles Nest Road and continues easterly to Jackson Road as a two-lane roadway. The portion of Kiefer Boulevard that crosses the northern portion of the Jackson Township project site does not currently exist, and would be implemented as part of the Jackson Township project.

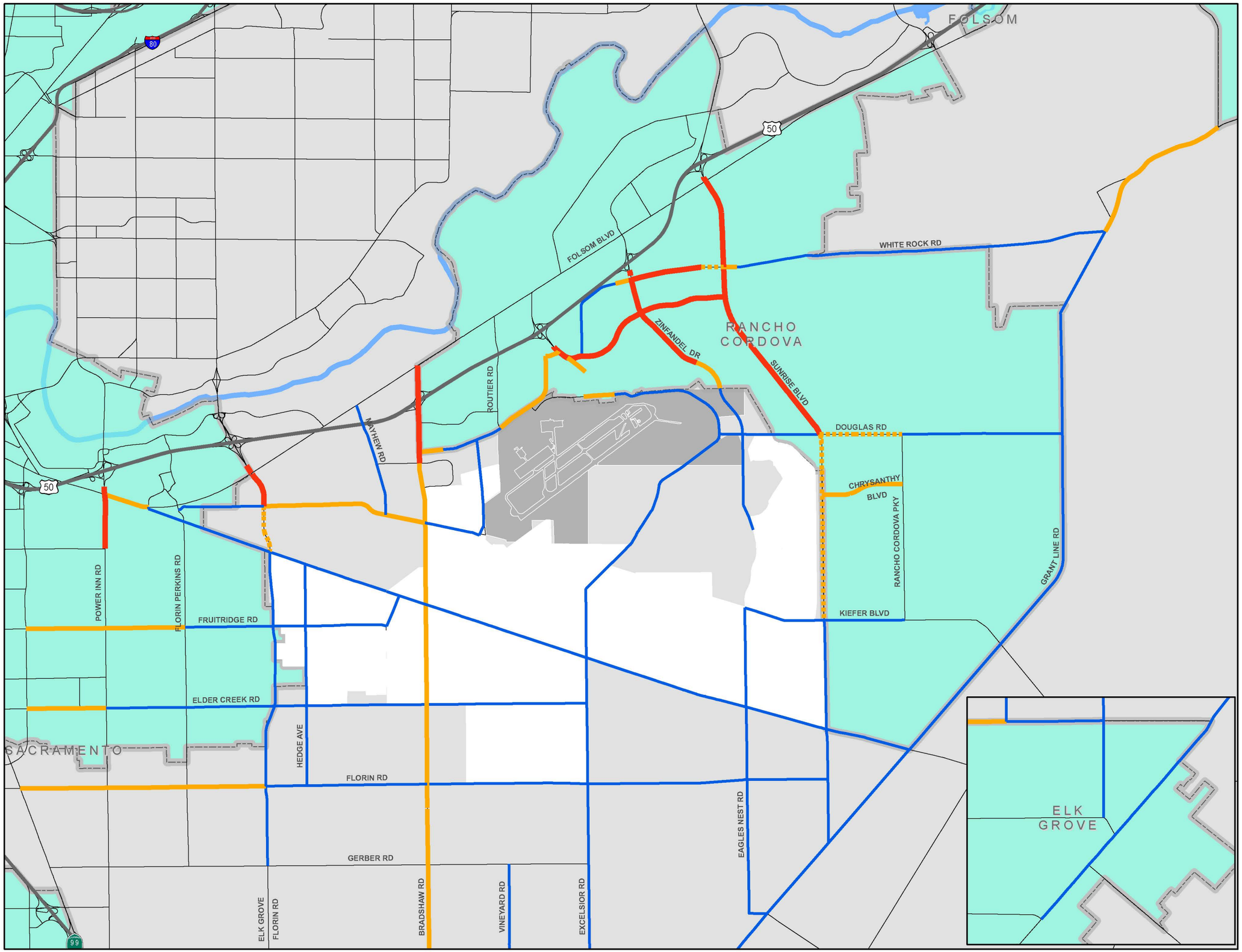


FIGURE 2.1
EXISTING CONDITIONS
ROADWAY NETWORK

Legend

- 2 Lanes
- 3 Lanes
- 4 Lanes
- 5 Lanes
- 6 Lanes
- 7 Lanes
- Cities
- Mather Airport

DKS

2.2 TRANSIT SYSTEM

The Sacramento Regional Transit District (RT) operates 67 bus routes and 38.6 miles of light rail covering a 418 square-mile service area. Buses and light rail run 365 days a year using 76 light rail vehicles, 182 buses (with an additional 30 buses in reserve) powered by compressed natural gas (CNG) and 11 shuttle vans. Buses operate daily from 5 a.m. to 11 p.m. every 12 to 75 minutes, depending on the route. Light rail trains begin operation at 4 a.m. with service every 15 minutes during the day and every 30 minutes in the evening and on weekends. Blue Line and Gold Line trains operate until 12:30 a.m. and the Gold Line to Folsom operates until 7 p.m. Green Line trains operate every 30 minutes Monday through Friday. Passenger amenities include 50 light rail stops or stations, 31 bus and light rail transfer centers and 18 park-and-ride lots. RT also serves over 3,300 bus stops throughout Sacramento County.[8]

Figure 2.2 illustrates selected RT service near the Jackson Township project site. The RT Gold Line light rail service is located parallel to Folsom Boulevard north of the Jackson Township project site. Nearby stations include (from west to east) Watt / Manlove, Starfire, Tiber, Butterfield, Mather Field / Mills, Zinfandel, Cordova Town Center, and Sunrise. No RT bus routes operate in the vicinity of the site.

2.3 BICYCLE SYSTEM

Figure 2.3 illustrates the Sacramento County Bikeway Master Plan in the vicinity of the Jackson Township project site, depicting existing and planned bikeways. A future Class I Bikeway, the Elder Creek Trail, crosses the southern portion of the site. Future Class II Bikeways are planned on Jackson Road, Excelsior Road, and Kiefer Boulevard.

2.4 PEDESTRIAN SYSTEM

The pedestrian sidewalk system is incomplete within the Jackson Township project site and in many areas in the vicinity of the Jackson Township project site. As development occurs, sidewalks are being installed along many roadways in the area. With the exception of those locations where such improvements have already occurred, pedestrian access in the immediate vicinity of the Jackson Township project is limited to roadway shoulders, where such shoulders exist.

2.5 TRAFFIC VOLUMES

Peak period (7:00 to 9:00 a.m. and 4:00 to 6:00 p.m.) intersection turning movement counts were collected on Tuesdays, Wednesdays, and Thursdays in April and Early May, 2013 for the existing intersections in the study area.

Daily (24-hour) segment counts were collected on Tuesdays, Wednesdays, and Thursdays in April and Early May, 2013 for the existing segments in the study area. The existing daily traffic volumes are summarized later in Section 2.6.1 of this report.

8 http://www.sacrt.com/rtataglance.stm Accessed 14 February 2014.

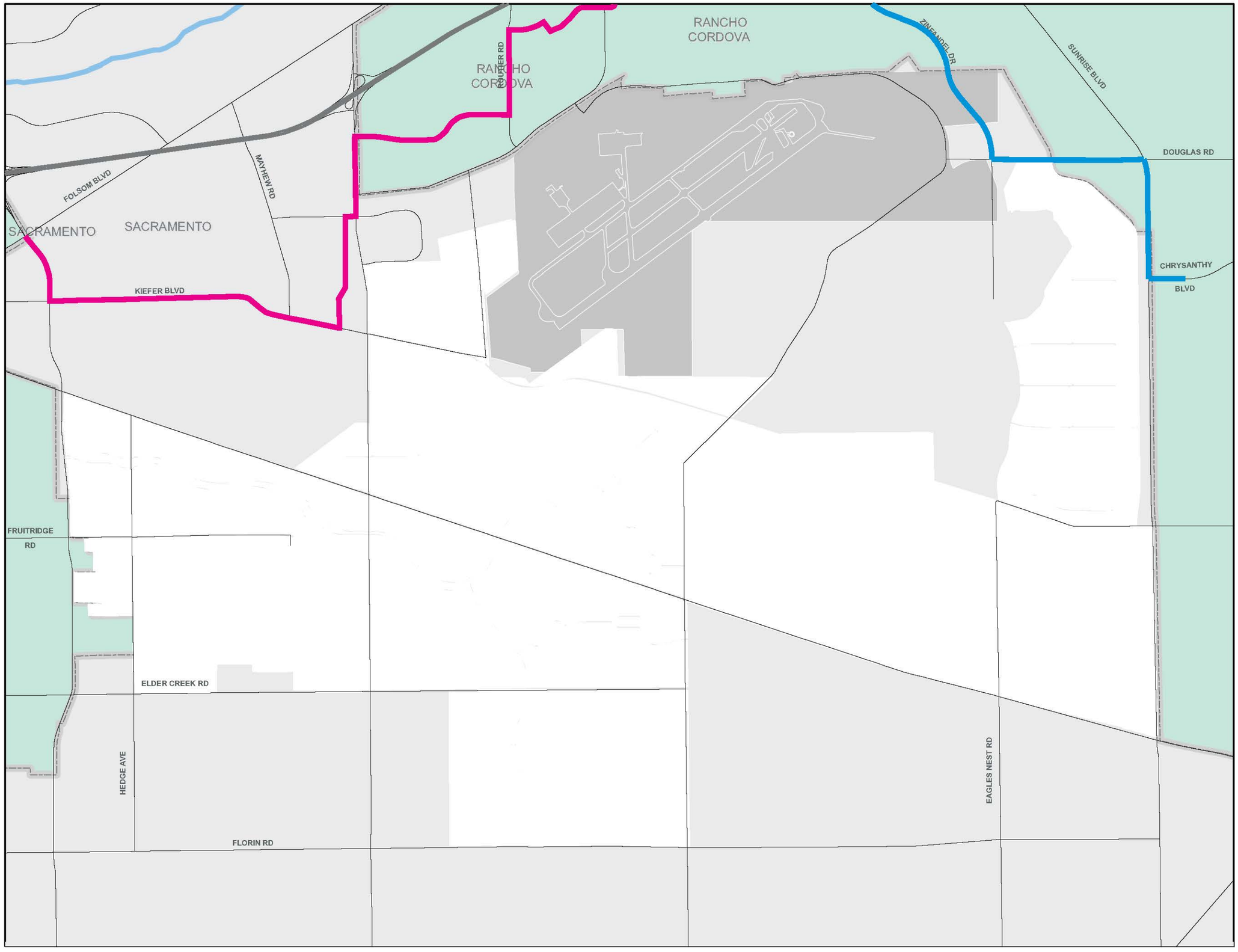


FIGURE 2.2
STUDY AREA TRANSIT NETWORK
EXISTING CONDITIONS

Legend

- Route 72 (Rosemont - Lincoln Village)
- Route 76 (Anatolia Shuttle)
- Cities
- Mather Airport

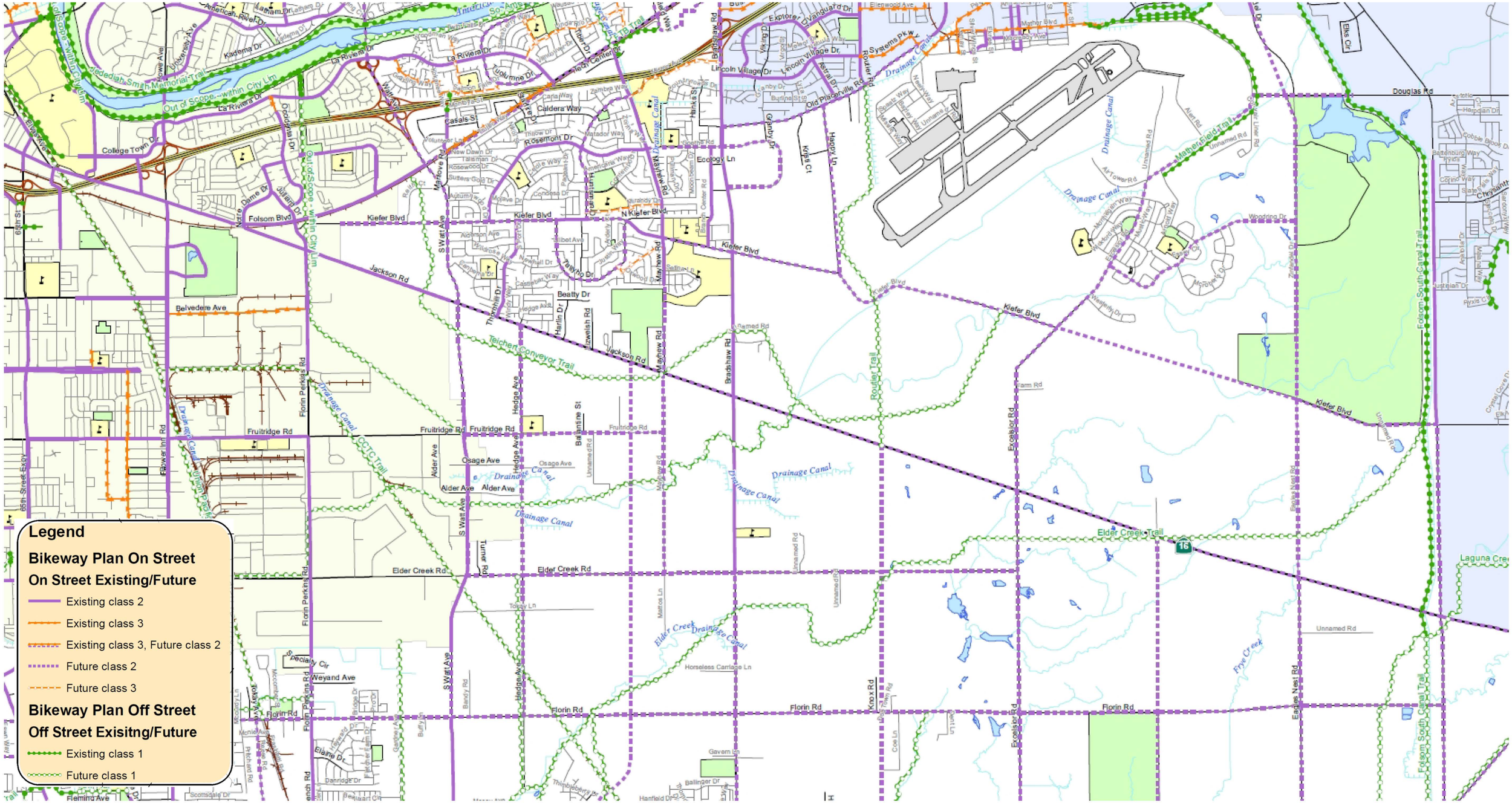


FIGURE 2.3
EXISTING BICYCLE NETWORK

Peak period traffic volumes on the US 50 freeway system (mainline and ramps) were obtained from the California Freeway Performance Measurement System (PeMS). Data recorded on April 16 through 18, 2013, and April 23 through 25, 2013 were utilized in these analyses.

2.6 EXISTING OPERATING CONDITIONS

Figure 2.4 summarizes existing roadway operating conditions.

2.6.1 Roadway Segments

Level of service analyses were also conducted for the roadway segments in the study area based upon daily traffic volumes, number of traffic lanes between intersections, and roadway characteristics. **Table 2.1** summarizes the roadway levels of service, and the performance of the segment compared to the level of service policies of the assigned jurisdiction.

The following segments do not meet the level of service policies:

- Bradshaw Road - US 50 to Lincoln Village Drive
- Elk Grove Florin Road - Florin Road to Gerber Road
- Folsom Boulevard - Howe Avenue to Jackson Road
- Grant Line Road - Calvine Road to Bond Road
- South Watt Avenue - Jackson Road to Florin Road
- Sunrise Boulevard - US 50 to Trade Center Drive
- Sunrise Boulevard - Kiefer Boulevard to Jackson Road
- Watt Avenue - US 50 to Folsom Boulevard

2.6.2 Intersections

Existing intersection geometry (number of approach lanes) is illustrated in the tables below.

Table 2.2 summarizes the existing a.m. and p.m. peak hour operating conditions at the study area intersections, and the performance of the segment compared to the level of service policies of the assigned jurisdiction. At two-way stop unsignalized intersections, Sacramento County determines conformity with the level of service policy on an approach / movement basis, while the City of Sacramento utilizes a calculation of the average intersection level of service (similar to signalized intersections and all-way stop intersections). Details of the intersection operating condition calculations are included in the technical appendix.

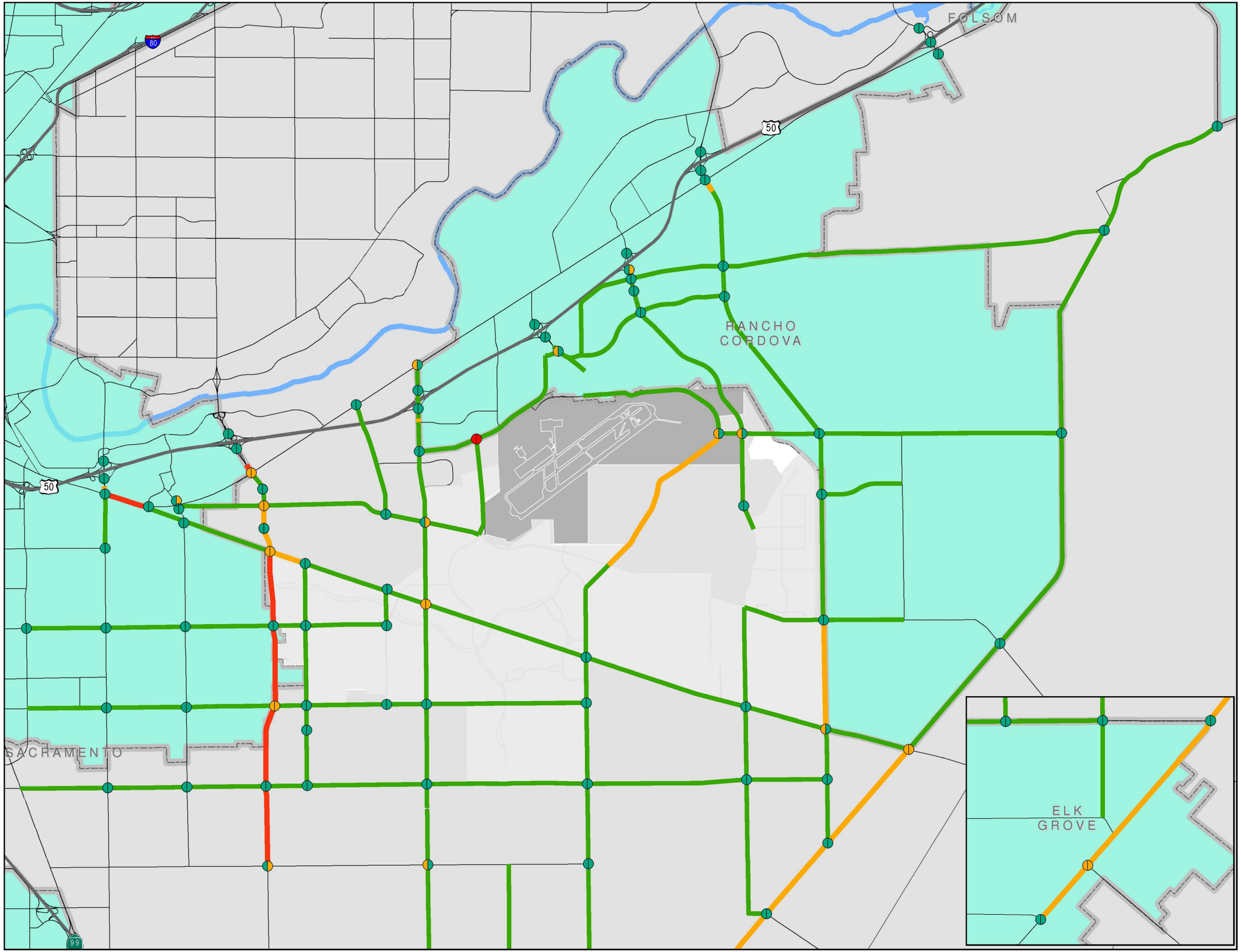


FIGURE 2.4
EXISTING CONDITIONS ROADWAY SEGMENT AND INTERSECTION LOS

Legend

Intersections (AM Peak Hour)
- LOS A-D
- LOS E
- LOS F

Intersections (PM Peak Hour)
- LOS A-D
- LOS E
- LOS F

Roadway Segments
- LOS A-D
- LOS E
- LOS F
- Cities
- Mather Airport

DKS

Table 2.1
Existing Roadway Segment Levels of Service

ID	Roadway	Segment		Jurisdiction	Governing Jurisdiction / Area[1]	LOS Policy Criteria	Existing				
		From	To				Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service
1	Bradshaw Rd	Folsom Blvd	US 50	Rancho Cordova/County	Rancho Cordova	D	6	Arterial M	20,592	0.38	A
2	Bradshaw Rd	US 50	Lincoln Village Dr	Rancho Cordova/County	Rancho Cordova	D	6	Arterial M	52,590	0.97	**E**
3	Bradshaw Rd	Lincoln Village Dr	Old Placerville Rd	Rancho Cordova/County	Rancho Cordova	D	6	Arterial M	42,787	0.79	C
4	Bradshaw Rd	Old Placerville Rd	Goethe Rd	County	County Urban	E	6	Arterial M	38,984	0.72	C
5	Bradshaw Rd	Goethe Rd	Kiefer Blvd	County	County Urban	E	4	Arterial M	28,651	0.80	C
6	Bradshaw Rd	Kiefer Blvd	Jackson Rd	County	County Urban	E	4	Arterial M	30,726	0.85	D
7	Bradshaw Rd	Jackson Rd	Elder Creek Rd	County	County Urban	E	4	Arterial M	22,871	0.64	B
8	Bradshaw Rd	Elder Creek Rd	Florin Rd	County	County Urban	E	4	Arterial M	22,265	0.62	B
9	Bradshaw Rd	Florin Rd	Gerber Rd	County	County Urban	E	4	Arterial M	22,883	0.64	B
10	Bradshaw Rd	Gerber Rd	Calvine Rd	County	County Urban	E	4	Arterial M	16,984	0.47	A
11	Calvine Rd	Waterman Rd	Bradshaw Rd	Elk Grove/County	Elk Grove	D	4	Arterial M	16,015	0.44	A
12	Calvine Rd	Bradshaw Rd	Vineyard Rd	Elk Grove/County	Elk Grove	D	4	Arterial M	12,395	0.34	A
13	Calvine Rd	Vineyard Rd	Excelsior Rd	Elk Grove/County	Elk Grove	D	2	Arterial M	6,036	0.34	A
14	Chrysanthy Blvd	Sunrise Blvd	Rancho Cordova Pkwy	Rancho Cordova/County	Rancho Cordova	D	4	Arterial M	3,411	0.09	A
15	Douglas Rd	Mather Blvd	Zinfandel Dr	County	County Urban	E	2	Arterial M	6,635	0.37	A
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd	Rancho Cordova/County	Rancho Cordova	D	2	Arterial M	8,369	0.46	A
17	Douglas Rd	Sunrise Blvd	Rancho Cordova Pkwy	Rancho Cordova	Rancho Cordova	D	5	Arterial M	3,674	0.10	A
18	Douglas Rd	Rancho Cordova Pkwy	Grant Line Rd	Rancho Cordova	Rancho Cordova	D	2	Arterial M	3,674	0.20	A
19	Eagles Nest Rd	Kiefer Blvd	Jackson Rd	County	County Urban	E	2	Arterial M	740	0.04	A
20	Eagles Nest Rd	Jackson Rd	Florin Rd	County	County Urban	E	2	Arterial M	517	0.03	A
21	Eagles Nest Rd	Florin Rd	Grant Line Rd	County	County Urban	E	2	Arterial M	189	0.01	A
22	Elder Creek Rd	65th St	Power Inn Rd	City of Sacramento	City Exempt Roadway	E	4	Arterial M	17,891	0.50	A
23	Elder Creek Rd	Power Inn Rd	Florin-Perkins Rd	City of Sacramento	City Default	D	2	Arterial M	15,734	0.87	D
24	Elder Creek Rd	Florin Perkins Rd	South Watt Ave	City of Sacramento	City Default	D	2	Arterial M	11,092	0.62	B
25	Elder Creek Rd	South Watt Ave	Hedge Ave	County	County Urban	E	2	Arterial M	5,576	0.31	A
26	Elder Creek Rd	Hedge Ave	Mayhew Rd	County	County Urban	E	2	Arterial M	5,797	0.32	A
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd	County	County Urban	E	2	Arterial M	5,355	0.30	A
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd	County	County Urban	E	2	Arterial M	2,158	0.12	A
29	Elk Grove-Florin Rd	Florin Rd	Gerber Rd	County	County Urban	E	2	Arterial M	22,960	1.28	**F**
30	Excelsior Rd	Kiefer Blvd	Jackson Rd	County	County Urban	E	2	Arterial M	3,716	0.21	A
31	Excelsior Rd	Jackson Rd	Elder Creek Rd	County	County Urban	E	2	Arterial M	5,075	0.28	A
32	Excelsior Rd	Elder Creek Rd	Florin Rd	County	County Urban	E	2	Arterial M	4,203	0.23	A
33	Excelsior Rd	Florin Rd	Gerber Rd	County	County Urban	E	2	Arterial M	5,423	0.30	A
34	Excelsior Rd	Gerber Rd	Calvine Rd	County	County Urban	E	2	Arterial M	4,229	0.23	A

Bold values do not meet LOS policy.

Table 2.1
Existing Roadway Segment Levels of Service

ID	Roadway	Segment		Jurisdiction	Governing Jurisdiction / Area[1]	LOS Policy Criteria	Existing				
		From	To				Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service
35	Excelsior Rd	Calvine Rd	Sheldon Rd	Elk Grove	Elk Grove	D	2	Arterial M	4,473	0.25	A
36	Florin Rd	Stockton Blvd	Power Inn Rd	County	County Urban	E	4	Arterial M	27,495	0.76	C
37	Florin Rd	Power Inn Rd	Florin-Perkins Rd	County	County Urban	E	4	Arterial M	21,595	0.60	A
38	Florin Rd	Florin-Perkins Rd	So Watt Ave/ Elk Grove Florin Rd	County	County Urban	E	4	Arterial M	14,163	0.39	A
39	Florin Rd	South Watt Ave	Hedge Ave	County	County Urban	E	2	Arterial M	7,718	0.43	A
40	Florin Rd	Hedge Ave	Mayhew Rd	County	County Urban	E	2	Arterial M	6,312	0.35	A
41	Florin Rd	Mayhew Rd	Bradshaw Rd	County	County Urban	E	2	Arterial M	6,317	0.35	A
42	Florin Rd	Bradshaw Rd	Excelsior Rd	County	County Urban	E	2	Arterial M	3,478	0.19	A
43	Florin Rd	Excelsior Rd	Sunrise Blvd	County	County Urban	E	2	Arterial M	3,835	0.21	A
44	Folsom Blvd	Howe Ave	Jackson Rd	City of Sacramento	City Exempt Roadway	E	4	Arterial M	37,516	1.04	**F**
45	Fruitridge Rd	65th St	Power Inn Rd	City of Sacramento	City Default	D	4	Arterial M	16,634	0.46	A
46	Fruitridge Rd	Power Inn Rd	Florin Perkins Rd	City of Sacramento	City Default	D	4	Arterial M	15,214	0.42	A
47	Fruitridge Rd	Florin Perkins Rd	South Watt Ave	City of Sacramento	City Default	D	2	Arterial M	10,280	0.57	A
48	Fruitridge Rd	South Watt Ave	Hedge Ave	City of Sacramento/ County	City Default	D	2	Arterial M	2,890	0.16	A
49	Fruitridge Rd	Hedge Ave	Mayhew Rd	County	County Urban	E	2	Arterial M	1,790	0.10	A
50	Grant Line Rd	White Rock Rd	Douglas Rd	Rancho Cordova/County	Rancho Cordova	D	2	Rural NS	7,189	0.42	D
51	Grant Line Rd	Douglas Rd	Kiefer Blvd	Rancho Cordova/County	Rancho Cordova	D	2	Rural S	6,143	0.31	C
52	Grant Line Rd	Kiefer Blvd	Jackson Rd	Rancho Cordova/County	Rancho Cordova	D	2	Rural S	5,758	0.29	C
53	Grant Line Rd	Jackson Rd	Sunrise Blvd	County	County Urban	E	2	Rural S	14,720	0.74	E
54	Grant Line Rd	Sunrise Blvd	Calvine Rd	County	County Urban	E	2	Rural S	14,812	0.74	E
55.1	Grant Line Rd	Calvine Rd	Elk Grove City Limit	Elk Grove/County	Elk Grove	D	2	Rural S	13,140	0.66	**E**
55.2	Grant Line Rd	Elk Grove City Limit	Sheldon Rd	Elk Grove/County	Elk Grove	D	2	Rural S	13,140	0.66	**E**
56	Grant Line Rd	Sheldon Rd	Wilton Rd	Elk Grove	Elk Grove	D	2	Rural S	17,459	0.87	**E**
57	Grant Line Rd	Wilton Rd	Bond Rd	Elk Grove	Elk Grove	D	2	Rural S	16,064	0.80	**E**
58	Happy Ln	Old Placerville Rd	Kiefer Blvd	County	County Urban	E	2	Rural S	4,635	0.23	C
58.1	Happy Lane	Old Placerville Road	Routier Ext	County	County Urban	E	2	Rural S	4,635	0.23	C
58.2	Happy Lane	Routier Ext	Kiefer Boulevard	County	County Urban	E	2	Rural S	4,635	0.23	C
59	Hedge Ave	Jackson Rd	Fruitridge Rd	County	County Urban	E	2	Arterial M	3,061	0.17	A
60	Hedge Ave	Fruitridge Rd	Elder Creek Rd	City of Sacramento/County	County Urban	E	2	Arterial M	3,737	0.21	A
61	Hedge Ave	Elder Creek Rd	Florin Rd	County	County Urban	E	2	Arterial M	2,722	0.15	A
62	Howe Ave	US 50	Folsom Blvd	City of Sacramento	City Exempt Roadway	E	6	Arterial M	53,849	1.00	E
63	International Dr	Mather Field Rd	Zinfandel Dr	Rancho Cordova	Rancho Cordova	D	6	Arterial M	17,500	0.32	A

Bold values do not meet LOS policy.

Table 2.1
Existing Roadway Segment Levels of Service

ID	Roadway	Segment		Jurisdiction	Governing Jurisdiction / Area[1]	LOS Policy Criteria	Existing				
		From	To				Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service
64	International Dr	Zinfandel Dr	Sunrise Blvd	Rancho Cordova	Rancho Cordova	D	6	Arterial M	8,802	0.16	A
65	Jackson Rd	Folsom Blvd	Florin Perkins Rd	City of Sacramento	City Exempt Light Rail	E	2	Arterial M	12,358	0.69	B
66	Jackson Rd	Florin Perkins Rd	South Watt Ave	City of Sacramento/County	City Exempt Light Rail	E	2	Arterial M	10,414	0.58	A
67	Jackson Rd	South Watt Ave	Hedge Ave	County	County Urban	E	2	Arterial M	17,060	0.95	E
68	Jackson Rd	Hedge Ave	Mayhew Rd	County	County Urban	E	2	Arterial M	12,616	0.70	C
69	Jackson Rd	Mayhew Rd	Bradshaw Rd	County	County Urban	E	2	Arterial M	14,996	0.83	D
70	Jackson Rd	Bradshaw Rd	Excelsior Rd	County	County Urban	E	2	Arterial M	13,030	0.72	C
71	Jackson Rd	Excelsior Rd	Eagles Nest Rd	County	County Urban	E	2	Rural Hwy	10,478	0.46	D
72	Jackson Rd	Eagles Nest Rd	Sunrise Blvd	County	County Urban	E	2	Rural Hwy	9,976	0.44	D
73	Jackson Rd	Sunrise Blvd	Grant Line Rd	Rancho Cordova/County	Rancho Cordova	D	2	Rural Hwy	13,306	0.58	D
74	Kiefer Blvd	Florin Perkins Rd	South Watt Ave	City of Sacramento/County	City Exempt Light Rail	E	2	Arterial M	4,616	0.26	A
75	Kiefer Blvd	South Watt Ave	Mayhew Rd	County	County Urban	E	4	Arterial M	18,668	0.52	A
76	Kiefer Blvd	Mayhew Rd	Bradshaw Rd	County	County Urban	E	4	Arterial M	9,274	0.26	A
77	Kiefer Blvd	Bradshaw Rd	Happy Ln	County	County Urban	E	2	Arterial M	4,618	0.26	A
77.3	Kiefer Boulevard	Routier Ext	Happy Lane	County	County Urban	E	2	Arterial M	4,618	0.26	A
78	Kiefer Blvd	Zinfandel Dr	Sunrise Blvd	County	County Urban	E	2	Arterial M	656	0.04	A
79	Kiefer Blvd	Sunrise Blvd	Rancho Cordova Pkwy	Rancho Cordova	Rancho Cordova	D	2	Arterial M	2,786	0.15	A
80	Mather Blvd / Norden Ave	Von Karman St	Bleckely St	Rancho Cordova	Rancho Cordova	D	4	Arterial M	4,373	0.12	A
81	Mather Blvd	Bleckely St	Femoyer St	Rancho Cordova	Rancho Cordova	D	4	Arterial M	4,373	0.12	A
82	Mather Blvd	Femoyer St	Douglas Rd	Rancho Cordova/County	Rancho Cordova	D	2	Arterial M	4,373	0.24	A
83	Mather Blvd-Excelsior Rd	Douglas Rd	Kiefer Blvd	County	County Urban	E	2	Res Collector F	6,751	0.84	E
84	Mather Field Rd	US 50	Rockingham Dr	Rancho Cordova	Rancho Cordova	D	6	Arterial M	37,755	0.70	B
85	Mather Field Rd	Rockingham Dr	International Dr	Rancho Cordova	Rancho Cordova	D	6	Arterial M	37,520	0.69	B
86	Mather Field Rd	International Dr	Peter A McCuen Blvd	Rancho Cordova	Rancho Cordova	D	4	Arterial M	14,857	0.41	A
87	Mayhew Rd	Folsom Blvd	Goethe Rd	County	County Urban	E	2	Arterial M	6,977	0.39	A
88	Mayhew Rd	Goethe Rd	Kiefer Blvd	County	County Urban	E	2	Arterial L	6,593	0.44	A
89	Mayhew Rd	Jackson Rd	Fruitridge Rd	County	County Urban	E	2	Arterial L	1,616	0.11	A
90	Old Placerville Rd	Bradshaw Rd	Granby Dr	Rancho Cordova/County	Rancho Cordova	D	4	Arterial M	15,800	0.44	A
91	Old Placerville Rd	Granby Dr	Happy Ln	Rancho Cordova/County	Rancho Cordova	D	2	Arterial M	13,573	0.75	C
92	Old Placerville Rd	Happy Ln	Routier Rd	Rancho Cordova/County	Rancho Cordova	D	2	Arterial M	10,710	0.60	A

Bold values do not meet LOS policy.

Table 2.1
Existing Roadway Segment Levels of Service

ID	Roadway	Segment		Jurisdiction	Governing Jurisdiction / Area[1]	LOS Policy Criteria	Existing				
		From	To				Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service
93	Old Placerville Rd	Routier Rd	Rockingham Dr	Rancho Cordova/County	Rancho Cordova	D	4	Arterial M	10,710	0.30	A
94	Power Inn Rd	Folsom Blvd	14th Ave	City of Sacramento	City Exempt Light Rail	E	6	Arterial M	36,175	0.67	B
95	Rockingham Dr	Old Placerville Rd	Mather Field Rd	Rancho Cordova	Rancho Cordova	D	4	Arterial M	19,881	0.55	A
96	South Watt Ave	Folsom Blvd	Kiefer Blvd	County	County Urban	E	6	Arterial M	40,920	0.76	C
97	South Watt Ave	Kiefer Blvd	Jackson Rd	County	County Urban	E	5	Arterial M	32,415	0.90	E
98	South Watt Ave	Jackson Rd	Fruitridge Rd	City of Sacramento/County	City Default	D	2	Arterial M	25,832	1.44	**F**
99	South Watt Ave	Fruitridge Rd	Elder Creek Rd	City of Sacramento/County	City Default	D	2	Arterial M	21,567	1.20	**F**
100	South Watt Ave	Elder Creek Rd	Florin Rd	City of Sacramento/County	City Default	D	2	Arterial M	19,069	1.06	**F**
101	Sunrise Blvd	US 50	Folsom Blvd	Rancho Cordova	Rancho Cordova	D	7	Arterial M	54,500	1.01	**F**
102	Sunrise Blvd	Folsom Blvd	Trade Center Dr	Rancho Cordova	Rancho Cordova	D	6	Arterial M	49,500	0.92	**E**
103	Sunrise Blvd	Trade Center Dr	White Rock Rd	Rancho Cordova	Rancho Cordova	D	6	Arterial M	34,571	0.64	B
104.1	Sunrise Blvd	White Rock Rd	International Dr	Rancho Cordova	Rancho Cordova	D	6	Arterial M	25,811	0.48	A
104.2	Sunrise Blvd	International Dr	Rio Del Oro Pkwy	Rancho Cordova	Rancho Cordova	D	6	Arterial M	28,400	0.53	A
104.3	Sunrise Blvd	Rio Del Oro Pkwy	Douglas Rd	Rancho Cordova	Rancho Cordova	D	6	Arterial M	25,811	0.48	A
105	Sunrise Blvd	Douglas Rd	Kiefer Blvd	Rancho Cordova/County	Rancho Cordova	D	5	Arterial M	21,878	0.61	B
106	Sunrise Blvd	Kiefer Blvd	Jackson Rd	Rancho Cordova/County	Rancho Cordova	D	2	Arterial M	16,894	0.94	**E**
107	Sunrise Blvd	Jackson Rd	Florin Rd	County	County Urban	E	2	Rural S	11,181	0.56	D
108	Sunrise Blvd	Florin Rd	Grant Line Rd	County	County Urban	E	2	Rural S	7,752	0.39	D
109	Vineyard Rd	Gerber Rd	Calvine Rd	County	County Urban	E	2	Arterial M	5,515	0.31	A
110	Watt Ave	US 50	Folsom Blvd	City of Sacramento/County	City Exempt Light Rail	E	6	Arterial H	65,242	1.09	**F**
111	White Rock Rd	International Rd	Quality Dr	Rancho Cordova	Rancho Cordova	D	2	Arterial M	3,962	0.22	A
112	White Rock Rd	Quality Dr	Zinfandel Dr	Rancho Cordova	Rancho Cordova	D	4	Arterial M	11,200	0.31	A
113	White Rock Rd	Zinfandel Dr	Kilgore Rd	Rancho Cordova	Rancho Cordova	D	6	Arterial M	14,756	0.27	A
114	White Rock Rd	Kilgore Rd	Sunrise Blvd	Rancho Cordova	Rancho Cordova	D	5	Arterial M	14,756	0.41	A
115	White Rock Rd	Sunrise Blvd	Fitzgerald Rd	Rancho Cordova	Rancho Cordova	D	4	Arterial M	15,433	0.43	A
116	White Rock Rd	Fitzgerald Rd	Grant Line Rd	Rancho Cordova/County	Rancho Cordova	D	2	Rural NS	2,490	0.15	B
117	White Rock Rd	Grant Line Rd	Prairie City Rd	County	County Urban	E	4	Arterial M	9,400	0.26	A
118	Zinfandel Dr	US 50	White Rock Rd	Rancho Cordova	Rancho Cordova	D	7	Arterial M	45,228	0.84	D
119	Zinfandel Dr	White Rock Rd	International Rd	Rancho Cordova	Rancho Cordova	D	6	Arterial M	17,923	0.33	A
120	Zinfandel Dr	International Rd	Baroque Dr	Rancho Cordova	Rancho Cordova	D	6	Arterial M	7,595	0.14	A
121	Zinfandel Dr	Baroque Dr	City Limit	Rancho Cordova	Rancho Cordova	D	4	Arterial M	7,595	0.21	A
122	Zinfandel Dr	City Limit	Douglas Rd	County	County Urban	E	2	Arterial M	7,595	0.42	A
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd	County	County Urban	E	2	Arterial M	2,848	0.16	A

Bold values do not meet LOS policy.

Table 2.1
Existing Roadway Segment Levels of Service

ID	Roadway	Segment		Jurisdiction	Governing Jurisdiction / Area[1]	LOS Policy Criteria	Existing				
		From	To				Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service

Note: Gray shading indicates changes in travel lanes or facility type that the project is responsible to provide.

[1] The following classifications are used to determine daily roadway capacity:
Arterial L - Arterial, Low Access Control
Arterial M - Arterial, Moderate Access Control
Arterial H - Arterial, High Access Control
Rural Hwy - Rural 2-lane Highway
Rural S - Rural 2-lane Road, 24'-36' of pavement, Paved Shoulders
Rural NS - Rural 2-lane Road, 24'-36' of pavement, No Shoulders
Res Collector F - Residential Collector with Frontage
Res Collector NF - Residential Collector with No Frontage

Bold values do not meet LOS policy.

Table 2.2

Existing Intersection Levels of Service

	Intersection	Jurisdiction	Governing Jurisdiction / Area [1]	LOS Policy Criteria	AM Peak Hour			PM Peak Hour		
					Existing			Existing		
					Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)
1	Howe Ave & College Town Dr/US 50 WB Ramps	City of Sacramento	City Exempt Roadway	E	Signal	D	36.6	Signal	D	44.4
2	Howe Ave & US 50 EB Ramps	City of Sacramento	City Exempt Roadway	E	Signal	B	16.9	Signal	C	20.5
3	Power Inn Rd/Howe Ave & Folsom Blvd	City of Sacramento	City Exempt Roadway	E	Signal	D	39.1	Signal	D	55.0
4	Power Inn Rd & 14th Ave	City of Sacramento	City Default	D	Signal	C	31.5	Signal	D	39.6
5	Power Inn Rd & Fruitridge Rd	City of Sacramento	City Default	D	Signal	D	43.4	Signal	C	33.5
6	Jackson Rd/Notre Dame Dr. & Folsom Blvd.	City of Sacramento	City Exempt Roadway	E	Signal	D	36.8	Signal	C	32.1
7	Florin Perkins Rd/Julliard Dr. & Folsom Blvd	City of Sacramento	City Exempt Roadway	E	Signal	D	39.0	Signal	E	55.6
8	Florin Perkins Rd & Kiefer Blvd.	City of Sacramento	City Exempt Light Rail	E	Two-way stop			Two-way stop		
	Westbound Left Turn					*C*	*20.1*		*C*	*23.3*
	Westbound Right Turn					*B*	*13.3*		*B*	*12.6*
	Southbound Left Turn					*A*	*10.0*		*B*	*10.9*

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Table 2.2

Existing Intersection Levels of Service

	Intersection	Jurisdiction	Governing Jurisdiction / Area [1]	LOS Policy Criteria	AM Peak Hour			PM Peak Hour		
					Existing			Existing		
					Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)
9	Florin Perkins Rd & Jackson Rd	City of Sacramento	City Exempt Light Rail	E	Signal	D	51.5	Signal	D	54.1
10	Florin Perkins Rd & Fruitridge Rd	City of Sacramento	City Exempt Roadway	E	Signal	C	25.1	Signal	C	25.4
11	Florin Perkins Rd & Elder Creek Rd	City of Sacramento	City Exempt Roadway	E	Signal	C	25.7	Signal	C	26.2
12	Watt Ave & Folsom Blvd.	County	County Urban	E	Signal	E	66.2	Signal	E	71.9
13	S. Watt Ave. & Reith Ct/Manlove Rd	County	County Urban	E	Signal	B	19.6	Signal	D	54.1
14	S. Watt Ave & Kiefer Blvd.	County	County Urban	E	Signal	E	56.0	Signal	E	75.9
15	S. Watt Ave & Canberra Dr.	County	County Urban	E	Signal	B	11.5	Signal	A	9.7
16	S. Watt Ave & Jackson Rd	County	County Urban	E	Signal	E	62.5	Signal	E	66.4
17	S. Watt Ave & Fruitridge Rd	City of Sacramento / County	City Default	D	Signal	D	38.1	Signal	D	41.7
18	S. Watt Ave & Elder Creek Rd	City of Sacramento / County	City Default	D	Signal	E	62.7	Signal	E	68.8

Bold values do not meet LOS policy.

Table 2.2

Existing Intersection Levels of Service

	Intersection	Jurisdiction	Governing Jurisdiction / Area [1]	LOS Policy Criteria	AM Peak Hour			PM Peak Hour		
					Existing			Existing		
					Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)
20	Elk Grove Florin Rd/S. Watt Ave. & Florin Rd	County	County Urban	E	Signal	D	54.7	Signal	D	51.8
21	Elk Grove Florin Rd & Gerber Rd	County	County Urban	E	Signal	D	49.1	Signal	E	64.6
23	Hedge Ave & Jackson Rd	County	County Urban	E	Signal	D	35.1	Signal	D	37.3
24	Hedge Ave & Fruitridge Rd	County	County Urban	E	All-way stop	B	13.6	All-way stop	A	9.4
25	Hedge Ave & Elder Creek Rd	County	County Urban	E	All-way stop	C	15.9	All-way stop	B	11.6
26	Hedge Ave & Tokay Lane	County	County Urban	E	Two-way stop			Two-way stop		
	Northbound Left Turn			*E*		*A*	*0.0*		*A*	*0.0*
	Southbound Left Turn			*E*		*A*	*8.0*		*A*	*7.3*
	Eastbound			*E*		*B*	*12.2*		*B*	*10.2*
	Westbound			*E*		*B*	*11.1*		*A*	*9.6*
27	Hedge Ave & Florin Rd	County	County Urban	E	All-way stop	B	12.9	All-way stop	B	11.1
28	Mayhew Rd & Kiefer Blvd	County	County Urban	E	Signal	D	48.6	Signal	D	51.1

Bold values do not meet LOS policy.

Table 2.2

Existing Intersection Levels of Service

	Intersection	Jurisdiction	Governing Jurisdiction / Area [1]	LOS Policy Criteria	AM Peak Hour			PM Peak Hour		
					Existing			Existing		
					Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)
29	Mayhew Rd & Jackson Rd	County	County Urban	E	Two-way stop			Two-way stop		
	Northbound Through - Left Turn			*E*		*D*	*27.6*		*D*	*34.0*
	Northbound Right Turn			*E*		*B*	*11.8*		*C*	*15.0*
	Southbound			*E*		*C*	*18.3*		*C*	*24.9*
	Eastbound Left Turn			*E*		*A*	*8.9*		*A*	*8.4*
	Westbound Left Turn			*E*		*A*	*8.3*		*A*	*9.3*
30	Mayhew Rd & Fruitridge Rd	County	County Urban	E	Two-way stop			Two-way stop		
	Northbound Left Turn			*E*		*A*	*0.0*		*A*	*7.4*
	Eastbound			*E*		*A*	*9.2*		*A*	*9.2*

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Table 2.2

Existing Intersection Levels of Service

	Intersection	Jurisdiction	Governing Jurisdiction / Area [1]	LOS Policy Criteria	AM Peak Hour			PM Peak Hour		
					Existing			Existing		
					Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)
31	Mayhew Rd & Elder Creek Rd	County	County Urban	E	Two-way stop			Two-way stop		
	Northbound			*E*		*B*	*11.9*		*B*	*10.9*
	Southbound			*E*		*B*	*11.1*		*A*	*9.8*
	Eastbound Left Turn			*E*		*A*	*8.3*		*A*	*7.6*
	Westbound Left Turn			*E*		*A*	*7.5*		*A*	*0.0*
32	Woodring Dr & Zinfandel Dr	County	County Urban	E	Two-way stop			Two-way stop		
	Eastbound			*E*		*A*	*9.3*		*A*	*9.3*
	Northbound Left Turn			*E*		*A*	*0.0*		*A*	*0.0*
33	Bradshaw Rd & Folsom Blvd.	City of Rancho Cordova / County	Rancho Cordova	D	Signal	E	56.7	Signal	D	49.9
34	Bradshaw Rd & US 50 WB Ramps	City of Rancho Cordova / County	Rancho Cordova	D	Signal	B	15.9	Signal	B	15.2
35	Bradshaw Rd & US 50 EB Ramps	City of Rancho Cordova / County	Rancho Cordova	D	Signal	C	24.4	Signal	B	16.0
36	Bradshaw Rd & Old Placerville Rd	City of Rancho Cordova / County	Rancho Cordova	D	Signal	D	45.9	Signal	D	52.0
37	Bradshaw Rd & Kiefer Blvd	County	County Urban	E	Signal	D	45.7	Signal	E	66.2

Bold values do not meet LOS policy.

Table 2.2

Existing Intersection Levels of Service

	Intersection	Jurisdiction	Governing Jurisdiction / Area [1]	LOS Policy Criteria	AM Peak Hour			PM Peak Hour		
					Existing			Existing		
					Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)
38	Bradshaw Rd & Jackson Rd	County	County Urban	E	Signal	E	73.1	Signal	E	59.4
39	Bradshaw Rd & Elder Creek Rd	County	County Urban	E	Signal	D	36.8	Signal	D	36.1
40	Bradshaw Rd & Florin Rd	County	County Urban	E	Signal	D	38.1	Signal	D	53.6
41	Bradshaw Rd & Gerber Rd	County	County Urban	E	Signal	E	72.2	Signal	D	49.9
42	Happy Lane & Old Placerville Rd	City of Rancho Cordova / County	Rancho Cordova	D	Two-way stop			Two-way stop		
	Northbound Left Turn			*D*		*F*	*64.8*		*F*	*95.9*
	Northbound Right Turn			*D*		*D*	*30.6*		*C*	*15.4*
	Westbound Left Turn			*D*		*B*	*10.2*		*B*	*10.1*
45	Excelsior Rd & Jackson Rd	County	County Urban	E	Signal	D	36.7	Signal	D	40.3
46	Excelsior Rd & Elder Creek Rd	County	County Urban	E	Two-way stop			Two-way stop		
	Northbound Left Turn			*E*		*A*	*7.5*		*A*	*8.0*
	Eastbound			*E*		*C*	*18.6*		*B*	*12.3*

Bold values do not meet LOS policy.

Table 2.2

Existing Intersection Levels of Service

	Intersection	Jurisdiction	Governing Jurisdiction / Area [1]	LOS Policy Criteria	AM Peak Hour			PM Peak Hour		
					Existing			Existing		
					Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)
47	Excelsior Rd & Florin Rd	County	County Urban	E	All-way stop	C	24.9	All-way stop	B	12.5
48	Excelsior Rd & Gerber Rd/Birch Ranch Dr	County	County Urban	E	All-way stop	B	14.0	All-way stop	B	10.6
49	Mather Field Rd & US 50 WB Ramps	City of Rancho Cordova	Rancho Cordova	D	Signal	C	24.7	Signal	A	9.4
50	Mather Field Rd & US 50 EB Ramps	City of Rancho Cordova	Rancho Cordova	D	Signal	C	27.7	Signal	B	13.4
51	Mather Field Rd & Rockingham Dr	City of Rancho Cordova	Rancho Cordova	D	Signal	E	56.4	Signal	D	54.7
52	Mather Blvd & Douglas Rd	County	County Urban	E	All-way stop	E	39.3	All-way stop	C	15.5
53	Zinfandel Dr & US 50 WB Ramps	City of Rancho Cordova	Rancho Cordova	D	Signal	B	16.4	Signal	D	51.7
54	Zinfandel Dr & US 50 EB Ramps/Gold Center Dr	City of Rancho Cordova	Rancho Cordova	D	Signal	D	40.0	Signal	E	60.1
55	Zinfandel Dr & White Rock Rd	City of Rancho Cordova	Rancho Cordova	D	Signal	D	47.7	Signal	D	54.7
56	Zinfandel Dr & Data Dr	City of Rancho Cordova	Rancho Cordova	D	Signal	D	49.3	Signal	D	52.9

Bold values do not meet LOS policy.

Table 2.2

Existing Intersection Levels of Service

Intersection		Jurisdiction	Governing Jurisdiction / Area [1]	LOS Policy Criteria	AM Peak Hour			PM Peak Hour		
					Existing			Existing		
					Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)
57	Zinfandel Dr & International Dr	City of Rancho Cordova	Rancho Cordova	D	Signal	C	34.0	Signal	D	48.5
58	Zinfandel Dr & Douglas Rd	County	County Urban	E	Signal	E	55.5	Signal	D	54.2
60	Eagles Nest Rd & Jackson Rd	County	County Urban	E	Two-way stop			Two-way stop		
	Northbound			*E*		*C*	*22.0*		*C*	*23.8*
	Southbound			*E*		*B*	*13.9*		*C*	*22.0*
	Eastbound Left Turn			*E*		*A*	*8.8*		*A*	*7.9*
	Westbound Left Turn			*E*		*A*	*7.9*		*A*	*8.7*
61	Eagles Nest Rd & Florin Rd	County	County Urban	E	Two-way stop			Two-way stop		
	Northbound			*E*		*B*	*12.7*		*B*	*12.1*
	Southbound			*E*		*B*	*10.0*		*B*	*10.5*
	Eastbound Left Turn			*E*		*A*	*7.7*		*A*	*7.7*
	Westbound Left Turn			*E*		*A*	*0.0*		*A*	*7.6*
62	Sunrise Blvd & US 50 WB Ramps	City of Rancho Cordova	Rancho Cordova	D	Signal	D	44.7	Signal	B	19.7
63	Sunrise Blvd & US 50 EB Ramps	City of Rancho Cordova	Rancho Cordova	D	Signal	B	16.9	Signal	B	17.6

Bold values do not meet LOS policy.

Table 2.2

Existing Intersection Levels of Service

	Intersection	Jurisdiction	Governing Jurisdiction / Area [1]	LOS Policy Criteria	AM Peak Hour			PM Peak Hour		
					Existing			Existing		
					Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)
64	Sunrise Blvd & Folsom Blvd	City of Rancho Cordova	Rancho Cordova	D	Signal	D	54.4	Signal	D	48.6
65	Sunrise Blvd & White Rock Rd	City of Rancho Cordova	Rancho Cordova	D	Signal	D	47.8	Signal	D	51.6
66	Sunrise Blvd & International Dr/Monier Circle	City of Rancho Cordova	Rancho Cordova	D	Signal	D	47.8	Signal	D	45.8
67	Sunrise Blvd & Douglas Rd	City of Rancho Cordova	Rancho Cordova	D	Signal	D	51.7	Signal	D	46.5
68	Sunrise Blvd & Chrysanthy Blvd	City of Rancho Cordova / County	Rancho Cordova	D	Signal	C	27.0	Signal	C	21.0
69	Sunrise Blvd & Kiefer Blvd	City of Rancho Cordova / County	Rancho Cordova	D	Signal	D	53.6	Signal	C	27.0
70	Sunrise Blvd & Jackson Rd	City of Rancho Cordova / County	Rancho Cordova	D	Signal	E	57.0	Signal	D	47.2
71	Sunrise Blvd & Florin Rd	County	County Urban	E	Signal	B	11.3	Signal	D	48.3
72	Sheldon Lake Dr/Sunrise Blvd & Grant Line Rd	County [Connector JPA]	County [Connector JPA]	E [C]	Signal	D	43.2	Signal	D	40.7
73	Hazel Ave & Tributary Point Dr/US 50 WB Off-ramp	County	County Urban	E	Signal	C	31.2	Signal	D	41.4

Bold values do not meet LOS policy.

Table 2.2

Existing Intersection Levels of Service

Intersection		Jurisdiction	Governing Jurisdiction / Area [1]	LOS Policy Criteria	AM Peak Hour			PM Peak Hour		
					Existing			Existing		
					Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)
74	Hazel Ave & US 50 EB Ramps	City of Rancho Cordova / County	Rancho Cordova	D	Signal	C	20.6	Signal	C	29.9
75	Hazel Ave & Folsom Blvd	City of Rancho Cordova / County	Rancho Cordova	D	Signal	D	51.7	Signal	D	46.7
76	Prairie City Rd & White Rock Rd	City of Folsom / County [Connector JPA]	Folsom / [Connector JPA]	C [C]	Signal	B	19.2	Signal	B	15.0
77	Grant Line Rd & White Rock Rd	County [Connector JPA]	County [Connector JPA]	E [C]	Signal	B	10.9	Signal	B	11.2
78	Grant Line Rd & Douglas Rd	City of Rancho Cordova / County [Connector JPA]	Rancho Cordova [Connector JPA]	D [C]	All-way stop	C	15.2	All-way stop	B	12.3
79	Grant Line Rd & Kiefer Blvd	City of Rancho Cordova / County [Connector JPA]	Rancho Cordova [Connector JPA]	D [C]	All-way stop	B	11.4	All-way stop	B	10.5
80	Grant Line Rd & Jackson Rd	City of Rancho Cordova / County [Connector JPA]	Rancho Cordova [Connector JPA]	D [C]	Signal	E	74.0	Signal	E	78.9
81	Watt Ave & US-50 EB Ramps	City of Sacramento / County	City Exempt Light Rail	E	Signal	B	13.0	Signal	B	14.9

Bold values do not meet LOS policy.

Table 2.2

Existing Intersection Levels of Service

	Intersection	Jurisdiction	Governing Jurisdiction / Area [1]	LOS Policy Criteria	AM Peak Hour			PM Peak Hour		
					Existing			Existing		
					Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)
82	Watt Ave & US-50 WB Ramps	City of Sacramento / County	City Default	D	Signal	C	32.9	Signal	C	28.6
83	Mayhew Rd & Folsom Blvd.	County	County Urban	E	Signal	B	19.8	Signal	C	20.1
84	65th Street Expy & Fruitridge Rd	City of Sacramento	City Default	D	Signal	C	31.2	Signal	D	35.3
85	Power Inn Rd & Elder Creek Rd	City of Sacramento	City Exempt Roadway	E	Signal	D	35.2	Signal	D	36.3
86	Power Inn Rd & Florin Rd	County	County Urban	E	Signal	D	36.3	Signal	D	45.9
87	Florin Perkins Rd & Florin Rd	County	County Urban	E	Signal	D	36.7	Signal	C	32.5
88	Bradshaw Rd & Calvine Rd	City of Elk Grove / County	Elk Grove	D	Signal	C	30.5	Signal	D	36.9
89	Vineyard Rd & Calvine Rd	City of Elk Grove / County	Elk Grove	D	Signal	C	30.8	Signal	C	34.9
90	Excelsior Rd & Calvine Rd	City of Elk Grove / County	Elk Grove	D	All-way stop	C	16.6	All-way stop	B	13.0
91	Grant Line Rd & Eagles Nest Rd/Sloughhouse Rd	County [Connector JPA]	County [Connector JPA]	E [C]	Signal	D	51.7	Signal	D	46.5

Bold values do not meet LOS policy.

Table 2.2

Existing Intersection Levels of Service

	Intersection	Jurisdiction	Governing Jurisdiction / Area [1]	LOS Policy Criteria	AM Peak Hour			PM Peak Hour		
					Existing			Existing		
					Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)
92	Grant Line Rd & Calvine Rd	City of Elk Grove / County [Connector JPA]	Elk Grove [Connector JPA]	D [C]	Signal	C	21.4	Signal	C	24.0
93	Grant Line Rd & Dwy/Wilton Rd	City of Elk Grove / Connector JPA	Elk Grove [Connector JPA]	D [C]	Signal	E	65.9	Signal	E	64.8
94	Grant Line Rd & Bond Rd/Wrangler Dr	City of Elk Grove / Connector JPA	Elk Grove [Connector JPA]	D [C]	Signal	C	33.3	Signal	D	46.4

[1] The following classifications are used to determine the applicable LOS Policy:
County Rural - Sacramento County, Outside Urban Service Boundary
County Urban - Sacramento County, Within Urban Service Boundary
City Default - City of Sacramento, Base Level of Service Standard
City Exempt Roadway - City of Sacramento, Roadways Exempt from Base Level of Service Standard
City Exempt Light Rail - City of Sacramento, Within 1/2 Mile Walking Distance of Light Rail Station

Bold values do not meet LOS policy.

The following intersections do not meet the level of service policies:

- South Watt Avenue and Elder Creek Road - a.m. and p.m. peak hours
- Bradshaw Road and Folsom Boulevard - a.m. peak hour
- Happy Lane and Old Placerville Road - northbound left turn - a.m. and p.m. peak hours
- Mather Field Road and Rockingham Drive - a.m. peak hour
- Zinfandel Drive and US 50 Eastbound Ramps / Gold Center Drive - p.m. peak hour
- Sunrise Boulevard and Jackson Road - a.m. peak hour
- Grant Line Road and Jackson Road - a.m. and p.m. peak hours
- Grant Line Road and Wilton Road - a.m. and p.m. peak hours

2.6.3 U.S. 50 Freeway

2.6.3.1 Freeway Mainline

Table 2.3 summarizes a.m. and p.m. peak hour US 50 freeway mainline operations. Details of the analysis are included in the technical appendix. The following locations exhibit LOS F conditions:

- Eastbound
    - Stockton Boulevard to 59th Street - a.m. and p.m. peak hours
    - Bradshaw Road to Mather Field Road - a.m. peak hour
    - Zinfandel Drive to Hazel Avenue - p.m. peak hour
- Westbound
    - Mather Field Road to Watt Avenue - a.m. peak hour
    - Watt Avenue to 59th Street - a.m. and p.m. peak hours
    - 59th Street to SR 51 / SR 99 - p.m. peak hour

2.6.3.2 Freeway Ramp Junctions / Weaving

Table 2.4 summarizes a.m. and p.m. peak hour freeway operations at ramp junctions and weaving areas. Details of the analysis are included in the technical appendix. The following locations exhibit LOS F conditions:

- Eastbound
    - Watt Avenue Entrance Merge - a.m. peak hour
    - Mather Field Road to Zinfandel Drive weave - a.m. peak hour
- Westbound
    - Sunrise Boulevard Entrance - a.m. peak hour

2.6.3.3 Freeway Ramp Intersection Queuing

Table 2.5 summarizes a.m. and p.m. peak hour freeway ramp intersection queuing. None of the existing queues extends onto the freeway mainline.

Table 2.3: Existing Peak Hour Freeway Mainline Level of Service

Direc-tion	Location	Mixed Flow Lanes	AM Peak Hour			PM Peak Hour		
			Volume	Density	LOS	Volume	Density	LOS
East-bound US 50	SR 99 / SR 51 to Stockton Boulevard	5	7,068	23.46	C	6,415	23.33	C
	Stockton Boulevard to 59th Street	5	7,470	35.05	**F**	7,228	41.46	**F**
	59th Street to 65th Street	4	6,767	27.40	D	6,641	28.36	D
	65th Street to Howe Avenue	5	7,962	28.05	D	7,562	29.71	D
	Howe Avenue to Watt Avenue	4	7,405	31.77	D	7,602	33.01	D
	Watt Avenue to Bradshaw Road	4	7,935	27.22	D	7,176	24.80	C
	Bradshaw Rd to Mather Field Rd	4	7,725	45.10	**F**	7,366	25.50	C
	Mather Field Rd to Zinfandel Drive	5	7,275	19.18	C	7,224	20.13	C
	Zinfandel Drive to Sunrise Blvd	4	5,121	20.08	C	6,649	42.12	**F**
	Sunrise Boulevard to Hazel Avenue	3	4,985	27.67	D	5,323	37.30	**F**
West-bound US 50	Hazel Avenue to Sunrise Boulevard	3	6,068	32.91	D	4,370	23.17	C
	Sunrise Blvd to Zinfandel Drive	4	7,502	33.31	D	4,762	19.30	C
	Zinfandel Drive to Mather Field Rd	5	7,548	21.96	C	5,765	14.85	B
	Mather Field Rd to Bradshaw Road	4	7,859	44.40	**F**	6,939	28.66	D
	Bradshaw Road to Watt Avenue	4	7,488	53.92	**F**	6,466	32.91	D
	Watt Avenue to Howe Avenue	5	7,376	53.44	**F**	6,234	28.04	**F**
	Howe Avenue to 65th Street	5	8,157	35.68	**F**	7,407	41.55	**F**
	65th Street to 59th Street	4	8,278	44.85	**F**	7,358	51.56	**F**
	59th Street to Stockton Boulevard	5	9,115	29.39	D	7,945	32.31	**F**
	Stockton Boulevard to SR 99 / SR 51	5	8,546	31.89	D	8,136	33.25	**F**

Density = passenger cars per hour per lane (pc/ph/pl). **Bold** values denote level of service "F" conditions.

Source: *DKS Associates, 2018.*

Table 2.4: Existing Peak Hour Freeway Ramp Junction/Weaving Level of Service						
Direc-tion	**Location**	**Junction Type**	**A.M. Peak Hour**		**P.M. Peak Hour**	
			Ramp Volume	**LOS**	**Ramp Volume**	**LOS**
East-bound US 50	Northbound 65th Street Slip Entrance	Weave	765	D	653	C
	Howe Avenue / Hornet Drive Exit		1,631		1,417	
	Southbound Howe Avenue Loop Entrance	One-Lane Merge	484	C	881	C
	Northbound Howe Avenue Slip Entrance	One-Lane Merge	419	C	431	C
	Watt Avenue Exit	Two-Lane Diverge	1,317	B	1,634	B
	Watt Avenue Entrance	One-Lane Merge	2,134	**F**	1,724	D
	Bradshaw Road Exit	Two-Lane Diverge	1,520	B	1,228	B
	Southbound Bradshaw Road Loop Entrance	One-Lane Merge	220	C	422	C
	Northbound Bradshaw Road Slip Entrance	One-Lane Merge	971	C	918	C
	Mather Field Road Exit	Two-Lane Diverge	1,266	B	1,062	A
	Southbound Mather Field Road Loop Entrance	One-Lane Merge	125	C	101	B
	Northbound Mather Field Road Slip Entrance	Weave	317	**F**	816	C
	Zinfandel Drive Exit		2,932		1,452	
	Southbound Zinfandel Drive Loop Entrance	One-Lane Merge	182	B	129	C
	Northbound Zinfandel Drive Slip Entrance	One-Lane Merge	348	B	540	C
	Sunrise Boulevard Exit	Major Diverge	1,773	C	1,959	D
	Sunrise Boulevard Entrance	One-Lane Merge	992	C	889	D
	Hazel Avenue Exit	Two-Lane Diverge	933	B	1,541	C
	Hazel Avenue Entrance	Weave	804	C	945	C
	Aerojet Road Exit		241		55	

Table 2.4: Existing Peak Hour Freeway Ramp Junction/Weaving Level of Service						
Direc-tion	**Location**	**Junction Type**	**A.M. Peak Hour**		**P.M. Peak Hour**	
			Ramp Volume	**LOS**	**Ramp Volume**	**LOS**
West-bound US 50	Hazel Avenue Exit	Two-Lane Diverge	631	A	869	A
	Northbound Hazel Avenue Loop Entrance	One-Lane Merge	160	B	600	B
	Southbound Hazel Avenue Slip Entrance	One-Lane Merge	1,550	B	800	B
	Sunrise Boulevard Exit	One-Lane Diverge	749	E	758	D
	Sunrise Blvd Entrance	Lane Addition	2,183	**F**	1,656	D
	Zinfandel Drive Exit	One-Lane Diverge	1,034	E	608	C
	Northbound Zinfandel Drive Loop Entrance	Lane Addition	585	B	1,197	B
	Southbound Zinfandel Drive Slip Entrance	One-Lane Merge	442	C	561	B
	Mather Field Road Exit	One-Lane Drop	1,093	C	556	A
	Northbound Mather Field Road Loop Entrance	One-Lane Merge	515	B	861	B
	Southbound Mather Field Road Slip Entrance	One-Lane Merge	387	B	380	B
	Bradshaw Road Exit	Two-Lane Diverge	1,236	B	1,327	B
	Northbound Bradshaw Road Loop Entrance	One-Lane Merge	914	D	910	C
	Southbound Bradshaw Road Slip Entrance	One-Lane Merge	338	D	590	C
	Watt Avenue Exit	Major Diverge	1,373	D	1,188	C
	Northbound Watt Avenue Entrance	One-Lane Merge	820	D	943	C
	Southbound Watt Avenue Slip Entrance	Lane Addition / Weave	1,232	C	1,317	D
	Howe Avenue Exit	Major Diverge / Weave	1,531	D	1,419	
	Northbound Howe Avenue Loop Entrance	One-Lane Merge	654	D	602	C
	Southbound Howe Avenue Slip Entrance	One-Lane Merge	574	C	574	C

Bold values denote level of service "F" conditions.

Source: *DKS Associates, 2018.*

Table 2.5: Existing Peak Hour Freeway Ramp Termini Queuing

Direction	US 50 Exit Ramp	Available Storage Length (feet / lane)			Maximum Queue Length (feet / lane)					
					Existing AM Peak Hour			Existing PM Peak Hour		
		L	T	R	L	T	R	L	T	R
Eastbound US-50	Howe Avenue	765	-	765	200	-	378	224	-	247
	Watt Avenue	1,500	-	1,500	179	-	201	254	-	181
	Bradshaw Road	1,250	-	1,250	198	-	509	164	-	414
	Mather Field Road	1,385	-	1,385	207	-	554	271	-	61
	Zinfandel Drive	1,025	1,025	1,025	218	810	746	430	361	131
	Sunrise Boulevard	1,695	-	1,695	283	-	184	360	-	76
	Hazel Avenue	1,310	-	1,310	317	-	76	808	-	29
Westbound US-50	Hazel Avenue	1,995		1,995	271		48	281	271	499
	Sunrise Boulevard	1,540	-	1,540	134	-	165	133	-	172
	Zinfandel Drive	1,065	-	1,065	390	-	68	132	-	199
	Mather Field Road	1,335	-	1,335	594	-	538	222	-	97
	Bradshaw Road	1,330	-	1,330	326	-	107	389	-	31
	Watt Avenue	1,480	-	1,480	147	-	448	94	-	425
	Howe Avenue	1,355	1,355	1,355	192	412	123	241	412	239

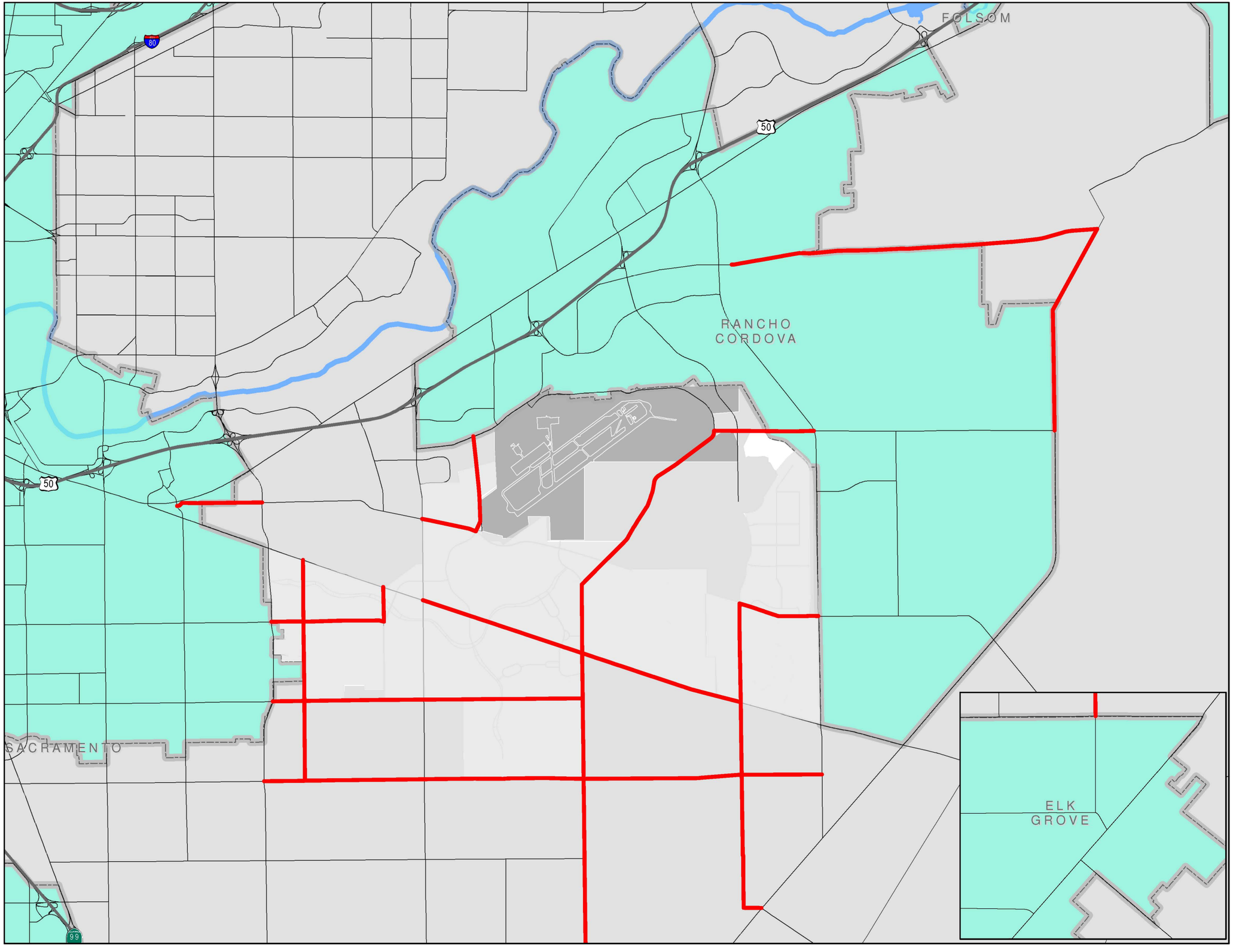
L = left turn movement, T = through movement, R = right turn movement

Source: *DKS Associates, 2018.*

2.6.4 Rural Roadway Functionality

Figure 2.5 shows rural roadway segments that currently do not meet the County standard of 12-foot vehicle lanes with 6-foot paved shoulders. Sacramento County is currently the only jurisdiction that has policies regarding the functionality of rural roadways, therefore the functionality of rural roadways in other jurisdictions was not considered in the traffic study. **Table 2.6** summarizes substandard County rural roadways in the study area.

FIGURE 2.5
EXISTING SUBSTANDARD ROADWAYS



Legend

- Substandard Roadways
- Cities
- Mather Airport

Table 2.6
Existing Substandard Roadway Segments

ID	Roadway	Segment		Jurisdiction	Existing Substandard Roadways			
		From	To		Travel Lanes	Pavement (ft)	Substandard? [1]	Existing Volume
15	Douglas Rd	Mather Blvd	Zinfandel Dr	County	2	23	Yes	6,635
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd	Rancho Cordova/County	2	23	Yes	8,369
19	Eagles Nest Rd	Kiefer Blvd	Jackson Rd	County	2	20	Yes	740
20	Eagles Nest Rd	Jackson Rd	Florin Rd	County	2	<21	Yes	517
21	Eagles Nest Rd	Florin Rd	Grant Line Rd	County	2	<21	Yes	189
25	Elder Creek Rd	South Watt Ave	Hedge Ave	County	2	23	Yes	5,576
26	Elder Creek Rd	Hedge Ave	Mayhew Rd	County	2	23	Yes	5,797
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd	County	2	23	Yes	5,355
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd	County	2	23	Yes	2,158
30	Excelsior Rd	Kiefer Blvd	Jackson Rd	County	2	22	Yes	3,716
31	Excelsior Rd	Jackson Rd	Elder Creek Rd	County	2	<21	Yes	5,075
32	Excelsior Rd	Elder Creek Rd	Florin Rd	County	2	<21	Yes	4,203
33	Excelsior Rd	Florin Rd	Gerber Rd	County	2	<21	Yes	5,423
34	Excelsior Rd	Gerber Rd	Calvine Rd	County	2	<21	Yes	4,229
39	Florin Rd	South Watt Ave	Hedge Ave	County	2	22	Yes	7,718
40	Florin Rd	Hedge Ave	Mayhew Rd	County	2	22	Yes	6,312
41	Florin Rd	Mayhew Rd	Bradshaw Rd	County	2	22	Yes	6,317
42	Florin Rd	Bradshaw Rd	Excelsior Rd	County	2	22	Yes	3,478
43	Florin Rd	Excelsior Rd	Sunrise Blvd	County	2	22	Yes	3,835
48	Fruitridge Rd	South Watt Ave	Hedge Ave	City of Sacramento/ County	2	22	Yes	2,890
49	Fruitridge Rd	Hedge Ave	Mayhew Rd	County	2	22	Yes	1,790
50	Grant Line Rd	White Rock Rd	Douglas Rd	Rancho Cordova/County	2	22	Yes	7,189
58	Happy Ln	Old Placerville Rd	Kiefer Blvd	County	2	22	Yes	4,635
59	Hedge Ave	Jackson Rd	Fruitridge Rd	County	2	22	Yes	3,061
60	Hedge Ave	Fruitridge Rd	Elder Creek Rd	City of Sacramento/County	2	22	Yes	3,737
61	Hedge Ave	Elder Creek Rd	Florin Rd	County	2	22	Yes	2,722

Table 2.6
Existing Substandard Roadway Segments

ID	Roadway	Segment		Jurisdiction	Existing Substandard Roadways			
		From	To		Travel Lanes	Pavement (ft)	Substandard? [1]	Existing Volume
70	Jackson Rd	Bradshaw Rd	Excelsior Rd	County	2	26	Yes	13,030
71	Jackson Rd	Excelsior Rd	Eagles Nest Rd	County	2	26	Yes	10,478
74	Kiefer Blvd	Florin Perkins Rd	South Watt Ave	City of Sacramento/County	2	22	Yes	4,616
77	Kiefer Blvd	Bradshaw Rd	Happy Ln	County	2	22	Yes	4,618
78	Kiefer Blvd	Zinfandel Dr	Sunrise Blvd	County	2	22	Yes	656
83	Mather Blvd-Excelsior Rd[4]	Douglas Rd	Kiefer Blvd	County	2	22	Yes	6,751
89	Mayhew Rd	Jackson Rd	Fruitridge Rd	County	2	22	Yes	1,616
116	White Rock Rd	Fitzgerald Rd	Grant Line Rd	Rancho Cordova/County	2	20	Yes	2,490
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd	County	2	<21	Yes	2,848

Note: Gray shading indicates changes in travel lanes or facility type that the project is responsible to provide. For all roadway segments to be widened, the project is responsible to build the entire roadway to County standards.

[1] Substandard rural roads are defined as rural, 2-lane roadway segments with travel lanes narrower than 12 feet and/or roadside shoulders narrower than 6 feet.

[2] Functionality impacts are triggered when a substandard rural road increases over a threshold of 6,000 ADT, or for a roadway already above 6,000 ADT, increases by more than 600 ADT.

[3] The potential for an impact exists should the project generate traffic volumes on the roadway exceeding 6,000 ADT, or increasing more than 600 ADT on a roadway already above 6,000 ADT, prior to the construction of roadway improvements.

[4] Excluding the roadway segment that is within the developed community of Independence at Mather.

[5] The functionality impact is mitigated by improving the roadway to County standards, including widening travel lanes to 12 feet and/or widening or providing paved shoulders to 6 feet.

3. EXISTING PLUS JACKSON TOWNSHIP PROJECT (ALTERNATIVE 2)

3.1 JACKSON TOWNSHIP PROJECT (ALTERNATIVE 2) DESCRIPTION

As illustrated previously in Figure 1.1, the Jackson Township project is located in unincorporated Sacramento County, generally east of the City of Sacramento and south of the City of Rancho Cordova and Mather Airport. It is bounded on the south by Jackson Road (SR 16) and on the west by Excelsior Road. The north boundary is near the future Kiefer Boulevard, while the east boundary is west of Eagles Nest Road.

3.1.1 Land Use

Table 3.1 summarizes the Jackson Township land use for Alternative 2. The SACSIM model (used to estimate travel demand by travel mode) requires estimates of the number and demographics of people who would live in each household as well as key social/economic characteristics of each household. SACOG helped estimate the required household demographics based on the number housing units by density category and detailed local Census data compiled by housing types.

SACSIM also requires employment by type for each parcel in the Jackson Township project. The applicant provided number of acres and square feet by non-residential category on each parcel. Employment estimates were then estimated using average square feet per employee and per student. The total employment in Jackson Township (Alt. 2) was estimated to be about 5,833.

The model also requires the estimated enrollment at each school within the Jackson Township project. The total enrollment for grades K-12 was estimated at about 6,000 students. Some of those students would come from housing units outside the Jackson Township project.

3.1.2 Transportation Network

3.1.2.1 Roadway Segments and Intersections

Figure 3.1 illustrates the Jackson Township project transportation network. The Jackson Township project would widen and / or complete many roadways that cross or border the site, and would include new roadways to serve the proposed land use. Sections 3.4.1 and 3.4.2 include information regarding the roadway segment and intersection improvements that are considered part of the Jackson Township project.

3.1.2.2 Pedestrian and Bicycle Facilities

Figure 3.2 illustrates the proposed bikeway plan of the Jackson Township project. The roadways within the Jackson Township project would meet County standards, which would provide sidewalks and on- street (Class II) bike lanes on all collector, arterial and thoroughfare roadways. The Jackson Township project also provides several off-street (Class I) multi-purpose trails.

Table 3.1: Land Use Summary for the Jackson Township Project (Alternative 2)						
		Residential			Non-Residential	
Land Use Category	Acres	Density Range	Ave Density	Dwelling Units	Floor Area Ratio	Estimated Square Feet
Low Density	382.6	1.0 – 10.9	6.0	2,295		
Medium Density	124.5	11.0 – 19.9	10.0	1,245		
High Density	82.0	20.0 – 30.0	25.0	2,050		
High Density Bonus Units				76		
General Commercial	59.7				0.25	650,100
Community Commercial	16.2				0.25	176,400
Mixed Use	19.7			100	0.50	429,000
Office	35.2				0.50	766,600
Park	79.1					
Open Space	330.3					
Elementary School	30.0					
High School/Middle School	70.0					
Other Public/Quasi-Public	2.5					
Primary Roadways	84.5					
Agriculture (Ag Res)	74.7			448		
Total	**1,391.0**			**6,214**		**2,022,100**
Source: *Project Applicant*						

FIGURE 3.1
EXISTING PLUS JACKSON TOWNSHIP (ALTERNATIVE 2) ROADWAY NETWORK

Legend

- 2 Lanes
- 3 Lanes
- 4 Lanes
- 5 Lanes
- 6 Lanes
- 7 Lanes
- Cities
- Mather Airport

FIGURE 3.2
PROPOSED BIKEWAY MASTER PLAN
JACKSON TOWNSHIP
(ALTERNATIVE 2)

Legend

- Bicycle Paths (Class I)
- Bicycle Lanes (Class II)
- Cities
- Mather Airport

3.1.2.3 Transit System

Consistent with Sacramento County's General Plan policy LU-120, the Jackson Township project incorporates higher density land uses and mixed uses along transportation corridors to help support transit use. However, as described in Section 2.2, existing transit service is very limited near the Jackson Township project. The transit provider for the area, Sacramento Regional Transit (RT), has developed a long-range transit plan that anticipates three additional high frequency transit lines in the general area by the year 2035. However, even with this additional transit network, the Jackson Township project would likely not meet the County's General Plan policy.

To comply with the County's General Plan Policy LU-120, a separate planning effort involving staff from Sacramento County, RT, DKS, and the applicants of the FOUR PROJECTS was conducted to define an appropriate transit network and frequency that could serve the proposed development in the Jackson Corridor consistent with the intent of the County's policies.

An important consideration in the development of a transit network for the Jackson Corridor is that there are four major development projects proposed in the Jackson Corridor (FOUR PROJECTS) The transit planning effort needed to define standalone transit systems for each of the FOUR PROJECTS that would not only serve the transit needs of each of the FOUR PROJECTS independently, but would also serve as cohesive and complementary transit system units that could operate efficiently together should more than one of the FOUR PROJECTS be approved for development.

A series of transit networks and service frequencies were developed and tested using the SACSIM model with the objective of optimizing transit ridership and the number of boardings. Utilizing RT's performance criteria for evaluating the effectiveness of the various transit lines and service frequencies, an optimum transit network and frequency was developed for the Jackson Corridor.

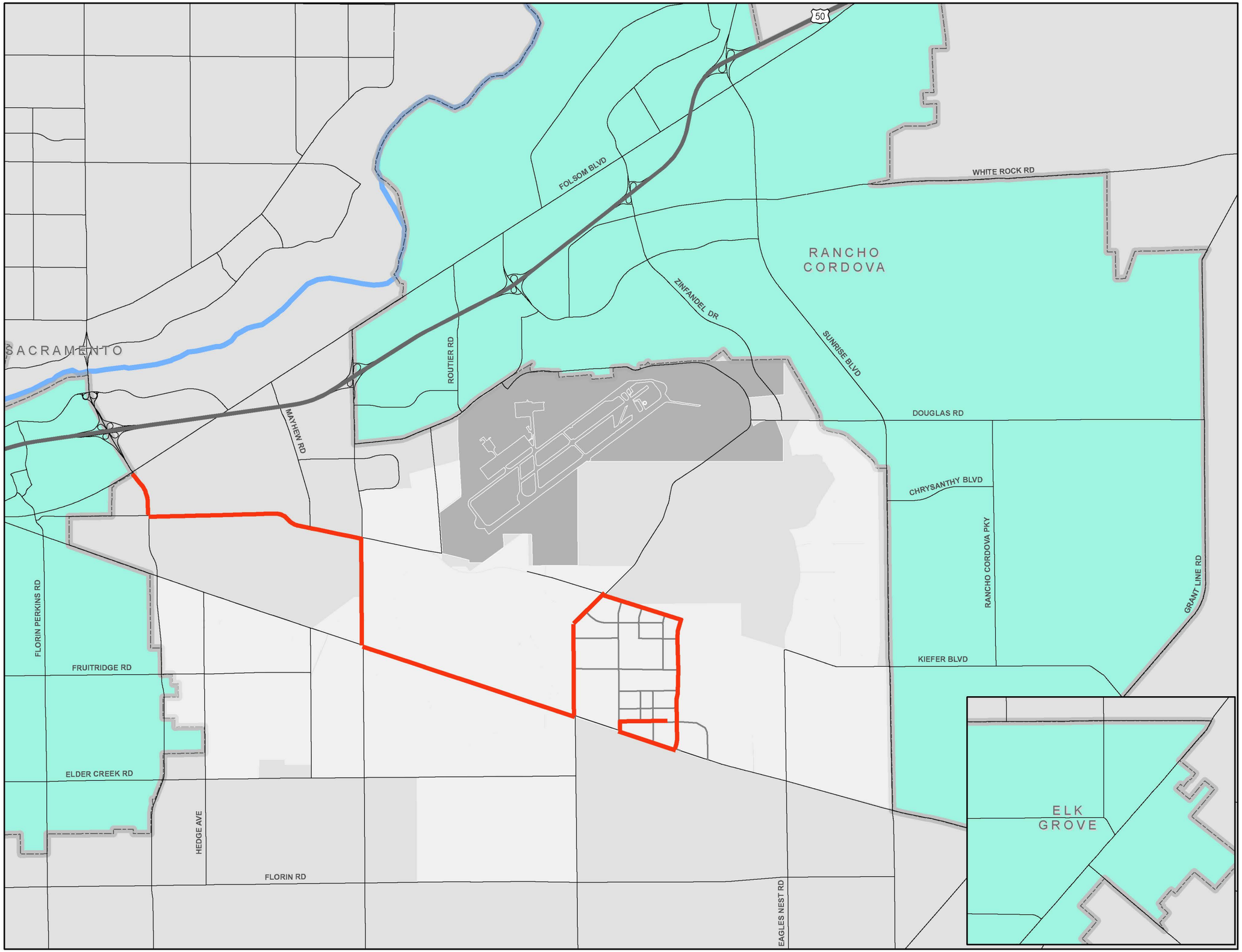
The planning effort resulted in four transit lines that would serve the FOUR PROJECTS in the Jackson Corridor at a frequency of 15 minutes during the peak commute hours (approximately 6-9 AM and 3-6 PM) and 30 minutes during off-peak service hours (approximately 9AM-3PM and 6PM-8PM) on weekdays. **Figure 3.3** illustrates the proposed transit system for the Jackson Township project, which represents a portion of the ultimate transit system that would serve the FOUR PROJECTS. The combined transit system for the FOUR PROJECTS is discussed and illustrated in Section 4.1.2.3.

The proposed transit system for the Jackson Township project has been assumed as an attribute of the Jackson Township project and has been included in the traffic modeling for this traffic analysis. The assumed transit routes and service frequency would be required at full development of the Jackson Township project. The full level of transit service would not achieve adequate transit ridership during the early stages of development. Thus the ultimate transit service, like the roadway system serving the Jackson Township project, must be phased with development of the Jackson Township project.

FIGURE 3.3
PROJECT TRANSIT NETWORK
EXISTING PLUS JACKSON TOWNSHIP
(ALTERNATIVE 2)

Legend

- Kiefer Jackson Local Route
- Cities
- Mather Airport



3.2 TRIP GENERATION

The SACSIM model that has been utilized for the transportation forecasts in this analysis estimated trip generation of the Jackson Township project. **Table 3.2** summarizes the person trip generation. The Jackson Township project would generate over 15,000 daily work person trip ends, and over 112,000 daily person trip ends for all trip purposes.

Table 3.3 summarizes the estimated mode choice for the Existing plus Jackson Township project scenario. About 84.1 percent of all person trips are expected to be accommodated by automobile. Transit will serve about 1.1 percent of all trips, while walk and bike modes will accommodate about 14.8 percent of all trips. The mode choice assumes full implementation of the project's pedestrian and bicycle systems.

Table 3.4 summarizes the vehicular (auto) trip generation of the Jackson Township project. The Jackson Township project is estimated to generate about 71,000 daily vehicle trip ends. It should be noted that more than one person trip may be accommodated by a vehicle trip (e.g. carpooling). Over 20,000 of the daily vehicle trip ends will be associated with trips with both an origin and destination within the Jackson Township project, over 28 percent of the trip ends. The internal trip ends represent about 10,200 daily vehicle trips (one-half the number of internal trip ends). The Jackson Township project will generate over 50,000 external vehicle trips that have an origin or destination inside the Jackson Township project but the other end of the trip is outside the Jackson Township project. Table 3.4 also shows the vehicle trips generated during the a.m. and p.m. peak hours.

3.3 TRIP DISTRIBUTION

The distribution of trips associated with development on the Jackson Township project site was derived utilizing SACSIM, incorporating the proposed land use and access locations associated with the Jackson Township project site. Trip distribution varies by land use and time period. **Figure 3.4** illustrates the overall trip distribution of daily Jackson Township project trips with the Existing Plus Jackson Township project scenario. The highest percentages of Jackson Township project traffic are accommodated on Jackson Road and Excelsior Road.

3.4 OPERATIONS ANALYSIS AND IMPACTS

For purposes of this analysis, full development of the Jackson Township project is assumed to occur "instantaneously." In this manner, the traffic and impacts associated with the Jackson Township project can be directly compared to known and measured conditions. Existing scenario impacts are determined by comparing the traffic operating conditions associated with the Jackson Township project with the traffic operating conditions associated with the existing (without development) conditions, and comparing the change to the thresholds of significance. **Figure 3.5** illustrates the resultant traffic operating conditions.

Table 3.2: Estimated Daily Person Trip Generation (Existing Plus Project Scenario) Jackson Township (Alternative 2) Specific Plan

Trip Purpose	Daily Person Trip Ends
Work Trips	15,508
Non-Work Trips	99,693
All Trip Purposes	112,200

Source: *DKS Associates, 2018.*

Table 3.3: Mode Split (Existing Plus Project Scenario) Jackson Township (Alternative 2) Specific Plan

Mode	Percentage of Person Trips by Trip Purpose		
	Work Trips	Non-Work Trips	All Trip Purposes
Auto - SOV	84.7%	43.2%	48.9%
Auto - HOV	908%	39.3%	35.2%
Transit	2.2%	1.0%	1.1%
Walk	2.9%	15.7%	14.0%
Bike	0.3%	0.9%	0.8%

Source: *DKS Associates, 2018.*

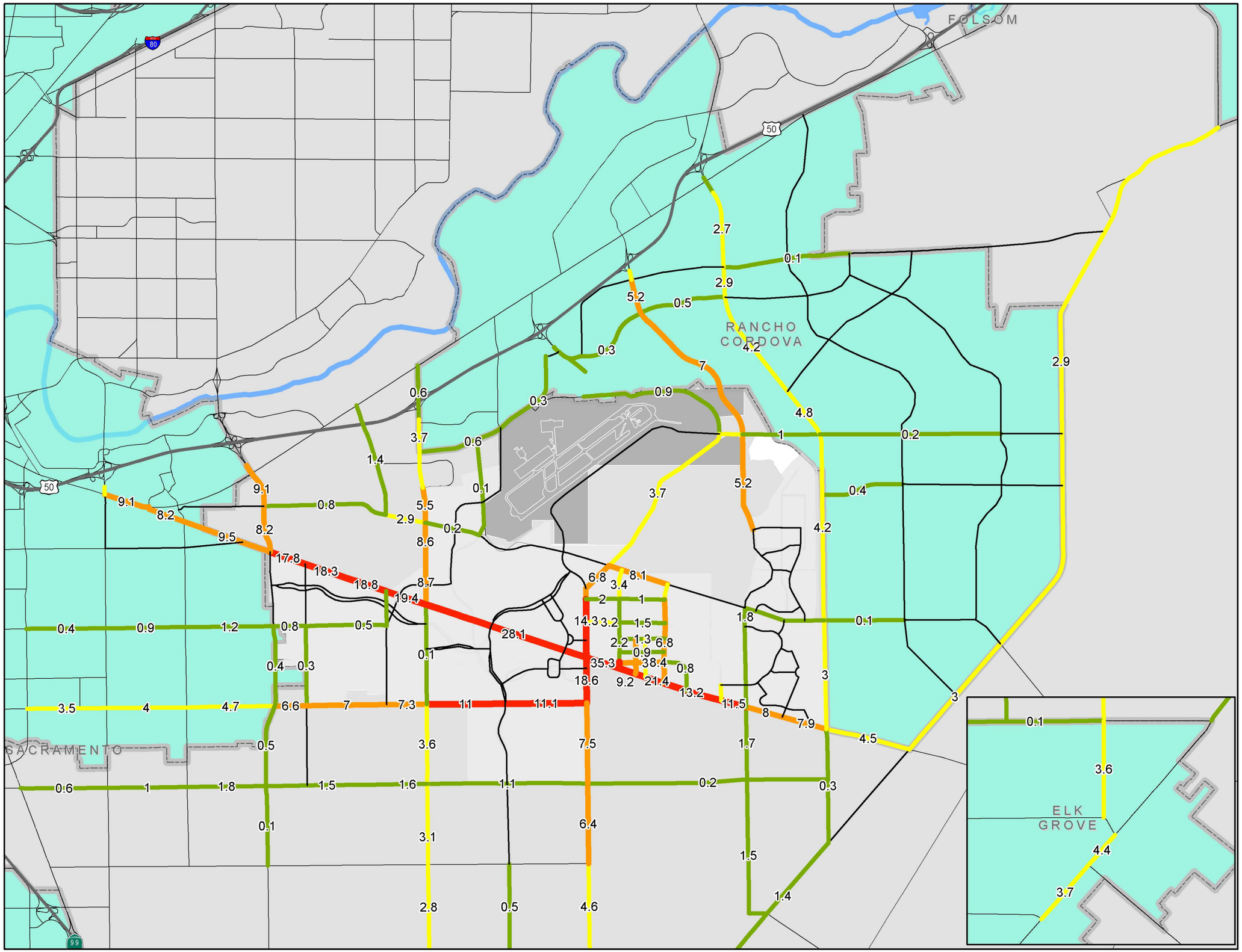
Table 3.4: Estimated Daily Vehicle Trip Generation (Existing Plus Project Scenario) Jackson Township (Alternative 2) Specific Plan

Trip Type		AM Peak Hour	PM Peak Hour	Daily
Total Vehicle Trip Ends		6,423	6,578	70,928
Percent Internal Trip Ends[1]		24.7%	30.1%	28.7%
Vehicle Trips	Internal to Project	793	989	10,170
	External to Project	4,838	4,600	50,585
	Total	5,630	5,589	60,755

[1.] Both trip ends within the project.

Source: *DKS Associates, 2018.*

FIGURE 3.4
EXISTING PLUS JACKSON TOWNSHIP
(ALTERNATIVE 2)
TRIP DISTRIBUTION



Legend

Jackson Township Distribution

Existing Conditions

- 0%
- 0.1% to 2.5%
- 2.6% to 5.0%
- 5.1% to 10.0%
- 10.0% and up
- Freeways
- Other Major Roadways
- Cities
- Mather Airport

DKS

FOLSOM

RANCHO CORDOVA

SACRAMENTO

ELK GROVE

80

50

99

FIGURE 3.5
EXISTING PLUS JACKSON TOWNSHIP (ALTERNATIVE 2) ROADWAY SEGMENT AND INTERSECTION LOS AND IMPACTS

Legend

Intersections (AM Peak Hour)
- LOS A-D
- LOS E
- LOS F

Intersections (PM Peak Hour)
- LOS A-D
- LOS E
- LOS F
- Mitigable Intersection Impact
- Unavoidable Intersection Impact

Roadway Segments
- LOS A-D
- LOS E
- LOS F

Impacts
- Unavoidable Segment Impact
- Mitigable Segment Impact
- Cities
- Mather Airport

DKS

3.4.1 Existing Plus Jackson Township Project Roadway Segment Impacts

Table 3.5 summarizes the results of the operations analysis for the study area roadway segments. The table includes the number of lanes assumed with the implementation of the Jackson Township project, which in many cases is greater than the number of lanes in the existing condition. The shaded table cells under the "Travel Lanes" and "Facility Type" headings illustrate new roadways and widened roadways that are assumed part of the Jackson Township project. The shaded table cells under the "Level of Service" heading indicate those locations with an LOS impact.

As stated above, the traffic analysis assumed that the Jackson Township project would construct a number of travel lanes on roadway segments that are internal to or on the boundary of the Jackson Township project, which would be greater than the number of lanes in the existing condition. The timing of implementation of such additional traffic lanes on these internal or boundary roadway segments will affect whether or not impacts would exist at some time prior to full build out of the Jackson Township project.

3.4.2 Existing Plus Jackson Township Project Intersection Impacts

Tables 3.6 and 3.7 summarize the results of the operations analysis for the study area intersections. The tables include the implementation of intersection changes associated with the Jackson Township project. Table 3.7 illustrates the type of traffic control and number of lanes by type on each study area intersection approach. Shaded table cells indicate those locations where changes in traffic control and / or number of approach lanes by type were assumed to be implemented by the Jackson Township project. Shaded table cells in Table 3.6 illustrate those locations with an LOS impact. Detailed analysis information is included in the technical appendix.

As stated above, the traffic analysis assumed that the Jackson Township project would construct a number of changes to many of the intersections that are internal to or on the boundary of the Jackson Township project, which would be an improvement over the existing condition. The timing of implementation of such intersection improvements on these internal or boundary roadway segments will affect whether or not impacts would exist at some time prior to full build out of the Jackson Township project.

Signal warrant analysis was conducted for all unsignalized intersections along Jackson Road, and other unsignalized intersections in close proximity to the project. The project is considered to have a significant impact at an unsignalized location if both the impact criteria in Table 1.6 are met, and one or more of the signal warrants specified in the California Manual on Uniform Traffic Control Devices (CAMUTCD) are met. The following unsignalized intersections exhibit significant impacts and meet one or more traffic signal warrants:

- Happy Lane and Old Placerville Road
- Excelsior Road and Elder Creek Road
- Excelsior Road and Florin Road
- Mather Boulevard and Douglas Road

- Eagles Nest Road and Jackson Road
- Excelsior Road and Calvine Road

Table 3.5
Existing Plus Jackson Township Project (Alt. 2) Roadway Segment Levels of Service

ID	Roadway	Segment		Existing					Existing + Jackson Township Project (Alt. 2)				
		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service
1	Bradshaw Rd	Folsom Blvd	US 50	6	Arterial M	20,592	0.38	A	6	Arterial M	20,810	0.39	A
2	Bradshaw Rd	US 50	Lincoln Village Dr	6	Arterial M	52,590	0.97	**E**	6	Arterial M	53,830	1.00	**E**
3	Bradshaw Rd	Lincoln Village Dr	Old Placerville Rd	6	Arterial M	42,787	0.79	C	6	Arterial M	44,350	0.82	D
4	Bradshaw Rd	Old Placerville Rd	Goethe Rd	6	Arterial M	38,984	0.72	C	6	Arterial M	40,570	0.75	C
5	Bradshaw Rd	Goethe Rd	Kiefer Blvd	4	Arterial M	28,651	0.80	C	4	Arterial M	30,440	0.85	D
6	Bradshaw Rd	Kiefer Blvd	Jackson Rd	4	Arterial M	30,726	0.85	D	4	Arterial M	35,460	0.99	E
7	Bradshaw Rd	Jackson Rd	Elder Creek Rd	4	Arterial M	22,871	0.64	B	4	Arterial M	21,770	0.60	B
8	Bradshaw Rd	Elder Creek Rd	Florin Rd	4	Arterial M	22,265	0.62	B	4	Arterial M	24,020	0.67	B
9	Bradshaw Rd	Florin Rd	Gerber Rd	4	Arterial M	22,883	0.64	B	4	Arterial M	24,270	0.67	B
10	Bradshaw Rd	Gerber Rd	Calvine Rd	4	Arterial M	16,984	0.47	A	4	Arterial M	18,690	0.52	A
11	Calvine Rd	Waterman Rd	Bradshaw Rd	4	Arterial M	16,015	0.44	A	4	Arterial M	16,510	0.46	A
12	Calvine Rd	Bradshaw Rd	Vineyard Rd	4	Arterial M	12,395	0.34	A	4	Arterial M	13,540	0.38	A
13	Calvine Rd	Vineyard Rd	Excelsior Rd	2	Arterial M	6,036	0.34	A	2	Arterial M	7,210	0.40	A
14	Chrysanthy Blvd	Sunrise Blvd	Rancho Cordova Pkwy	4	Arterial M	3,411	0.09	A	4	Arterial M	3,580	0.10	A
15	Douglas Rd	Mather Blvd	Zinfandel Dr	2	Arterial M	6,635	0.37	A	2	Arterial M	7,660	0.43	A
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd	2	Arterial M	8,369	0.46	A	2	Arterial M	8,990	0.50	A
17	Douglas Rd	Sunrise Blvd	Rancho Cordova Pkwy	5	Arterial M	3,674	0.10	A	5	Arterial M	4,290	0.12	A
18	Douglas Rd	Rancho Cordova Pkwy	Grant Line Rd	2	Arterial M	3,674	0.20	A	2	Arterial M	3,980	0.22	A
19	Eagles Nest Rd	Kiefer Blvd	Jackson Rd	2	Arterial M	740	0.04	A	2	Arterial M	1,960	0.11	A
20	Eagles Nest Rd	Jackson Rd	Florin Rd	2	Arterial M	517	0.03	A	2	Arterial M	1650	0.09	A
21	Eagles Nest Rd	Florin Rd	Grant Line Rd	2	Arterial M	189	0.01	A	2	Arterial M	1230	0.07	A
22	Elder Creek Rd	65th St	Power Inn Rd	4	Arterial M	17,891	0.50	A	4	Arterial M	19,570	0.54	A
23	Elder Creek Rd	Power Inn Rd	Florin-Perkins Rd	2	Arterial M	15,734	0.87	D	2	Arterial M	17,230	0.96	**E**
24	Elder Creek Rd	Florin Perkins Rd	South Watt Ave	2	Arterial M	11,092	0.62	B	2	Arterial M	13,370	0.74	C
25	Elder Creek Rd	South Watt Ave	Hedge Ave	2	Arterial M	5,576	0.31	A	2	Arterial M	8,730	0.49	A
26	Elder Creek Rd	Hedge Ave	Mayhew Rd	2	Arterial M	5,797	0.32	A	2	Arterial M	9,010	0.50	A
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd	2	Arterial M	5,355	0.30	A	2	Arterial M	9,020	0.50	A
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd	2	Arterial M	2,158	0.12	A	2	Arterial M	9,780	0.54	A
29	Elk Grove-Florin Rd	Florin Rd	Gerber Rd	2	Arterial M	22,960	1.28	**F**	2	Arterial M	23,220	1.29	**F**
30.1	Excelsior Rd	Kiefer Blvd	Douglas Rd	2	Arterial M	3,716	0.21	A	2	Arterial M	7,220	0.40	A
30.2	Excelsior Rd	Douglas Rd	Collector WJ-1/ Collector JT-1	2	Arterial M	3,716	0.21	A	3	Arterial M	7,310	0.41	A

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 3.5
Existing Plus Jackson Township Project (Alt. 2) Roadway Segment Levels of Service

ID	Roadway	Segment		Existing					Existing + Jackson Township Project (Alt. 2)				
		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service
30.3	Excelsior Rd	Collector WJ-1/ Collector JT-1	Collector WJ-2/ Collector JT-2	2	Arterial M	3,716	0.21	A	3	Arterial M	12,320	0.68	B
30.4	Excelsior Rd	Collector WJ-2/ Collector JT-2	Jackson Rd	2	Arterial M	3,716	0.21	A	3	Arterial M	13,870	0.77	C
31	Excelsior Rd	Jackson Rd	Elder Creek Rd	2	Arterial M	5,075	0.28	A	2	Arterial M	15,650	0.87	D
32	Excelsior Rd	Elder Creek Rd	Florin Rd	2	Arterial M	4,203	0.23	A	2	Arterial M	6,850	0.38	A
33	Excelsior Rd	Florin Rd	Gerber Rd	2	Arterial M	5,423	0.30	A	2	Arterial M	7,580	0.42	A
34	Excelsior Rd	Gerber Rd	Calvine Rd	2	Arterial M	4,229	0.23	A	2	Arterial M	5,350	0.30	A
35	Excelsior Rd	Calvine Rd	Sheldon Rd	2	Arterial M	4,473	0.25	A	2	Arterial M	6,430	0.36	A
36	Florin Rd	Stockton Blvd	Power Inn Rd	4	Arterial M	27,495	0.76	C	4	Arterial M	28,440	0.79	C
37	Florin Rd	Power Inn Rd	Florin-Perkins Rd	4	Arterial M	21,595	0.60	A	4	Arterial M	23,230	0.65	B
38	Florin Rd	Florin-Perkins Rd	So Watt Ave/ Elk Grove Florin Rd	4	Arterial M	14,163	0.39	A	4	Arterial M	16,040	0.45	A
39	Florin Rd	South Watt Ave	Hedge Ave	2	Arterial M	7,718	0.43	A	2	Arterial M	9,520	0.53	A
40	Florin Rd	Hedge Ave	Mayhew Rd	2	Arterial M	6,312	0.35	A	2	Arterial M	8,640	0.48	A
41	Florin Rd	Mayhew Rd	Bradshaw Rd	2	Arterial M	6,317	0.35	A	2	Arterial M	8,680	0.48	A
42	Florin Rd	Bradshaw Rd	Excelsior Rd	2	Arterial M	3,478	0.19	A	2	Arterial M	5,340	0.30	A
43	Florin Rd	Excelsior Rd	Sunrise Blvd	2	Arterial M	3,835	0.21	A	2	Arterial M	4,390	0.24	A
44	Folsom Blvd	Howe Ave	Jackson Rd	4	Arterial M	37,516	1.04	**F**	4	Arterial M	40,230	1.12	**F**
45	Fruitridge Rd	65th St	Power Inn Rd	4	Arterial M	16,634	0.46	A	4	Arterial M	16,930	0.47	A
46	Fruitridge Rd	Power Inn Rd	Florin Perkins Rd	4	Arterial M	15,214	0.42	A	4	Arterial M	16,220	0.45	A
47	Fruitridge Rd	Florin Perkins Rd	South Watt Ave	2	Arterial M	10,280	0.57	A	2	Arterial M	10,750	0.60	A
48	Fruitridge Rd	South Watt Ave	Hedge Ave	2	Arterial M	2,890	0.16	A	2	Arterial M	2,560	0.14	A
49	Fruitridge Rd	Hedge Ave	Mayhew Rd	2	Arterial M	1,790	0.10	A	2	Arterial M	1,190	0.07	A
50	Grant Line Rd	White Rock Rd	Douglas Rd	2	Rural NS	7,189	0.42	D	2	Rural NS	8,530	0.50	D
51	Grant Line Rd	Douglas Rd	Kiefer Blvd	2	Rural S	6,143	0.31	C	2	Rural S	7,740	0.39	D
52	Grant Line Rd	Kiefer Blvd	Jackson Rd	2	Rural S	5,758	0.29	C	2	Rural S	7,220	0.36	D
53	Grant Line Rd	Jackson Rd	Sunrise Blvd	2	Rural S	14,720	0.74	E	2	Rural S	14,260	0.71	E
54	Grant Line Rd	Sunrise Blvd	Calvine Rd	2	Rural S	14,812	0.74	E	2	Rural S	15,270	0.76	E
55	Grant Line Rd	Calvine Rd	Sheldon Rd	2	Rural S	13,140	0.66	**E**	2	Rural S	13,410	0.67	**E**
56	Grant Line Rd	Sheldon Rd	Wilton Rd	2	Rural S	17,459	0.87	**E**	2	Rural S	19,430	0.97	**E**
57	Grant Line Rd	Wilton Rd	Bond Rd	2	Rural S	16,064	0.80	**E**	2	Rural S	18,030	0.90	**E**

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 3.5
Existing Plus Jackson Township Project (Alt. 2) Roadway Segment Levels of Service

ID	Roadway	Segment		Existing					Existing + Jackson Township Project (Alt. 2)				
		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service
58	Happy Ln	Old Placerville Rd	Kiefer Blvd	2	Rural S	4,635	0.23	C	2	Rural S	6,610	0.33	C
59	Hedge Ave	Jackson Rd	Fruitridge Rd	2	Arterial M	3,061	0.17	A	2	Arterial M	2,570	0.14	A
60	Hedge Ave	Fruitridge Rd	Elder Creek Rd	2	Arterial M	3,737	0.21	A	2	Arterial M	3,880	0.22	A
61	Hedge Ave	Elder Creek Rd	Florin Rd	2	Arterial M	2,722	0.15	A	2	Arterial M	2,990	0.17	A
62	Howe Ave	US 50	Folsom Blvd	6	Arterial M	53,849	1.00	E	6	Arterial M	55,140	1.02	**F**
63	International Dr	Mather Field Rd	Zinfandel Dr	6	Arterial M	17,500	0.32	A	6	Arterial M	18,140	0.34	A
64	International Dr	Zinfandel Dr	Sunrise Blvd	6	Arterial M	8,802	0.16	A	6	Arterial M	10,010	0.19	A
65	Jackson Rd	Folsom Blvd	Florin Perkins Rd	2	Arterial M	12,358	0.69	B	2	Arterial M	13,700	0.76	C
66	Jackson Rd	Florin Perkins Rd	South Watt Ave	2	Arterial M	10,414	0.58	A	2	Arterial M	13,770	0.77	C
67	Jackson Rd	South Watt Ave	Hedge Ave	2	Arterial M	17,060	0.95	E	2	Arterial M	23,820	1.32	**F**
68	Jackson Rd	Hedge Ave	Mayhew Rd	2	Arterial M	12,616	0.70	C	2	Arterial M	20,130	1.12	**F**
69	Jackson Rd	Mayhew Rd	Bradshaw Rd	2	Arterial M	14,996	0.83	D	2	Arterial M	21,940	1.22	**F**
70	Jackson Rd	Bradshaw Rd	Excelsior Rd	2	Arterial M	13,030	0.72	C	2	Arterial M	26,390	1.47	**F**
71.1	Jackson Rd	Excelsior Rd	Collector JT-3	2	Rural Hwy	10,478	0.46	D	4	Arterial M	32,560	0.90	E
71.2	Jackson Rd	Collector JT-3	Tree View Ln	2	Rural Hwy	10,478	0.46	D	4	Arterial M	20,280	0.56	A
71.3	Jackson Rd	Tree View Ln	Collector JT-4	2	Rural Hwy	10,478	0.46	D	4	Arterial M	16,520	0.46	A
71.4	Jackson Rd	Collector JT-4	Eagles Nest Rd	2	Rural Hwy	10,478	0.46	D	2	Rural Hwy	15,600	0.68	E
72	Jackson Rd	Eagles Nest Rd	Sunrise Blvd	2	Rural Hwy	9,976	0.44	D	2	Rural Hwy	12,770	0.56	D
73	Jackson Rd	Sunrise Blvd	Grant Line Rd	2	Rural Hwy	13,306	0.58	D	2	Rural Hwy	15,070	0.66	**E**
74	Kiefer Blvd	Florin Perkins Rd	South Watt Ave	2	Arterial M	4,616	0.26	A	2	Arterial M	4,770	0.27	A
75	Kiefer Blvd	South Watt Ave	Mayhew Rd	4	Arterial M	18,668	0.52	A	4	Arterial M	19,560	0.54	A
76	Kiefer Blvd	Mayhew Rd	Bradshaw Rd	4	Arterial M	9,274	0.26	A	4	Arterial M	12,090	0.34	A
77	Kiefer Blvd	Bradshaw Rd	Happy Ln	2	Arterial M	4,618	0.26	A	2	Arterial M	5,580	0.31	A
78	Kiefer Blvd	Zinfandel Dr	Sunrise Blvd	2	Arterial M	656	0.04	A	2	Arterial M	1940	0.11	A
79	Kiefer Blvd	Sunrise Blvd	Rancho Cordova Pkwy	2	Arterial M	2,786	0.15	A	2	Arterial M	2,820	0.16	A
80	Mather Blvd / Norden Ave	Von Karman St	Bleckely St	4	Arterial M	4,373	0.12	A	4	Arterial M	5,450	0.15	A
81	Mather Blvd	Bleckely St	Femoyer St	4	Arterial M	4,373	0.12	A	4	Arterial M	5,450	0.15	A
82	Mather Blvd	Femoyer St	Douglas Rd	2	Arterial M	4,373	0.24	A	2	Arterial M	5,450	0.30	A
83	Mather Blvd-Excelsior Rd	Douglas Rd	Kiefer Blvd	2	Res Collector F	6,751	0.84	E	2	Res Collector F	8,680	1.09	**F**

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 3.5
Existing Plus Jackson Township Project (Alt. 2) Roadway Segment Levels of Service

ID	Roadway	Segment		Existing					Existing + Jackson Township Project (Alt. 2)				
		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service
84	Mather Field Rd	US 50	Rockingham Dr	6	Arterial M	37,755	0.70	B	6	Arterial M	38,870	0.72	C
85	Mather Field Rd	Rockingham Dr	International Dr	6	Arterial M	37,520	0.69	B	6	Arterial M	38,170	0.71	C
86	Mather Field Rd	International Dr	Peter A McCuen Blvd	4	Arterial M	14,857	0.41	A	4	Arterial M	15,160	0.42	A
87	Mayhew Rd	Folsom Blvd	Goethe Rd	2	Arterial M	6,977	0.39	A	2	Arterial M	8,140	0.45	A
88	Mayhew Rd	Goethe Rd	Kiefer Blvd	2	Arterial L	6,593	0.44	A	2	Arterial L	8,150	0.54	A
89	Mayhew Rd	Jackson Rd	Fruitridge Rd	2	Arterial L	1,616	0.11	A	2	Arterial L	990	0.07	A
90	Old Placerville Rd	Bradshaw Rd	Granby Dr	4	Arterial M	15,800	0.44	A	4	Arterial M	16,930	0.47	A
91	Old Placerville Rd	Granby Dr	Happy Ln	2	Arterial M	13,573	0.75	C	2	Arterial M	14,410	0.80	D
92	Old Placerville Rd	Happy Ln	Routier Rd	2	Arterial M	10,710	0.60	A	2	Arterial M	12,140	0.67	B
93	Old Placerville Rd	Routier Rd	Rockingham Dr	4	Arterial M	10,710	0.30	A	4	Arterial M	11,500	0.32	A
94	Power Inn Rd	Folsom Blvd	14th Ave	6	Arterial M	36,175	0.67	B	6	Arterial M	36,320	0.67	B
95	Rockingham Dr	Old Placerville Rd	Mather Field Rd	4	Arterial M	19,881	0.55	A	4	Arterial M	20,650	0.57	A
96	South Watt Ave	Folsom Blvd	Kiefer Blvd	6	Arterial M	40,920	0.76	C	6	Arterial M	44,120	0.82	D
97	South Watt Ave	Kiefer Blvd	Jackson Rd	5	Arterial M	32,415	0.90	E	5	Arterial M	35,600	0.99	E
98	South Watt Ave	Jackson Rd	Fruitridge Rd	2	Arterial M	25,832	1.44	**F**	2	Arterial M	25,890	1.44	**F**
99	South Watt Ave	Fruitridge Rd	Elder Creek Rd	2	Arterial M	21,567	1.20	**F**	2	Arterial M	21,690	1.21	**F**
100	South Watt Ave	Elder Creek Rd	Florin Rd	2	Arterial M	19,069	1.06	**F**	2	Arterial M	19,290	1.07	**F**
101	Sunrise Blvd	US 50	Folsom Blvd	7	Arterial M	54,500	1.01	**F**	7	Arterial M	55,750	1.03	**F**
102	Sunrise Blvd	Folsom Blvd	Trade Center Dr	6	Arterial M	49,500	0.92	**E**	6	Arterial M	50,930	0.94	**E**
103	Sunrise Blvd	Trade Center Dr	White Rock Rd	6	Arterial M	34,571	0.64	B	6	Arterial M	36,150	0.67	B
104.1	Sunrise Blvd	White Rock Rd	International Dr	6	Arterial M	25,811	0.48	A	6	Arterial M	27,240	0.50	A
104.2	Sunrise Blvd	International Dr	Rio Del Oro Pkwy	6	Arterial M	28,400	0.53	A	6	Arterial M	31,420	0.58	A
104.3	Sunrise Blvd	Rio Del Oro Pkwy	Douglas Rd	6	Arterial M	25,811	0.48	A	6	Arterial M	29,270	0.54	A
105	Sunrise Blvd	Douglas Rd	Kiefer Blvd	5	Arterial M	21,878	0.61	B	5	Arterial M	24,620	0.68	B
106	Sunrise Blvd	Kiefer Blvd	Jackson Rd	2	Arterial M	16,894	0.94	**E**	2	Arterial M	19,040	1.06	**F**
107	Sunrise Blvd	Jackson Rd	Florin Rd	2	Rural S	11,181	0.56	D	2	Rural S	11,210	0.56	D
108	Sunrise Blvd	Florin Rd	Grant Line Rd	2	Rural S	7,752	0.39	D	2	Rural S	7,640	0.38	D
109	Vineyard Rd	Gerber Rd	Calvine Rd	2	Arterial M	5,515	0.31	A	2	Arterial M	5,830	0.32	A
110	Watt Ave	US 50	Folsom Blvd	6	Arterial H	65,242	1.09	**F**	6	Arterial H	67,620	1.13	**F**
111	White Rock Rd	International Rd	Quality Dr	2	Arterial M	3,962	0.22	A	2	Arterial M	4,070	0.23	A
112	White Rock Rd	Quality Dr	Zinfandel Dr	4	Arterial M	11,200	0.31	A	4	Arterial M	10,980	0.31	A
113	White Rock Rd	Zinfandel Dr	Kilgore Rd	6	Arterial M	14,756	0.27	A	6	Arterial M	14,850	0.28	A
114	White Rock Rd	Kilgore Rd	Sunrise Blvd	5	Arterial M	14,756	0.41	A	5	Arterial M	15,200	0.42	A

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 3.5
Existing Plus Jackson Township Project (Alt. 2) Roadway Segment Levels of Service

ID	Roadway	Segment		Existing					Existing + Jackson Township Project (Alt. 2)				
		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service
115	White Rock Rd	Sunrise Blvd	Fitzgerald Rd	4	Arterial M	15,433	0.43	A	4	Arterial M	15,690	0.44	A
116	White Rock Rd	Fitzgerald Rd	Grant Line Rd	2	Rural NS	2,490	0.15	B	2	Rural NS	2,410	0.14	B
117	White Rock Rd	Grant Line Rd	Prairie City Rd	4	Arterial M	9,400	0.26	A	4	Arterial M	10,600	0.29	A
118	Zinfandel Dr	US 50	White Rock Rd	7	Arterial M	45,228	0.84	D	7	Arterial M	48,140	0.89	D
119	Zinfandel Dr	White Rock Rd	International Rd	6	Arterial M	17,923	0.33	A	6	Arterial M	21,240	0.39	A
120	Zinfandel Dr	International Rd	Baroque Dr	6	Arterial M	7,595	0.14	A	6	Arterial M	12,190	0.23	A
121	Zinfandel Dr	Baroque Dr	City Limit	4	Arterial M	7,595	0.21	A	4	Arterial M	12,190	0.34	A
122	Zinfandel Dr	City Limit	Douglas Rd	2	Arterial M	7,595	0.42	A	2	Arterial M	12,190	0.68	B
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd	2	Arterial M	2,848	0.16	A	2	Arterial M	6,860	0.38	A
400	Collector JT-1	Excelsior Rd	Collector JT-3						2	Res Collector F	2,180	0.27	B
401	Collector JT-1	Collector JT-3	Tree View Ln						2	Res Collector F	830	0.10	A
402	Collector JT-3	Kiefer Blvd	Collector JT-1						2	Res Collector F	1,330	0.17	A
403	Collector JT-3	Collector JT-1	Collector JT-6						2	Res Collector F	1,560	0.20	A
404	Collector JT-3	Collector JT-6	Collector JT-5						2	Res Collector F	1,590	0.20	A
405	Collector JT-3	Collector JT-5	Jackson Rd						2	Arterial M	16,140	0.90	D
406	Collector JT-4	Jackson Rd	Bridgewater Dr						2	Arterial M	2,340	0.13	A
407	Collector JT-5	Collector JT-3	Tree View Ln						2	Arterial M	8,420	0.47	A
408	Collector JT-6	Excelsior Rd	Collector JT-3						2	Res Collector F	2,860	0.36	B
409	Collector JT-6	Collector JT-3	Tree View Ln						2	Res Collector F	1,060	0.13	A
410	Kiefer Blvd	Excelsior Rd	Tree View Ln						3	Arterial M	5,020	0.28	A
411	Tree View Ln	Kiefer Blvd	Collector JT-1						4	Arterial M	2,510	0.07	A
412	Tree View Ln	Collector JT-1	Collector JT-6						4	Arterial M	4,970	0.14	A
413	Tree View Ln	Collector JT-6	Collector JT-5						4	Arterial M	5,080	0.14	A
414	Tree View Ln	Collector JT-5	Jackson Rd						4	Arterial M	6,500	0.18	A
415	Collector JT-7	Collector JT-3	Tree View Ln						2	Arterial M	800	0.04	A
416	Collector JT-8	Collector JT-3	Tree View Ln						2	Arterial M	990	0.06	A
417	Collector JT-9	Jackson Rd	Collector JT-8						2	Arterial M	3,260	0.18	A

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Table 3.5
Existing Plus Jackson Township Project (Alt. 2) Roadway Segment Levels of Service

ID	Roadway	Segment		Existing					Existing + Jackson Township Project (Alt. 2)				
		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service
418	Collector JT-10	Jackson Rd	Collector JT-8						2	Arterial M	1,600	0.09	A
419	Collector JT-6	Tree View Ln	Jackson Rd						2	Res Collector F	1,630	0.20	B

Note: Gray shading indicates changes in travel lanes or facility type that the project is responsible to provide.

[1] The following classifications are used to determine daily roadway capacity:
Arterial L - Arterial, Low Access Control
Arterial M - Arterial, Moderate Access Control
Arterial H - Arterial, High Access Control
Rural Hwy - Rural 2-lane Highway
Rural S - Rural 2-lane Road, 24'-36' of pavement, Paved Shoulders
Rural NS - Rural 2-lane Road, 24'-36' of pavement, No Shoulders
Res Collector F - Residential Collector with Frontage
Res Collector NF - Residential Collector with No Frontage

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Table 3.6

Existing Plus Jackson Township Project (Alternative 2) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus Jackson Township Project Alternative 2			LOS Impact	Existing			Existing Plus Jackson Township Project Alternative 2			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
1	Howe Avenue & College Town Drive/US 50 WB Ramps	Signal	D	36.6	Signal	B	19.3	No	Signal	D	44.4	Signal	C	28.1	No
2	Howe Avenue & US 50 EB Ramps	Signal	B	16.9	Signal	B	11.0	No	Signal	C	20.5	Signal	A	9.0	No
3	Power Inn Road/Howe Avenue & Folsom Blvd	Signal	D	39.1	Signal	C	34.1	No	Signal	D	55.0	Signal	D	41.7	No
4	Power Inn Road & 14th Avenue	Signal	C	31.5	Signal	B	16.1	No	Signal	D	39.6	Signal	C	21.5	No
5	Power Inn Road & Fruitridge Road	Signal	D	43.4	Signal	D	41.2	No	Signal	C	33.5	Signal	C	26.8	No
6	Jackson Road/Notre Dame Dr. & Folsom Blvd.	Signal	D	36.8	Signal	C	22.7	No	Signal	C	32.1	Signal	B	16.1	No
7	Florin Perkins Road/Julliard Dr. & Folsom Boulevard	Signal	D	39.0	Signal	C	26.3	No	Signal	E	55.6	Signal	C	24.3	No
8	Florin Perkins Road & Kiefer Blvd.	Two-way stop	A	2.8	Two-way stop	A	2.5	No	Two-way stop	A	3.2	Two-way stop	A	3.4	No
	Westbound Left Turn		*C*	*20.1*		*C*	*24.5*			*C*	*23.3*		*D*	*28.6*	
	Westbound Right Turn		*B*	*13.3*		*B*	*13.9*			*B*	*12.6*		*B*	*13.3*	
	Southbound Left Turn		*A*	*10.0*		*B*	*10.7*			*B*	*10.9*		*B*	*12.0*	
9	Florin Perkins Road & Jackson Road	Signal	D	51.5	Signal	B	18.5	No	Signal	D	54.1	Signal	C	26.5	No
10	Florin Perkins Road & Fruitridge Road	Signal	C	25.1	Signal	C	20.3	No	Signal	C	25.4	Signal	B	19.3	No
11	Florin Perkins Road & Elder Creek Road	Signal	C	25.7	Signal	B	18.9	No	Signal	C	26.2	Signal	B	19.9	No
12	Watt Avenue & Folsom Blvd.	Signal	E	66.2	Signal	E	78.5	No	Signal	E	71.9	Signal	E	65.2	No
13	S. Watt Ave. & Reith Ct/Manlove Road	Signal	B	19.6	Signal	B	12.8	No	Signal	D	54.1	Signal	B	11.0	No
14	S. Watt Avenue & Kiefer Blvd.	Signal	E	56.0	Signal	E	63.2	No	Signal	E	75.9	Signal	D	39.7	No

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Table 3.6

Existing Plus Jackson Township Project (Alternative 2) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus Jackson Township Project Alternative 2			LOS Impact	Existing			Existing Plus Jackson Township Project Alternative 2			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
15	S. Watt Avenue & Canberra Dr.	Signal	B	11.5	Signal	A	7.3	No	Signal	A	9.7	Signal	A	6.1	No
16	S. Watt Avenue & Jackson Road	Signal	E	62.5	Signal	E	64.5	No	Signal	E	66.4	Signal	E	64.2	No
17	S. Watt Avenue & Fruitridge Road	Signal	D	38.1	Signal	C	20.0	No	Signal	D	41.7	Signal	C	21.5	No
18	S. Watt Avenue & Elder Creek Road	Signal	E	62.7	Signal	E	71.3	Yes	Signal	E	68.8	Signal	E	75.9	Yes
20	Elk Grove Florin Road/S. Watt Ave. & Florin Road	Signal	D	54.7	Signal	C	27.7	No	Signal	D	51.8	Signal	C	34.2	No
21	Elk Grove Florin Road & Gerber Road	Signal	D	49.1	Signal	D	37.3	No	Signal	E	64.6	Signal	E	67.3	No
23	Hedge Avenue & Jackson Road	Signal	D	35.1	Signal	C	22.6	No	Signal	D	37.3	Signal	B	13.7	No
24	Hedge Avenue & Fruitridge Road	All-way stop	B	13.6	All-way stop	C	16.3	No	All-way stop	A	9.4	All-way stop	A	9.0	No
25	Hedge Avenue & Elder Creek Road	All-way stop	C	15.9	All-way stop	E	42.9	No	All-way stop	B	11.6	All-way stop	C	20.0	No
26	Hedge Avenue & Tokay Lane	Two-way stop	A	0.4	Two-way stop	A	0.3	No	Two-way stop	A	0.2	Two-way stop	A	0.2	No
	Northbound Left Turn		*A*	*0.0*		*A*	*0.0*			*A*	*0.0*		*A*	*0.0*	
	Southbound Left Turn		*A*	*8.0*		*A*	*8.3*			*A*	*7.3*		*A*	*7.3*	
	Eastbound		*B*	*12.2*		*B*	*13.3*			*B*	*10.2*		*B*	*10.9*	
	Westbound		*B*	*11.1*		*B*	*12.0*			*A*	*9.6*		*A*	*9.9*	
27	Hedge Avenue & Florin Road	All-way stop	B	12.9	All-way stop	C	16.1	No	All-way stop	B	11.1	All-way stop	C	15.9	No
28	Mayhew Road & Kiefer Boulevard	Signal	D	48.6	Signal	C	21.3	No	Signal	D	51.1	Signal	B	18.7	No

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Table 3.6

Existing Plus Jackson Township Project (Alternative 2) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus Jackson Township Project Alternative 2			LOS Impact	Existing			Existing Plus Jackson Township Project Alternative 2			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
29	Mayhew Road & Jackson Road	Two-way stop	A	1.8	Two-way stop	A	1.7	No	Two-way stop	A	1.9	Two-way stop	A	0.8	No
	Northbound Through - Left Turn		*D*	*27.6*		*E*	*45.0*			*D*	*34.0*		*E*	*45.9*	
	Northbound Right Turn		*B*	*11.8*		*C*	*17.2*			*C*	*15.0*		*B*	*14.7*	
	Southbound		*C*	*18.3*		*D*	*27.6*			*C*	*24.9*		*D*	*30.7*	
	Eastbound Left Turn		*A*	*8.9*		*A*	*9.1*			*A*	*8.4*		*A*	*9.2*	
	Westbound Left Turn		*A*	*8.3*		*A*	*9.3*			*A*	*9.3*		*A*	*9.2*	
30	Mayhew Road & Fruitridge Road	Two-way stop	A	6.2	Two-way stop	A	7.0	No	Two-way stop	A	5.1	Two-way stop	A	6.4	No
	Northbound Left Turn		*A*	*0.0*		*A*	*0.0*			*A*	*7.4*		*A*	*7.3*	
	Eastbound		*A*	*9.2*		*A*	*9.1*			*A*	*9.2*		*A*	*8.8*	
31	Mayhew Road & Elder Creek Road	Two-way stop	A	0.2	Two-way stop	A	0.2	No	Two-way stop	A	0.3	Two-way stop	A	0.2	No
	Northbound		*B*	*11.9*		*B*	*13.5*			*B*	*10.9*		*B*	*12.7*	
	Southbound		*B*	*11.1*		*B*	*12.2*			*A*	*9.8*		*B*	*11.2*	
	Eastbound Left Turn		*A*	*8.3*		*A*	*8.7*			*A*	*7.6*		*A*	*8.0*	
	Westbound Left Turn		*A*	*7.5*		*A*	*7.8*			*A*	*0.0*		*A*	*0.0*	
32	Woodring Drive & Zinfandel Drive	Two-way stop	A	5.9	Two-way stop	A	9.1	No	Two-way stop	A	3.0	Two-way stop	A	4.2	No
	Eastbound		*A*	*9.3*		*B*	*13.3*			*A*	*9.3*		*B*	*11.9*	
	Northbound Left Turn		*A*	*0.0*		*A*	*7.7*			*A*	*0.0*		*A*	*0.0*	
33	Bradshaw Road & Folsom Blvd.	Signal	E	56.7	Signal	C	22.1	No	Signal	D	49.9	Signal	B	19.9	No
34	Bradshaw Road & US 50 WB Ramps	Signal	B	15.9	Signal	A	5.5	No	Signal	B	15.2	Signal	A	6.0	No
35	Bradshaw Road & US 50 EB Ramps	Signal	C	24.4	Signal	B	13.0	No	Signal	B	16.0	Signal	A	9.7	No
36	Bradshaw Road & Old Placerville Road	Signal	D	45.9	Signal	C	31.9	No	Signal	D	52.0	Signal	C	34.3	No
37	Bradshaw Road & Kiefer Boulevard	Signal	D	45.7	Signal	B	19.3	No	Signal	E	66.2	Signal	E	59.6	No

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Table 3.6

Existing Plus Jackson Township Project (Alternative 2) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus Jackson Township Project Alternative 2			LOS Impact	Existing			Existing Plus Jackson Township Project Alternative 2			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
38	Bradshaw Road & Jackson Road	Signal	E	73.1	Signal	F	130.6	Yes	Signal	E	59.4	Signal	E	70.7	No
39	Bradshaw Road & Elder Creek Road	Signal	D	36.8	Signal	D	40.0	No	Signal	D	36.1	Signal	C	32.7	No
40	Bradshaw Road & Florin Road	Signal	D	38.1	Signal	C	31.4	No	Signal	D	53.6	Signal	D	36.4	No
41	Bradshaw Road & Gerber Road	Signal	E	72.2	Signal	E	67.4	No	Signal	D	49.9	Signal	C	30.8	No
42	Happy Lane & Old Placerville Road	Two-way stop	A	7.3	Two-way stop	B	11.5	Yes	Two-way stop	A	4.7	Two-way stop	B	14.9	Yes
	Northbound Left Turn		*F*	*64.8*		*F*	*199.7*			*F*	*95.9*		*F*	*>300*	
	Northbound Right Turn		*D*	*30.6*		*E*	*35.5*			*C*	*15.4*		*C*	*19.7*	
	Westbound Left Turn		*B*	*10.2*		*B*	*10.9*			*B*	*10.1*		*B*	*10.5*	
43	Happy Lane & Kiefer Boulevard	Free Turn			Free Turn			No	Free Turn			Free Turn			No
44	Excelsior Road & Kiefer Boulevard	West Jackson/Jackson Township Project Int.			Signal	B	18.4	No	West Jackson/Jackson Township Project Int.			Signal	A	9.6	No
45	Excelsior Road & Jackson Road	Signal	D	36.7	Signal	F	167.1	Yes	Signal	D	40.3	Signal	F	108.0	Yes
46	Excelsior Road & Elder Creek Road	Two-way stop	A	3.5	Two-way stop	F	56.2	Yes	Two-way stop	A	2.7	Two-way stop	E	44.8	Yes
	Northbound Left Turn		*A*	*7.5*		*A*	*7.8*			*A*	*8.0*		*A*	*8.9*	
	Eastbound		*C*	*18.6*		*F*	*251.5*			*B*	*12.3*		*F*	*148.1*	
47	Excelsior Road & Florin Road	All-way stop	C	24.9	All-way stop	F	173.7	No	All-way stop	B	12.5	All-way stop	F	67.7	Yes
48	Excelsior Road & Gerber Road/Birch Ranch Drive	All-way stop	B	14.0	All-way stop	E	45.2	No	All-way stop	B	10.6	All-way stop	C	20.8	No
49	Mather Field Road & US 50 WB Ramps	Signal	C	24.7	Signal	A	8.7	No	Signal	A	9.4	Signal	A	5.3	No
50	Mather Field Road & US 50 EB Ramps	Signal	C	27.7	Signal	B	16.9	No	Signal	B	13.4	Signal	A	7.1	No

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Table 3.6

Existing Plus Jackson Township Project (Alternative 2) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus Jackson Township Project Alternative 2			LOS Impact	Existing			Existing Plus Jackson Township Project Alternative 2			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
51	Mather Field Road & Rockingham Drive	Signal	E	56.4	Signal	D	42.4	No	Signal	D	54.7	Signal	D	39.5	No
52	Mather Boulevard & Douglas Road	All-way stop	E	39.3	All-way stop	F	84.8	Yes	All-way stop	C	15.5	All-way stop	C	18.7	No
53	Zinfandel Drive & US 50 WB Ramps	Signal	B	16.4	Signal	A	8.7	No	Signal	D	51.7	Signal	D	40.7	No
54	Zinfandel Drive & US 50 EB Ramps/Gold Center Drive	Signal	D	40.0	Signal	D	46.0	No	Signal	E	60.1	Signal	E	64.5	No
55	Zinfandel Drive & White Rock Road	Signal	D	47.7	Signal	C	25.4	No	Signal	D	54.7	Signal	D	39.1	No
56	Zinfandel Drive & Data Drive	Signal	D	49.3	Signal	B	15.7	No	Signal	D	52.9	Signal	C	20.1	No
57	Zinfandel Drive & International Dr	Signal	C	34.0	Signal	B	19.4	No	Signal	D	48.5	Signal	C	21.1	No
58	Zinfandel Drive & Douglas Road	Signal	E	55.5	Signal	E	62.6	No	Signal	D	54.2	Signal	B	17.6	No
59	Eagles Nest Road/Zinfandel Drive & Kiefer Boulevard	Free Turn			Free Turn			No	Free Turn			Free Turn			No
60	Eagles Nest Road & Jackson Road	Two-way stop	A	2.3	Two-way stop	F	96.3	Yes	Two-way stop	A	3.6	Two-way stop	C	20.0	Yes
	Northbound		*C*	*22.0*		*F*	*>300*			*C*	*23.8*		*F*	*216.4*	
	Southbound		*B*	*13.9*		*C*	*15.6*			*C*	*22.0*		*E*	*47.7*	
	Eastbound Left Turn		*A*	*8.8*		*B*	*10.3*			*A*	*7.9*		*A*	*8.1*	
	Westbound Left Turn		*A*	*7.9*		*A*	*8.3*			*A*	*8.7*		*A*	*8.9*	
61	Eagles Nest Road & Florin Road	Two-way stop	A	2.3	Two-way stop	A	5.0	No	Two-way stop	A	2.6	Two-way stop	A	4.8	No
	Northbound		*B*	*12.7*		*B*	*14.9*			*B*	*12.1*		*B*	*13.5*	
	Southbound		*B*	*10.0*		*B*	*12.0*			*B*	*10.5*		*B*	*13.2*	
	Eastbound Left Turn		*A*	*7.7*		*A*	*7.8*			*A*	*7.7*		*A*	*7.8*	
	Westbound Left Turn		*A*	*0.0*		*A*	*0.0*			*A*	*7.6*		*A*	*0.0*	

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Table 3.6

Existing Plus Jackson Township Project (Alternative 2) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus Jackson Township Project Alternative 2			LOS Impact	Existing			Existing Plus Jackson Township Project Alternative 2			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
62	Sunrise Boulevard & US 50 WB Ramps	Signal	D	44.7	Signal	C	30.9	No	Signal	B	19.7	Signal	A	9.3	No
63	Sunrise Boulevard & US 50 EB Ramps	Signal	B	16.9	Signal	A	9.7	No	Signal	B	17.6	Signal	A	9.7	No
64	Sunrise Boulevard & Folsom Boulevard	Signal	D	54.4	Signal	C	28.3	No	Signal	D	48.6	Signal	C	34.7	No
65	Sunrise Boulevard & White Rock Road	Signal	D	47.8	Signal	C	31.9	No	Signal	D	51.6	Signal	D	36.2	No
66	Sunrise Boulevard & International Drive/Monier Circle	Signal	D	47.8	Signal	B	17.0	No	Signal	D	45.8	Signal	C	21.6	No
67	Sunrise Boulevard & Douglas Road	Signal	D	51.7	Signal	C	24.8	No	Signal	D	46.5	Signal	C	22.5	No
68	Sunrise Boulevard & Chrysanthy Boulevard	Signal	C	27.0	Signal	C	29.2	No	Signal	C	21.0	Signal	A	8.0	No
69	Sunrise Boulevard & Kiefer Boulevard	Signal	D	53.6	Signal	C	30.4	No	Signal	C	27.0	Signal	B	12.9	No
70	Sunrise Boulevard & Jackson Road	Signal	E	57.0	Signal	D	45.8	No	Signal	D	47.2	Signal	D	35.8	No
71	Sunrise Boulevard & Florin Road	Signal	B	11.3	Signal	A	8.6	No	Signal	D	48.3	Signal	B	19.9	No
72	Sheldon Lake Drive/Sunrise Boulevard & Grant Line Road	Signal	D	43.2	Signal	C	22.7	No	Signal	D	40.7	Signal	E	57.4	No
73	Hazel Avenue & Tributary Point Drive/US 50 WB Off-ramp	Signal	C	31.2	Signal	C	27.1	No	Signal	D	41.4	Signal	B	17.3	No
74	Hazel Avenue & US 50 EB Ramps	Signal	C	20.6	Signal	A	8.6	No	Signal	C	29.9	Signal	A	6.0	No
75	Hazel Avenue & Folsom Boulevard	Signal	D	51.7	Signal	C	24.4	No	Signal	D	46.7	Signal	D	36.6	No
76	Prairie City Road & White Rock Road	Signal	B	19.2	Signal	B	12.3	No	Signal	B	15.0	Signal	B	10.1	No

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 3.6

Existing Plus Jackson Township Project (Alternative 2) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus Jackson Township Project Alternative 2			LOS Impact	Existing			Existing Plus Jackson Township Project Alternative 2			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
77	Grant Line Road & White Rock Road	Signal	B	10.9	Signal	A	8.2	No	Signal	B	11.2	Signal	A	7.7	No
78	Grant Line Road & Douglas Road	All-way stop	C	15.2	Signal	B	11.0	No	All-way stop	B	12.3	Signal	A	9.4	No
79	Grant Line Road & Kiefer Boulevard	All-way stop	B	11.4	All-way stop	B	12.9	No	All-way stop	B	10.5	All-way stop	B	12.4	No
80	Grant Line Road & Jackson Road	Signal	E	74.0	Signal	F	96.0	Yes	Signal	E	78.9	Signal	E	70.7	No
81	Watt Avenue & US-50 EB Ramps	Signal	B	13.0	Signal	B	12.3	No	Signal	B	14.9	Signal	B	13.5	No
82	Watt Avenue & US-50 WB Ramps	Signal	C	32.9	Signal	D	35.8	No	Signal	C	28.6	Signal	C	29.9	No
83	Mayhew Rd & Folsom Blvd.	Signal	B	19.8	Signal	B	12.3	No	Signal	C	20.1	Signal	B	13.4	No
84	65th Street Expy & Fruitridge Road	Signal	C	31.2	Signal	C	26.3	No	Signal	D	35.3	Signal	C	26.6	No
85	Power Inn Road & Elder Creek Road	Signal	D	35.2	Signal	C	27.8	No	Signal	D	36.3	Signal	C	34.5	No
86	Power Inn Road & Florin Rd	Signal	D	36.3	Signal	D	37.4	No	Signal	D	45.9	Signal	D	45.0	No
87	Florin Perkins Road & Florin Rd	Signal	D	36.7	Signal	C	31.0	No	Signal	C	32.5	Signal	C	28.1	No
88	Bradshaw Rd & Calvine Rd	Signal	C	30.5	Signal	C	24.3	No	Signal	D	36.9	Signal	C	29.3	No
89	Vineyard Rd & Calvine Rd	Signal	C	30.8	Signal	B	17.5	No	Signal	C	34.9	Signal	B	17.9	No
90	Excelsior Road & Calvine Rd	All-way stop	C	16.6	All-way stop	E	36.2	Yes	All-way stop	B	13.0	All-way stop	C	20.9	No
91	Grant Line Rd & Eagles Nest Rd/Sloughhouse Rd	Signal	D	51.7	Signal	B	13.7	No	Signal	D	46.5	Signal	C	24.6	No

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Table 3.6

Existing Plus Jackson Township Project (Alternative 2) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus Jackson Township Project Alternative 2			LOS Impact	Existing			Existing Plus Jackson Township Project Alternative 2			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
92	Grant Line Rd & Calvine Rd	Signal	C	21.4	Signal	B	15.8	No	Signal	C	24.0	Signal	B	16.5	No
93	Grant Line Rd & Dwy/Wilton Rd	Signal	E	65.9	Signal	E	69.9	No	Signal	E	64.8	Signal	D	48.6	No
94	Grant Line Rd & Bond Rd/Wrangler Dr	Signal	C	33.3	Signal	B	13.0	No	Signal	D	46.4	Signal	B	15.5	No
95	Florin Perkins Road & 14th Avenue	Cumulative Intersection			Cumulative Intersection			No	Cumulative Intersection			Cumulative Intersection			No
96	Jackson Road & 14th Avenue	Cumulative Intersection			Cumulative Intersection			No	Cumulative Intersection			Cumulative Intersection			No
97	Rock Creek Pkwy & Jackson Road	Cumulative Intersection			Cumulative Intersection			No	Cumulative Intersection			Cumulative Intersection			No
98	Aspen 1 Access Road & Jackson Road	Cumulative Intersection			Cumulative Intersection			No	Cumulative Intersection			Cumulative Intersection			No
99	Rancho Cordova Pkwy & US-50 WB Ramps	Cumulative Intersection			Cumulative Intersection			No	Cumulative Intersection			Cumulative Intersection			No
100	Rancho Cordova Pkwy & US-50 EB Ramps	Cumulative Intersection			Cumulative Intersection			No	Cumulative Intersection			Cumulative Intersection			No
101	Rancho Cordova Pkwy & Easton Valley Pkwy	Cumulative Intersection			Cumulative Intersection			No	Cumulative Intersection			Cumulative Intersection			No
102	Rancho Cordova Pkwy & White Rock Road	Cumulative Intersection			Cumulative Intersection			No	Cumulative Intersection			Cumulative Intersection			No
103	Rancho Cordova Pkwy & Douglas Road	Cumulative Intersection			Cumulative Intersection			No	Cumulative Intersection			Cumulative Intersection			No
104	Rancho Cordova Pkwy & Chrysanthy Boulevard/Chrysanthy Blvd	Cumulative Intersection			Cumulative Intersection			No	Cumulative Intersection			Cumulative Intersection			No
105	Rancho Cordova Pkwy & Kiefer Blvd	Cumulative Intersection			Cumulative Intersection			No	Cumulative Intersection			Cumulative Intersection			No
106	Rancho Cordova Pkwy & Grant Line Road	Cumulative Intersection			Cumulative Intersection			No	Cumulative Intersection			Cumulative Intersection			No

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Table 3.6

Existing Plus Jackson Township Project (Alternative 2) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus Jackson Township Project Alternative 2			LOS Impact	Existing			Existing Plus Jackson Township Project Alternative 2			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
107	Americanos Blvd & White Rock Road	Cumulative Intersection			Cumulative Intersection			No	Cumulative Intersection			Cumulative Intersection			No
108	Americanos Blvd & Douglas Road	Cumulative Intersection			Cumulative Intersection			No	Cumulative Intersection			Cumulative Intersection			No
109	Americanos Blvd & Chrysanthy Blvd	Cumulative Intersection			Cumulative Intersection			No	Cumulative Intersection			Cumulative Intersection			No
110	Americanos Blvd & Kiefer Blvd	Cumulative Intersection			Cumulative Intersection			No	Cumulative Intersection			Cumulative Intersection			No
111	Grant Line Road & Chrysanthy Blvd	Cumulative Intersection			Cumulative Intersection			No	Cumulative Intersection			Cumulative Intersection			No
112	Hazel Avenue & Easton Valley Pkwy	Cumulative Intersection			Cumulative Intersection			No	Cumulative Intersection			Cumulative Intersection			No
200	Excelsior Road & Collector WJ-1/Collector JT-1	West Jackson/Jackson Township Project Int.			Signal	A	6.5	No	West Jackson/Jackson Township Project Int.			Signal	A	7.1	No
201	Excelsior Road & Collector WJ-2/Collector JT-2	West Jackson/Jackson Township Project Int.			Signal	B	15.4	No	West Jackson/Jackson Township Project Int.			Signal	B	19.5	No
202	W Collector MS-1 & Kiefer Boulevard	Mather South Project Int.			Mather South Project Int.			No	Mather South Project Int.			Mather South Project Int.			No
203	Northbridge Dr & Kiefer Boulevard	NewBridge Project Int.			NewBridge Project Int.			No	NewBridge Project Int.			NewBridge Project Int.			No
204	E Collector MS-1 & Kiefer Boulevard	Mather South Project Int.			Mather South Project Int.			No	Mather South Project Int.			Mather South Project Int.			No
300	Collector WJ-3 & Jackson Road	West Jackson Project Int.			West Jackson Project Int.			No	West Jackson Project Int.			West Jackson Project Int.			No
301	Collector WJ-4 & Jackson Road	West Jackson Project Int.			West Jackson Project Int.			No	West Jackson Project Int.			West Jackson Project Int.			No
302	Happy Lane & Jackson Road	West Jackson Project Int.			West Jackson Project Int.			No	West Jackson Project Int.			West Jackson Project Int.			No
303	Rock Creek Pkwy & Jackson Road	West Jackson Project Int.			West Jackson Project Int.			No	West Jackson Project Int.			West Jackson Project Int.			No

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Table 3.6

Existing Plus Jackson Township Project (Alternative 2) Intersection Levels of Service

Intersection		AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus Jackson Township Project Alternative 2			LOS Impact	Existing			Existing Plus Jackson Township Project Alternative 2			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
304	Collector WJ-5 & Jackson Road	West Jackson Project Int.			West Jackson Project Int.			No	West Jackson Project Int.			West Jackson Project Int.			No
305	Collector WJ-6 & Jackson Road	West Jackson Project Int.			West Jackson Project Int.			No	West Jackson Project Int.			West Jackson Project Int.			No
306	Excelsior Road & Collector WJ-6	West Jackson Project Int.			West Jackson Project Int.			No	West Jackson Project Int.			West Jackson Project Int.			No
307	S. Watt Avenue & Rock Creek Pkwy	West Jackson Project Int.			West Jackson Project Int.			No	West Jackson Project Int.			West Jackson Project Int.			No
308	Hedge Avenue & Rock Creek Pkwy WB	West Jackson Project Int.			West Jackson Project Int.			No	West Jackson Project Int.			West Jackson Project Int.			No
309	Hedge Avenue & Rock Creek Pkwy EB	West Jackson Project Int.			West Jackson Project Int.			No	West Jackson Project Int.			West Jackson Project Int.			No
310	Mayhew Road & Rock Creek Pkwy WB	West Jackson Project Int.			West Jackson Project Int.			No	West Jackson Project Int.			West Jackson Project Int.			No
311	Mayhew Road & Rock Creek Pkwy EB	West Jackson Project Int.			West Jackson Project Int.			No	West Jackson Project Int.			West Jackson Project Int.			No
312	Bradshaw Road & Rock Creek Pkwy	West Jackson Project Int.			West Jackson Project Int.			No	West Jackson Project Int.			West Jackson Project Int.			No
313	Collector WJ-7 & Rock Creek Pkwy	West Jackson Project Int.			West Jackson Project Int.			No	West Jackson Project Int.			West Jackson Project Int.			No
314	Vineyard Road/Happy Lane & Rock Creek Pkwy	West Jackson Project Int.			West Jackson Project Int.			No	West Jackson Project Int.			West Jackson Project Int.			No
315	Douglas Road & Rock Creek Pkwy	West Jackson Project Int.			West Jackson Project Int.			No	West Jackson Project Int.			West Jackson Project Int.			No
316	Bradshaw Road & Collector WJ-8	West Jackson Project Int.			West Jackson Project Int.			No	West Jackson Project Int.			West Jackson Project Int.			No
317	Bradshaw Road & Collector WJ-9	West Jackson Project Int.			West Jackson Project Int.			No	West Jackson Project Int.			West Jackson Project Int.			No
318	Bradshaw Road & Mayhew Road	West Jackson Project Int.			West Jackson Project Int.			No	West Jackson Project Int.			West Jackson Project Int.			No

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Table 3.6

Existing Plus Jackson Township Project (Alternative 2) Intersection Levels of Service

Intersection		AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus Jackson Township Project Alternative 2			LOS Impact	Existing			Existing Plus Jackson Township Project Alternative 2			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
319	Bradshaw Road & Collector WJ-10	West Jackson Project Int.			West Jackson Project Int.			No	West Jackson Project Int.			West Jackson Project Int.			No
320	Bradshaw Road & Collector WJ-11	West Jackson Project Int.			West Jackson Project Int.			No	West Jackson Project Int.			West Jackson Project Int.			No
321	Collector WJ-12 & Fruitridge Road	West Jackson Project Int.			West Jackson Project Int.			No	West Jackson Project Int.			West Jackson Project Int.			No
322	Mayhew Road & Collector WJ-13	West Jackson Project Int.			West Jackson Project Int.			No	West Jackson Project Int.			West Jackson Project Int.			No
323	Collector WJ-14 & Kiefer Boulevard	West Jackson Project Int.			West Jackson Project Int.			No	West Jackson Project Int.			West Jackson Project Int.			No
324	Collector WJ-15 & Kiefer Boulevard	West Jackson Project Int.			West Jackson Project Int.			No	West Jackson Project Int.			West Jackson Project Int.			No
325	Douglas Road/Shopping Center Dwy & Kiefer Boulevard	West Jackson Project Int.			West Jackson Project Int.			No	West Jackson Project Int.			West Jackson Project Int.			No
326	Happy Lane & Mayhew Road	West Jackson Project Int.			West Jackson Project Int.			No	West Jackson Project Int.			West Jackson Project Int.			No
327	Vineyard Road & Elder Creek Road	West Jackson Project Int.			West Jackson Project Int.			No	West Jackson Project Int.			West Jackson Project Int.			No
328	Vineyard Road & Florin Road	West Jackson Project Int.			West Jackson Project Int.			No	West Jackson Project/CEQA Cumulative Intersection			West Jackson Project/CEQA Cumulative Intersection			No
400	Collector JT-3 & Jackson Road	Jackson Township Project Int.			Signal	B	17.5	No	Jackson Township Project Int.			Signal	B	15.7	No
401	Tree View Lane & Jackson Road	Jackson Township Project Int.			Signal	B	12.4	No	Jackson Township Project Int.			Signal	A	9.7	No
402	Collector JT-4 & Jackson Road	Jackson Township Project Int.			Signal	B	10.1	No	Jackson Township Project Int.			Signal	A	9.8	No
403	Tree View Lane & Collector JT-5	Jackson Township Project Int.			Signal	B	13.4	No	Jackson Township Project Int.			Signal	B	12.5	No
404	Tree View Lane & Collector JT-6	Jackson Township Project Int.			Signal	A	3.9	No	Jackson Township Project Int.			Signal	A	5.8	No

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Table 3.6

Existing Plus Jackson Township Project (Alternative 2) Intersection Levels of Service

Intersection		AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus Jackson Township Project Alternative 2			LOS Impact	Existing			Existing Plus Jackson Township Project Alternative 2			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
405	Tree View Lane & Collector JT-1	Jackson Township Project Int.			Signal	B	17.2	No	Jackson Township Project Int.			Signal	B	15.1	No
406	Tree View Lane & Kiefer Boulevard	Jackson Township Project Int.			Signal	A	6.6	No	Jackson Township Project Int.			Signal	A	6.7	No

Note: Gray shading represents changes in traffic control that the project is responsible to provide.

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Table 3.7

Existing and Existing Plus Jackson Township Project (Alternative 2) Intersection Geometrics

	Intersection	Traffic Control		Existing Lane Geometrics				Existing Plus Jackson Township Project Lane Geometrics			
		Existing	Existing Plus Project	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach
1	Howe Avenue & College Town Drive/US 50 WB Ramps	Signal	Signal	↑↑↑↱	↲↓↓↓↓	↰↱↱	↰↰↰↱↱	↑↑↑↱	↲↓↓↓↓	↰↱↱	↰↰↰↱↱
2	Howe Avenue & US 50 EB Ramps	Signal	Signal	↑↑↑↱	↲↓↓↓	↰↰↱↱		↑↑↑↱	↲↓↓↓	↰↰↱↱	
3	Power Inn Road/Howe Avenue & Folsom Blvd	Signal	Signal	↰↰↑↑↑↱	↲↓↓↓↘↘	↰↰↑↱	↰↰↑↑↱↱	↰↰↑↑↑↱	↲↓↓↓↘↘	↰↰↑↱	↰↰↑↑↱↱
4	Power Inn Road & 14th Avenue	Signal	Signal	↰↰↑↑↱	↲↓↓↘	↰↰↱	↟	↰↰↑↑↱	↲↓↓↘	↰↰↱	↟
5	Power Inn Road & Fruitridge Road	Signal	Signal	↰↰↑↱	↲↓↓↘↘	↰↑↱	↰↑↑↱	↰↰↑↱	↲↓↓↘↘	↰↑↱	↰↑↑↱
6	Jackson Road/Notre Dame Dr. & Folsom Blvd.	Signal	Signal	↰↰↱	↲↰	↰↑↑↱	↰↑↑↱	↰↰↱	↲↰	↰↑↑↱	↰↑↑↱
7	Florin Perkins Road/Julliard Dr. & Folsom Boulevard	Signal	Signal	↰↰↱	↲↰	↰↑↑↱	↰↑↱	↰↰↱	↲↰	↰↑↑↱	↰↑↱
8	Florin Perkins Road & Kiefer Blvd.	Two-way stop	Two-way stop	↑↱	↓↓↘		↰↱	↑↱	↓↓↘		↰↱
9	Florin Perkins Road & Jackson Road	Signal	Signal	↰↑↑↱	↲↓↘	↰↑↱↱	↰↑↱	↰↑↑↱	↲↓↘	↰↑↱↱	↰↑↱
10	Florin Perkins Road & Fruitridge Road	Signal	Signal	↰↑↑↱	↲↓↓↘	↰↑↑↱	↰↑↱	↰↑↑↱	↲↓↓↘	↰↑↑↱	↰↑↱
11	Florin Perkins Road & Elder Creek Road	Signal	Signal	↰↑↑↱	↲↓↓↘	↰↑↑↱	↰↑↑↱	↰↑↑↱	↲↓↓↘	↰↑↑↱	↰↑↑↱
12	Watt Avenue & Folsom Blvd.	Signal	Signal	↰↰↑↑↑↱	↲↓↓↓↘↘	↰↰↑↑↱	↰↰↑↑↱	↰↰↑↑↑↱	↲↓↓↓↘↘	↰↰↑↑↱	↰↰↑↑↱
13	S. Watt Ave. & Reith Ct/Manlove Road	Signal	Signal	↰↑↑↑↱	↲↓↓↘	↟	↰↱↱	↰↑↑↑↱	↲↓↓↘	↟	↰↱↱
14	S. Watt Avenue & Kiefer Blvd.	Signal	Signal	↰↰↑↑↱	↲↓↓↘↘	↰↰↑↑↱	↰↰↑↑↱	↰↰↑↑↱	↲↓↓↘↘	↰↰↑↑↱	↰↰↑↑↱
15	S. Watt Avenue & Canberra Dr.	Signal	Signal	↑↑↱	↓↓↘		↰↱	↑↑↱	↓↓↘		↰↱
16	S. Watt Avenue & Jackson Road	Signal	Signal	↰↑↑↱	↲↓↓↘	↰↱	↰↑↱	↰↑↑↱	↲↓↓↘	↰↱	↰↑↱
17	S. Watt Avenue & Fruitridge Road	Signal	Signal	↰↑↱	↲↓↓↘	↰↑↱	↰↱	↰↑↱	↲↓↓↘	↰↑↱	↰↱
18	S. Watt Avenue & Elder Creek Road	Signal	Signal	↰↑↱	↲↓↘	↰↱	↰↑↱	↰↑↱	↲↓↘	↰↱	↰↑↱
20	Elk Grove Florin Road/S. Watt Ave. & Florin Road	Signal	Signal	↰↑↱	↲↓↘	↰↑↱	↰↑↑↱	↰↑↱	↲↓↘	↰↑↱	↰↑↑↱
21	Elk Grove Florin Road & Gerber Road	Signal	Signal	↰↰↑↱	↲↓↓↘↘	↰↰↑↑↱	↰↰↑↑↱	↰↰↑↱	↲↓↓↘↘	↰↰↑↑↱	↰↰↑↑↱
23	Hedge Avenue & Jackson Road	Signal	Signal	↰↱	↲↘	↰↑↱	↰↑↱	↰↱	↲↘	↰↑↱	↰↑↱
24	Hedge Avenue & Fruitridge Road	All-way stop	All-way stop	↟	↟	↟	↟	↟	↟	↟	↟
25	Hedge Avenue & Elder Creek Road	All-way stop	All-way stop	↟	↟	↟	↟	↟	↟	↟	↟
26	Hedge Avenue & Tokay Lane	Two-way stop	Two-way stop	↟	↟	↟	↟	↟	↟	↟	↟
27	Hedge Avenue & Florin Road	All-way stop	All-way stop	↟	↟	↟	↟	↟	↟	↟	↟
28	Mayhew Road & Kiefer Boulevard	Signal	Signal	↰↑↱	↲↓↘	↰↑↱	↰↑↱	↰↑↱	↲↓↘	↰↑↱	↰↑↱
29	Mayhew Road & Jackson Road	Two-way stop	Two-way stop	↰↱	↟	↰↑↱	↰↱	↰↱	↟	↰↑↱	↰↱
30	Mayhew Road & Fruitridge Road	Two-way stop	Two-way stop	↰	↰	↱		↰	↰	↱	

Note: Gray shading represents changes in traffic control or approach lanes that the project is responsible to provide.

Table 3.7

Existing and Existing Plus Jackson Township Project (Alternative 2) Intersection Geometrics

	Intersection	Traffic Control		Existing Lane Geometrics				Existing Plus Jackson Township Project Lane Geometrics			
		Existing	Existing Plus Project	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach
31	Mayhew Road & Elder Creek Road	Two-way stop	Two-way stop								
32	Zinfandel Drive & Woodring Drive	Two-way stop	Two-way stop								
33	Bradshaw Road & Folsom Blvd.	Signal	Signal								
34	Bradshaw Road & US 50 WB Ramps	Signal	Signal								
35	Bradshaw Road & US 50 EB Ramps	Signal	Signal								
36	Bradshaw Road & Old Placerville Road	Signal	Signal								
37	Bradshaw Road & Kiefer Boulevard	Signal	Signal								
38	Bradshaw Road & Jackson Road	Signal	Signal								
39	Bradshaw Road & Elder Creek Road	Signal	Signal								
40	Bradshaw Road & Florin Road	Signal	Signal								
41	Bradshaw Road & Gerber Road	Signal	Signal								
42	Happy Lane & Old Placerville Road	Two-way stop	Two-way stop								
43	Happy Lane & Kiefer Boulevard										
44	Excelsior Road & Kiefer Boulevard		Signal								
45	Excelsior Road & Jackson Road	Signal	Signal								
46	Excelsior Road & Elder Creek Road	Two-way stop	Two-way stop								
47	Excelsior Road & Florin Road	All-way stop	All-way stop								
48	Excelsior Road & Gerber Road/Birch Ranch Drive	All-way stop	All-way stop								
49	Mather Field Road & US 50 WB Ramps	Signal	Signal								
50	Mather Field Road & US 50 EB Ramps	Signal	Signal								
51	Mather Field Road & Rockingham Drive	Signal	Signal								
52	Mather Boulevard & Douglas Road	All-way stop	All-way stop								
53	Zinfandel Drive & US 50 WB Ramps	Signal	Signal								
54	Zinfandel Drive & US 50 EB Ramps/Gold Center Drive	Signal	Signal								
55	Zinfandel Drive & White Rock Road	Signal	Signal								
56	Zinfandel Drive & Data Drive	Signal	Signal								
57	Zinfandel Drive & International Dr	Signal	Signal								
58	Zinfandel Drive & Douglas Road	Signal	Signal								

Note: Gray shading represents changes in traffic control or approach lanes that the project is responsible to provide.

Table 3.7

Existing and Existing Plus Jackson Township Project (Alternative 2) Intersection Geometrics

	Intersection	Traffic Control		Existing Lane Geometrics				Existing Plus Jackson Township Project Lane Geometrics			
		Existing	Existing Plus Project	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach
59	Eagles Nest Road/Zinfandel Drive & Kiefer Boulevard			↱			↰	↱			↰
60	Eagles Nest Road & Jackson Road	Two-way stop	Two-way stop	↑	↟	↰↱	↰↱	↑	↟	↰↱	↰↱
61	Eagles Nest Road & Florin Road	Two-way stop	Two-way stop	↑	↟	↑	↑	↑	↟	↑	↑
62	Sunrise Boulevard & US 50 WB Ramps	Signal	Signal	↑↑↑ ↱	↿↓↓↓		↰↰↱↱	↑↑↑ ↱	↿↓↓↓		↰↰↱↱
63	Sunrise Boulevard & US 50 EB Ramps	Signal	Signal	↑↑↑↑ ↱	↿↓↓↓	↰↰↰↱↱		↑↑↑↑ ↱	↿↓↓↓	↰↰↰↱↱	
64	Sunrise Boulevard & Folsom Boulevard	Signal	Signal	↰↰↑↑↑↑ ↱	↿↓↓↓↘↘	↰↰↑↑ ↱	↰↰↑ ↱↱	↰↰↑↑↑↑ ↱	↿↓↓↓↘↘	↰↰↑↑ ↱	↰↰↑ ↱↱
65	Sunrise Boulevard & White Rock Road	Signal	Signal	↰↰↑↑↑ ↱	↿↓↓↓↘↘	↰↰↑↑ ↱	↰↰↑↑↑ ↱	↰↰↑↑↑ ↱	↿↓↓↓↘↘	↰↰↑↑ ↱	↰↰↑↑↑ ↱
66	Sunrise Boulevard & International Drive/Monier Circle	Signal	Signal	↰↰↑↑ ↱	↿↓↓↓↘	↰↰↑ ↱↱	↰↱	↰↰↑↑ ↱	↿↓↓↓↘	↰↰↑ ↱↱	↰↱
67	Sunrise Boulevard & Douglas Road	Signal	Signal	↰↰↑↑↑ ↱	↿↓↓↓↘↘	↰↰↑ ↱	↰↰↑↑ ↱	↰↰↑↑↑ ↱	↿↓↓↓↘↘	↰↰↑ ↱	↰↰↑↑ ↱
68	Sunrise Boulevard & Chrysanthy Boulevard	Signal	Signal	↑↑↑ ↱	↓↓↘↘		↰↰↱	↑↑↑ ↱	↓↓↘↘		↰↰↱
69	Sunrise Boulevard & Kiefer Boulevard	Signal	Signal	↰↑↑ ↱	↿↓↘↘	↑	↑ ↱	↰↑↑ ↱	↿↓↘↘	↑	↑ ↱
70	Sunrise Boulevard & Jackson Road	Signal	Signal	↰↱	↿↓↘	↰↑ ↱	↰↑ ↱	↰↱	↿↓↘	↰↑ ↱	↰↑ ↱
71	Sunrise Boulevard & Florin Road	Signal	Signal	↰↑	↿	↱		↰↑	↿	↱	
72	Sheldon Lake Drive/Sunrise Boulevard & Grant Line Road	Signal	Signal	↑	↿↟	↰↑ ↱	↰↱	↑	↿↟	↰↑ ↱	↰↱
73	Hazel Avenue & Tributary Point Drive/US 50 WB Off-ramp	Signal	Signal	↰↰↑↑↑	↿↓↓↓↓	↱	↑↱↱	↰↰↑↑↑	↿↓↓↓↓	↱	↑↱↱
74	Hazel Avenue & US 50 EB Ramps	Signal	Signal		↿↓↓	↰↱↱			↿↓↓	↰↱↱	
75	Hazel Avenue & Folsom Boulevard	Signal	Signal	↰↱	↿↿↟↘	↰↰↑ ↱	↰↑ ↱	↰↱	↿↿↟↘	↰↰↑ ↱	↰↑ ↱
76	Prairie City Road & White Rock Road	Signal	Signal		↿↘	↰↑↑	↑↑ ↱		↿↘	↰↑↑	↑↑ ↱
77	Grant Line Road & White Rock Road	Signal	Signal	↰↑↑	↿↓↓	↰↰↱		↰↑↑	↿↓↓	↰↰↱	
78	Grant Line Road & Douglas Road	All-way stop	Signal[1]	↑	↿	↱		↰↑	↿↓	↰↱	
79	Grant Line Road & Kiefer Boulevard	All-way stop	All-way stop	↑	↟	↑	↑	↑	↟	↑	↑
80	Grant Line Road & Jackson Road	Signal	Signal	↑	↟	↰↱	↰↱	↑	↟	↰↱	↰↱
81	Watt Avenue & US-50 EB Ramps	Signal	Signal	↑↑↑↑ ↱	↿↿↓↓	↰↰↱↱		↑↑↑↑ ↱	↿↿↓↓	↰↰↱↱	
82	Watt Avenue & US-50 WB Ramps	Signal	Signal	↑↑ ↱↱	↿↿↓↓↓		↰↰↱↱↱	↑↑ ↱↱	↿↿↓↓↓		↰↰↱↱↱
83	Mayhew Rd & Folsom Blvd.	Signal	Signal	↰↰↱		↑↑ ↱	↰↑↑	↰↰↱		↑↑ ↱	↰↑↑
84	65th Street Expy & Fruitridge Road	Signal	Signal	↰↑↑ ↱	↿↓↓↘	↰↑↑	↰↑↑ ↱	↰↑↑ ↱	↿↓↓↘	↰↑↑	↰↑↑ ↱
85	Power Inn Road & Elder Creek Road	Signal	Signal	↰↑↱	↿↓↘	↰↑↑ ↱	↰↑ ↱	↰↑↱	↿↓↘	↰↑↑ ↱	↰↑ ↱
86	Power Inn Road & Florin Rd	Signal	Signal	↰↑↱	↿↓↓↘	↰↑↑ ↱	↰↑↑ ↱	↰↑↱	↿↓↓↘	↰↑↑ ↱	↰↑↑ ↱

Note: Gray shading represents changes in traffic control or approach lanes that the project is responsible to provide.

Table 3.7

Existing and Existing Plus Jackson Township Project (Alternative 2) Intersection Geometrics

Intersection		Traffic Control		Existing Lane Geometrics				Existing Plus Jackson Township Project Lane Geometrics			
		Existing	Existing Plus Project	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach
87	Florin Perkins Road & Florin Rd	Signal	Signal	↰↑↑↱	↲↓↓↘	↰↑ ↱	↰↑ ↱	↰↑↑↱	↲↓↓↘	↰↑ ↱	↰↑ ↱
88	Bradshaw Rd & Calvine Rd	Signal	Signal	↰↰↑↱	↲↓↓↘↘	↰↰↑↑↱	↰↰↑ ↱	↰↰↑↱	↲↓↓↘↘	↰↰↑↑↱	↰↰↑ ↱
89	Vineyard Rd & Calvine Rd	Signal	Signal	↾	↲↱↘	↰↑ ↱	↰↑ ↱	↾	↲↱↘	↰↑ ↱	↰↑ ↱
90	Excelsior Road & Calvine Rd	All-way stop	All-way stop	↾	┼	↾	↾	↾	┼	↾	↾
91	Grant Line Rd & Eagles Nest Rd/Sloughhouse Rd	Signal	Signal	↰↑↱	↲↘	↾	↰↱	↰↑↱	↲↘	↾	↰↱
92	Grant Line Rd & Calvine Rd	Signal	Signal	↰↑	↲	↓		↰↑	↲	↓	
93	Grant Line Rd & Dwy/Wilton Rd	Signal	Signal	↰↱	↲↘	↰↱	↰↱	↰↱	↲↘	↰↱	↰↱
94	Grant Line Rd & Bond Rd/Wrangler Dr	Signal	Signal	↰↱	↲↓↘	↿↱	↾	↰↱	↲↓↘	↿↱	↾
200	Excelsior Road & Collector WJ-1/Collector JT-1		Signal					↑↱	↓↘		↰↱
201	Excelsior Road & Collector WJ-2/Collector JT-2		Signal					↑↱	↓↘		↰↱
400	Collector JT-3 & Jackson Road		Signal						↲↘	↰↰↑↑	↑↑ ↱
401	Tree View Lane & Jackson Road		Signal						↲↓↘	↰↰↑↑	↑↑ ↱
402	Collector JT-4 & Jackson Road		Signal						↲↘	↰↑↑	↑ ↱
403	Tree View Lane & Collector JT-5		Signal					↰↑↱	↲↓↘	↰↑ ↱	↰↑ ↱
404	Tree View Lane & Collector JT-6		Signal					↰↑↑	↲↓	↰↱	
405	Tree View Lane & Collector JT-1		Signal					↰↑↱	↲↓↘	↰↑ ↱	↰↑ ↱
406	Tree View Lane & Kiefer Boulevard		Signal					↰↰↱		↑↑ ↱	↰↰↑↑
407	HS/MS Dwy & Kiefer Boulevard		Signal					↰↱		↑ ↱	↰↑

Note: Gray shading represents changes in traffic control or approach lanes that the project is responsible to provide.

3.4.3 Existing Plus Jackson Township Project U.S. 50 Freeway Impacts

3.4.3.1 Freeway Basic Segments

Table 3.8 summarizes a.m. and p.m. peak hour US 50 freeway mainline operations. Details of the analysis are included in the technical appendix. No locations exhibit significant impacts, based on Caltrans' threshold of significance (5% V/C increase).

3.4.3.2 Freeway Merge / Diverge / Weave Segments

Table 3.9 summarizes a.m. and p.m. peak hour freeway operations at ramp junctions and weaving areas. Details of the analysis are included in the technical appendix. The following locations exhibit significant impacts:

- Westbound
    - Watt Avenue to Howe Avenue weave - p.m. peak hour

3.4.3.3 Freeway Ramp Intersection Queuing

Table 3.10 summarizes a.m. and p.m. peak hour freeway ramp intersection queuing. No locations exhibit a significant impact.

3.4.4 Existing Plus Jackson Township Project Pedestrian and Bicycle Facility Impacts

The Jackson Township project would not remove any existing or planned pedestrian facility. The Jackson Township project would not remove any existing bicycle facility, but would modify facilities that are planned in the Bikeway Master Plan. The Jackson Township project would add pedestrian and bicycle demands within the Jackson Township project site and to and from nearby land uses. As illustrated in Figure 3.2, the Jackson Township project has proposed changes to the Bikeway Master Plan. Because the Jackson Township project would add demand for pedestrian and bicycle facilities that may not be available in the site vicinity, the impact of the Jackson Township project on pedestrian and bicycle circulation is potentially significant.

Table 3.8: Existing Plus Jackson Township (Alternative 2) Project Peak Hour Freeway Basic Segment Level of Service									
Direc-tion	**Location**	**Existing**				**Existing Plus Jackson Township Project**			
		AM Peak Hour		**PM Peak Hour**		**AM Peak Hour**		**PM Peak Hour**	
		Volume	**LOS**	**Volume**	**LOS**	**Volume**	**LOS**	**Volume**	**LOS**
East-bound US 50	SR 99 / SR 51 to Stockton Boulevard	7,068	C	6,415	C	7,156	C	6,475	C
	Stockton Boulevard to 59th Street	7,470	**F**	7,228	**F**	7,564	**F**	7,290	**F**
	59th Street to 65th Street	6,767	D	6,641	D	6,856	D	6,689	D
	65th Street to Howe Avenue	7,962	D	7,562	D	8,084	D	7,611	D
	Howe Avenue to Watt Avenue	7,405	D	7,602	D	7,477	D	7,711	D
	Watt Avenue to Bradshaw Road	7,935	D	7,176	C	8,002	D	7,284	C
	Bradshaw Rd to Mather Field Rd	7,725	**F**	7,366	C	7,712	**F**	7,407	C
	Mather Field Rd to Zinfandel Drive	7,275	C	7,224	C	7,268	C	7,264	C
	Zinfandel Drive to Sunrise Blvd	5,121	C	6,649	**F**	5,289	C	6,708	**F**
	Sunrise Boulevard to Hazel Avenue	4,985	C	5,323	**F**	5,132	C	5,366	**F**
West-bound US 50	Hazel Avenue to Sunrise Boulevard	6,068	D	4,370	C	6,121	D	4,481	C
	Sunrise Blvd to Zinfandel Drive	7,502	D	4,762	C	7,540	D	4,902	C
	Zinfandel Drive to Mather Field Rd	7,548	C	5,765	B	7,551	C	5,710	B
	Mather Field Rd to Bradshaw Road	7,859	**F**	6,939	D	7,857	**F**	6,869	D
	Bradshaw Road to Watt Avenue	7,550	**F**	6,466	D	7,522	**F**	6,556	D
	Watt Avenue to Howe Avenue	7,376	**F**	5,106	**F**	7,326	**F**	5,165	**F**
	Howe Avenue to 65th Street	8,157	**F**	7,407	**F**	8,182	**F**	7,469	**F**
	65th Street to 59th Street	8,278	**F**	7,358	**F**	8,281	**F**	7,413	**F**
	59th Street to Stockton Boulevard	9,115	D	7,945	**F**	9,125	D	8,008	**F**
	Stockton Boulevard to SR 99 / SR 51	8,546	D	8,136	**F**	8,536	D	8,194	**F**

Bold values denote level of service "F" conditions. **Red shaded** values indicate project impacts.

Source: *DKS Associates, 2018.*

Table 3.9: Existing Plus Jackson Township Project (Alt. 2) Peak Hour Freeway Merge/Diverge/Weave Segment Level of Service

Direc-tion	Location	Junction Type	Existing				Existing Plus Jackson Township Project			
			A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
			Ramp Volume	LOS	Ramp Volume	LOS	Ramp Volume	LOS	Ramp Volume	LOS
East-bound US 50	Northbound 65th Street Slip Entrance	Weave	765	D	653	C	771	D	636	C
	Howe Avenue / Hornet Drive Exit		1,631		1,417		1,681		1,354	
	Southbound Howe Avenue Loop Entrance	One-Lane Merge	484	C	881	C	485	C	853	C
	Northbound Howe Avenue Slip Entrance	One-Lane Merge	419	C	431	C	435	C	426	C
	Watt Avenue Exit	Two-Lane Diverge	1,317	B	1,634	B	1,333	B	1,641	B
	Watt Avenue Entrance	One-Lane Merge	2,134	**F**	1,724	D	2,143	**F**	1,739	D
	Bradshaw Road Exit	Two-Lane Diverge	1,520	B	1,228	B	1,572	B	1,284	B
	Southbound Bradshaw Road Loop Entrance	One-Lane Merge	220	C	422	C	224	C	425	C
	Northbound Bradshaw Road Slip Entrance	One-Lane Merge	971	C	918	C	923	C	910	C
	Mather Field Road Exit	Two-Lane Diverge	1,266	B	1,062	A	1,275	B	1,092	A
	Southbound Mather Field Road Loop Entrance	One-Lane Merge	125	C	101	B	134	C	100	B

	Northbound Mather Field Road Slip Entrance	Weave	317	**F**	816	C	325	**F**	828	C
	Zinfandel Drive Exit		2,932		1,452		2,945		1,471	
	Southbound Zinfandel Drive Loop Entrance	One-Lane Merge	182	B	129	C	176	B	132	C
	Northbound Zinfandel Drive Slip Entrance	One-Lane Merge	348	B	540	C	562	B	591	C
	Sunrise Boulevard Exit	Major Diverge	1,773	C	1,959	D	1,821	C	1,954	D
	Sunrise Boulevard Entrance	One-Lane Merge	992	C	889	D	1,011	C	870	D
	Hazel Avenue Exit	Two-Lane Diverge	933	B	1,541	C	993	B	1,555	C
	Hazel Avenue Entrance	Weave	804	C	945	C	803	C	949	C
	Aerojet Road Exit		241		55		242		58	
West-bound US 50	Hazel Avenue Exit	Two-Lane Diverge	631	A	869	A	686	A	877	B
	Northbound Hazel Avenue Loop Entrance	One-Lane Merge	160	B	600	B	166	B	595	B
	Southbound Hazel Avenue Slip Entrance	One-Lane Merge	1,550	B	800	B	1,608	B	868	B
	Sunrise Boulevard Exit	One-Lane Diverge	749	E	758	D	729	E	780	D
	Sunrise Blvd Entrance	Lane Addition	2,183	**F**	1,656	D	2,186	**F**	1,685	D
	Zinfandel Drive Exit	One-Lane Diverge	1,034	E	608	C	1,060	E	764	C
	Northbound Zinfandel Drive Loop Entrance	Lane Addition	585	B	1,197	B	599	B	1,194	B
	Southbound Zinfandel Drive Slip Entrance	One-Lane Merge	442	C	561	B	437	C	533	B
	Mather Field Road Exit	One-Lane Drop	1,093	C	556	A	1,110	C	575	A

Northbound Mather Field Road Loop Entrance	One-Lane Merge	515	B	861	B	511	B	889	B
Southbound Mather Field Road Slip Entrance	One-Lane Merge	387	B	380	B	390	B	370	B
Bradshaw Road Exit	Two-Lane Diverge	1,236	B	1,327	B	1,277	B	1,266	B
Northbound Bradshaw Road Loop Entrance	One-Lane Merge	914	D	910	C	932	D	959	C
Southbound Bradshaw Road Slip Entrance	One-Lane Merge	338	D	590	C	334	D	633	C
Watt Avenue Exit	Major Diverge	1,373	D	1,188	C	1,357	D	1,209	C
Northbound Watt Avenue Entrance	One-Lane Merge	820	D	943	C	803	D	936	C
Southbound Watt Avenue Slip Entrance	Lane Addition / Weave	1,232	C	1,317	D	1,211	C	1,313	**F**
Howe Avenue Exit	Major Diverge / Weave	1,531	D	1,419		1,549	D	1,467	
Northbound Howe Avenue Loop Entrance	One-Lane Merge	654	D	602	C	665	D	621	C
Southbound Howe Avenue Slip Entrance	One-Lane Merge	574	C	574	C	575	C	569	C

Bold values denote level of service "F" conditions.
Red shaded values indicate project impacts.
Source: *DKS Associates, 2018.*

Table 3.10: Existing Plus Jackson Township (Alternative 2) Project Peak Hour Freeway Ramp Termini Queuing

Direction	US 50 Exit Ramp	Available Storage Length (feet / lane)			Maximum Queue Length (feet / lane)					
					AM Peak Hour			PM Peak Hour		
		L	T	R	L	T	R	L	T	R
Eastbound US-50	Howe Avenue	765	-	765	84	-	247	117	-	130
	Watt Avenue	1,500	-	1,500	176	-	213	245	-	219
	Bradshaw Road	1,250	-	1,250	91	-	306	84	-	203
	Mather Field Road	1,385	-	1,385	98	-	337	116	-	70
	Zinfandel Drive	1,025	1,025	1,025	194	708	660	471	398	208
	Sunrise Boulevard	1,695	-	1,695	139	-	95	172	-	56
	Hazel Avenue	1,310	-	1,310	168	-	41	156	-	7
Westbound US-50	Hazel Avenue	1,995		1,995	272		47	157		224
	Sunrise Boulevard	1,540	-	1,540	64	-	61	118	-	133
	Zinfandel Drive	1,065	-	1,065	167	-	51	90	-	122
	Mather Field Road	1,335	-	1,335	249	-	186	104	-	49
	Bradshaw Road	1,330	-	1,330	91	-	50	118	-	13
	Watt Avenue	1,480	-	1,480	167	-	538	92	-	438
	Howe Avenue	1,355	1,355	1,355	126	412	89	169	412	175

Red shaded values indicate project impacts.

L = left turn movement, T = through movement, R = right turn movement

Source: *DKS Associates, 2018.*

3.4.5 Existing Plus Jackson Township Project Transit System Impacts

Public transit is not currently provided to the Jackson Township project site. In the preparation of this analysis, a conceptual transit system to serve the Jackson Township project and adjacent future projects was developed (see Section 3.1.2.3). The additional transit service was assumed to be funded by the Jackson Township project. However, the timing and implementation of the transit system are uncertain at this time. The Jackson Township project would increase demands for public transit facilities. Therefore, the impact of the Jackson Township project on the transit system is potentially significant.

3.4.6 Existing Plus Jackson Township Functionality Impacts

Table 3.11 summarizes the results of the rural roadway segment functionality analysis. **Figure 3.6** illustrates the resultant functionality impacts. The table includes the number of lanes assumed with the implementation of the Jackson Township project, which in many cases is greater than the number of lanes in the existing condition. The shaded table cells under the "Travel Lanes" heading illustrates new roadways and widened roadways that are assumed part of the Jackson Township project. The "Substandard?" heading indicates whether or not a roadway meets the County standards of 12-foot lanes and 6-foot shoulders. If the project makes improvements to a roadway segment such as widening, it would be required to reconstruct the entire substandard roadway segment to County standards. The shaded table cells under the "Functionality Impact?" heading indicate those locations with a functionality impact.

As stated above, the traffic analysis assumed that the Jackson Township project would construct a number of travel lanes on roadway segments that are internal to or on the boundary of the Jackson Township project, and the entire roadway segment would be reconstructed to County standards at that time. The timing of implementation of such additional traffic lanes on these internal or boundary roadway segments will affect whether or not impacts would exist at some time prior to full build out of the Jackson Township project.

Table 3.11
Existing Plus Jackson Township Project (Alt. 2) Functionality Impacts

ID	Roadway	Segment		Jurisdiction	Existing Substandard Roadways				Existing + Jackson Township Project (Alt. 2)			
		From	To		Travel Lanes	Pavement (ft)	Substandard? [1]	Existing Volume	Travel Lanes	Substandard? [1]	Forecasted Volume	Functionality Impact? [2]
15	Douglas Rd	Mather Blvd	Zinfandel Dr	County	2	23	Yes	6,635	2	Yes	7,660	Yes
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd	Rancho Cordova/County	2	23	Yes	8,369	2	Yes	8,990	Yes
19	Eagles Nest Rd	Kiefer Blvd	Jackson Rd	County	2	20	Yes	740	2	Yes	1,960	No
20	Eagles Nest Rd	Jackson Rd	Florin Rd	County	2	<21	Yes	517	2	Yes	1,650	No
21	Eagles Nest Rd	Florin Rd	Grant Line Rd	County	2	<21	Yes	189	2	Yes	1,230	No
25	Elder Creek Rd	South Watt Ave	Hedge Ave	County	2	23	Yes	5,576	2	Yes	8,730	Yes
26	Elder Creek Rd	Hedge Ave	Mayhew Rd	County	2	23	Yes	5,797	2	Yes	9,010	Yes
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd	County	2	23	Yes	5,355	2	Yes	9,020	Yes
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd	County	2	23	Yes	2,158	2	Yes	9,780	Yes
30	Excelsior Rd	Kiefer Blvd	Jackson Rd	County	2	22	Yes	3,716	2	Yes	13,870	Yes
31	Excelsior Rd	Jackson Rd	Elder Creek Rd	County	2	<21	Yes	5,075	2	Yes	15,650	Yes
32	Excelsior Rd	Elder Creek Rd	Florin Rd	County	2	<21	Yes	4,203	2	Yes	6,850	Yes
33	Excelsior Rd	Florin Rd	Gerber Rd	County	2	<21	Yes	5,423	2	Yes	7,580	Yes
34	Excelsior Rd	Gerber Rd	Calvine Rd	County	2	<21	Yes	4,229	2	Yes	5,350	No
39	Florin Rd	South Watt Ave	Hedge Ave	County	2	22	Yes	7,718	2	Yes	9,520	Yes
40	Florin Rd	Hedge Ave	Mayhew Rd	County	2	22	Yes	6,312	2	Yes	8,640	Yes
41	Florin Rd	Mayhew Rd	Bradshaw Rd	County	2	22	Yes	6,317	2	Yes	8,680	Yes
42	Florin Rd	Bradshaw Rd	Excelsior Rd	County	2	22	Yes	3,478	2	Yes	5,340	No
43	Florin Rd	Excelsior Rd	Sunrise Blvd	County	2	22	Yes	3,835	2	Yes	4,390	No
48	Fruitridge Rd	South Watt Ave	Hedge Ave	City of Sacramento/ County	2	22	Yes	2,890	2	Yes	2,560	No
49	Fruitridge Rd	Hedge Ave	Mayhew Rd	County	2	22	Yes	1,790	2	Yes	1,190	No
50	Grant Line Rd	White Rock Rd	Douglas Rd	Rancho Cordova/County	2	22	Yes	7,189	2	Yes	8,530	Yes
58	Happy Ln	Old Placerville Rd	Kiefer Blvd	County	2	22	Yes	4,635	2	Yes	6,610	Yes
59	Hedge Ave	Jackson Rd	Fruitridge Rd	County	2	22	Yes	3,061	2	Yes	2,570	No
60	Hedge Ave	Fruitridge Rd	Elder Creek Rd	City of Sacramento/County	2	22	Yes	3,737	2	Yes	3,880	No
61	Hedge Ave	Elder Creek Rd	Florin Rd	County	2	22	Yes	2,722	2	Yes	2,990	No

Red text with light gray shading indicate project impacts.

Table 3.11
Existing Plus Jackson Township Project (Alt. 2) Functionality Impacts

ID	Roadway	Segment		Jurisdiction	Existing Substandard Roadways				Existing + Jackson Township Project (Alt. 2)			
		From	To		Travel Lanes	Pavement (ft)	Substandard? [1]	Existing Volume	Travel Lanes	Substandard? [1]	Forecasted Volume	Functionality Impact? [2]
70	Jackson Rd	Bradshaw Rd	Excelsior Rd	County	2	26	Yes	13,030	2	Yes	26,390	Yes
71	Jackson Rd	Excelsior Rd	Eagles Nest Rd	County	2	26	Yes	10,478	4	No	32,560	Yes[3]
74	Kiefer Blvd	Florin Perkins Rd	South Watt Ave	City of Sacramento/County	2	22	Yes	4,616	2	Yes	4,770	No
77	Kiefer Blvd	Bradshaw Rd	Happy Ln	County	2	22	Yes	4,618	2	Yes	5,580	No
78	Kiefer Blvd	Zinfandel Dr	Sunrise Blvd	County	2	22	Yes	656	2	Yes	1,940	No
83	Mather Blvd-Excelsior Rd[4]	Douglas Rd	Kiefer Blvd	County	2	22	Yes	6,751	2	Yes	8,680	Yes
89	Mayhew Rd	Jackson Rd	Fruitridge Rd	County	2	22	Yes	1,616	2	Yes	990	No
116	White Rock Rd	Fitzgerald Rd	Grant Line Rd	Rancho Cordova/County	2	20	Yes	2,490	2	Yes	2,410	No
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd	County	2	<21	Yes	2,848	2	Yes	6,860	Yes

Note: Gray shading indicates changes in travel lanes or facility type that the project is responsible to provide. For all roadway segments to be widened, the project is responsible to build the entire roadway to County standards.

[1] Substandard rural roads are defined as rural, 2-lane roadway segments with travel lanes narrower than 12 feet and/or roadside shoulders narrower than 6 feet.
[2] Functionality impacts are triggered when a substandard rural road increases over a threshold of 6,000 ADT, or for a roadway already above 6,000 ADT, increases by more than 600 ADT.
[3] The potential for an impact exists should the project generate traffic volumes on the roadway exceeding 6,000 ADT, or increasing more than 600 ADT on a roadway already above 6,000 ADT, prior to the construction of roadway improvements.
[4] Excluding the roadway segment that is within the developed community of Independence at Mather.
[5] The functionality impact is mitigated by improving the roadway to County standards, including widening travel lanes to 12 feet and/or widening or providing paved shoulders to 6 feet.

Red text with light gray shading indicate project impacts.

FIGURE 3.6
EXISTING PLUS JACKSON TOWNSHIP
(ALTERNATIVE 2)
FUNCTIONALITY IMPACTS

Legend

- Substandard Roadways
- Functionality Impact
- Functionality Impact if Roadway is Not Already Improved
- Study_Area_Segments
- Cities
- Mather Airport

3.5 MITIGATION

3.5.1 Existing Plus Jackson Township Project Roadway Segment Mitigation

Table 3.12 summarizes the results of the operations analysis for the study area roadway segments with mitigation. Where feasible, the number of roadway lanes was increased to mitigate the impact. However, the increased number of lanes could not exceed the maximum General Plan designations of the appropriate jurisdictions. The shaded table cells under the "Travel Lanes" and "Facility Type" headings illustrate widened roadways for mitigation purposes, which would be the responsibility of the Jackson Township project to implement. The shaded table cells under the "Level of Service" heading indicate those locations that would continue to have LOS impacts after mitigation. The table also includes the constraint that precluded full mitigation of the LOS impact.

The "LOS Impact with Mitigation?" column shows whether there is still an LOS impact after the mitigation measure is applied. In other words, this column shows whether a mitigation measure successfully mitigates the impact or not. In several locations where the improvements allowed under the General Plan would not mitigate an LOS impact, the County has proposed alternative mitigation measures, which are shown in the "Alternative Mitigation" column. These alternative mitigation measures will either fully mitigate the impact or substantially reduce the level of impact.

3.5.2 Existing Plus Jackson Township Project Intersection Mitigation

Tables 3.13 and 3.14 summarize the results of the operations analysis for the study area intersections with mitigation. However, the increased number of lanes on each approach does not exceed the County's standard number of approach lanes. Shaded table cells in Table 3.14 indicate those locations where changes in traffic control and / or number of approach lanes by type have been made which would be the responsibility of the Jackson Township project to implement. As shown in Table 3.13, all LOS impacts have been fully mitigated. Detailed analysis information is included in the technical appendix.

The "LOS Impact with Mitigation?" column in Table 3.14 shows whether there is still an LOS impact after the mitigation measure is applied. In other words, this column shows whether a mitigation measure successfully mitigates the impact or not. In locations where the LOS impact could not be mitigated by implementing the County's standard number of approach lanes, the County has proposed alternative mitigation measures, which are shown in the "Alternative Mitigation" column. These generally include providing additional turn lanes, carrying an additional through lane past the intersection, or designating the intersection as a High Capacity Intersection. These alternative mitigation measures will either fully mitigate the impact or substantially reduce the level of impact.

3.5.3 Existing Plus Jackson Township Project U.S. 50 Freeway Mitigation

Capacity improvements such as widening of the freeway and freeway junctions would reduce the severity of the impacts, but were generally not considered feasible due to right-of-way

restrictions, legal constraints, and the numerous transportation structures that would need to be modified and/or replaced. Potential alternative improvements have been identified from Caltrans' US-50 Transportation Concept Report (TCR) and Corridor System Management Plan (CSMP). The TCR and CSMP is focused on intelligent transportation systems (ITS) and integrated corridor management (ICM) projects that would have operational benefits to US-50 without adding additional capacity. The TCR and CSMP also identify potential improvements to parallel local facilities that would be expected to reduce travel demand on US-50. The Jackson Township project will participate in one or more of these alternative improvements that could directly reduce the severity of the project's impact and/or provide operational benefits to the US-50 corridor in general.

3.5.3.1 US-50 Westbound Alternative Improvements

To lessen the impact to the westbound US-50 weave between Watt Avenue and Howe Avenue, the project may pay a fair share toward the construction of:

- Bus/HOV lanes from Watt Avenue to Downtown Sacramento (2035 SACOG MTP)
- Replacement of existing communication lines with fiber optics to improve performance between SR-51/SR-99 and Watt Avenue (2013 10-Year SHOPP Plan)
- Auxiliary lane between the NB Howe Avenue on-ramp and the SB Howe Avenue on-ramp (2035 SACOG MTP)
- Ramp meter improvements (Caltrans ITS/OPS Project List)

Table 3.12
Existing Plus Jackson Township Project (Alt. 2) Roadway Segment Mitigations

ID	Roadway	Segment		Existing + Jackson Township Project					Mitigated Existing + Jackson Township Project (Alt. 2)						
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Volume / Capacity Ratio	Level of Service	LOS Impact with Mitigation?	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
23	Elder Creek Rd	Power Inn Rd	Florin-Perkins Rd	2	Arterial M	17,230	0.96	**E**	4	Arterial M	0.48	A	No		
44	Folsom Blvd	Howe Ave	Jackson Rd	4	Arterial M	40,230	1.12	**F**	4	Arterial M	1.12	**F**	Yes		Maximum General Plan lanes
56	Grant Line Rd	Sheldon Rd	Wilton Rd	2	Rural S	19,430	0.97	**E**	4	Arterial M	0.54	A	No		
57	Grant Line Rd	Wilton Rd	Bond Rd	2	Rural S	18,030	0.90	**E**	4	Arterial M	0.50	A	No		
62	Howe Ave	US 50	Folsom Blvd	6	Arterial M	55,140	1.02	**F**	6	Arterial M	1.02	**F**	Yes		Maximum General Plan lanes
67	Jackson Rd	South Watt Ave	Hedge Ave	2	Arterial M	23,820	1.32	**F**	4	Arterial M	0.66	B	No		
68	Jackson Rd	Hedge Ave	Mayhew Rd	2	Arterial M	20,130	1.12	**F**	4	Arterial M	0.56	A	No		
69	Jackson Rd	Mayhew Rd	Bradshaw Rd	2	Arterial M	21,940	1.22	**F**	4	Arterial M	0.61	B	No		
70	Jackson Rd	Bradshaw Rd	Excelsior Rd	2	Arterial M	26,390	1.47	**F**	4	Arterial M	0.73	C	No		
73	Jackson Rd	Sunrise Blvd	Grant Line Rd	2	Rural Hwy	15,070	0.66	**E**	4	Arterial M	0.42	A	No		
83	Mather Blvd-Excelsior Rd	Douglas Rd	Kiefer Blvd	2	Res Collector F	8,680	1.09	**F**	2	Res Collector F	0.85	E	No	Construct Douglas Road extension	
106	Sunrise Blvd	Kiefer Blvd	Jackson Rd	2	Arterial M	19,040	1.06	**F**	4	Arterial M	0.53	A	No		
110	Watt Ave	US 50	Folsom Blvd	6	Arterial H	67,620	1.13	**F**	6	Arterial H	1.13	**F**	Yes		Maximum General Plan lanes

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 3.12
Existing Plus Jackson Township Project (Alt. 2) Roadway Segment Mitigations

ID	Roadway	Segment		Existing + Jackson Township Project					Mitigated Existing + Jackson Township Project (Alt. 2)						
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Volume / Capacity Ratio	Level of Service	LOS Impact with Mitigation?	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible

Note: Gray shading represents changes in travel lanes or facility type that the project is responsible to provide.

[1] The following classifications are used to determine daily roadway capacity:
Arterial L - Arterial, Low Access Control
Arterial M - Arterial, Moderate Access Control
Arterial H - Arterial, High Access Control
Rural Hwy - Rural 2-lane Highway
Rural S - Rural 2-lane Road, 24'-36' of pavement, Paved Shoulders
Rural NS - Rural 2-lane Road, 24'-36' of pavement, No Shoulders
Res Collector F - Residential Collector with Frontage
Res Collector NF - Residential Collector with No Frontage

[2] Alternative mitigations represent proposed mitigations beyond the General Plan, as proposed by the County of Sacramento.

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 3.13

Existing Plus Jackson Township Project (Alternative 2) Impacted Intersections and Mitigations

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing Plus Jackson Township Project			LOS Impact	Mitigated Existing Plus Jackson Township Project			Existing Plus Jackson Township Project			LOS Impact	Mitigated Existing Plus Jackson Township Project		
		Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)
18	S. Watt Avenue & Elder Creek Road	Signal	E	71.3	Yes	Signal	D	41.6	Signal	E	75.9	Yes	Signal	D	36.4
38	Bradshaw Road & Jackson Road	Signal	F	130.6	Yes	Signal	E	69.4	Signal	E	70.7	No	Signal	D	41.0
42	Happy Lane & Old Placerville Road	Two-way stop	B	11.5	Yes	Signal	C	35.0	Two-way stop	B	14.9	Yes	Signal	C	24.9
	Northbound Left Turn		*F*	*199.7*						*F*	*>300*				
	Northbound Right Turn		*E*	*35.5*						*C*	*19.7*				
	Westbound Left Turn		*B*	*10.9*						*B*	*10.5*				
45	Excelsior Road & Jackson Road	Signal	F	167.1	Yes	Signal	E	63.0	Signal	F	108.0	Yes	Signal	D	45.4
46	Excelsior Road & Elder Creek Road	Two-way stop	F	56.2	Yes	Signal	D	41.2	Two-way stop	E	44.8	Yes	Signal	C	31.0
	Northbound Left Turn		*A*	*7.8*						*A*	*8.9*				
	Eastbound		*F*	*251.5*						*F*	*148.1*				
47	Excelsior Road & Florin Road	All-way stop	F	173.7	Yes	Signal	B	16.4	All-way stop	F	67.7	Yes	Signal	B	11.9
52	Mather Boulevard & Douglas Road	All-way stop	F	84.8	Yes	Signal	A	9.0	All-way stop	C	18.7	No	Signal	B	11.3
60	Eagles Nest Road & Jackson Road	Two-way stop	F	96.3	Yes	Signal	C	26.0	Two-way stop	C	20.0	Yes	Signal	C	26.5
	Northbound		*F*	*>300*						*F*	*216.4*				
	Southbound		*C*	*15.6*						*E*	*47.7*				
	Eastbound Left Turn		*B*	*10.3*						*A*	*8.1*				
	Westbound Left Turn		*A*	*8.3*						*A*	*8.9*				
80	Grant Line Road & Jackson Road	Signal	F	96.0	Yes	Signal	D	41.8	Signal	E	70.7	Yes	Signal	C	32.4
90	Excelsior Road & Calvine Rd	All-way stop	E	36.2	Yes	Signal	C	21.2	All-way stop	C	20.9	No	Signal	C	31.2

Note: Gray shading represents changes in traffic control that the project is responsible to provide.

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 3.14

Existing Plus Jackson Township Project (Alternative 2) Intersection Impacts and Mitigations

	Intersection	Traffic Control		Existing Plus Jackson Township Project Lane Geometrics				Mitigated Existing Plus Jackson Township Project Lane Geometrics				LOS Impact with Mitgation?	High Capacity Intersection?[1]	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
		Existing Plus Project	Mitigated Existing Plus Project	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach				
18	S. Watt Avenue & Elder Creek Road	Signal	Signal									No	No		
38	Bradshaw Road & Jackson Road	Signal	Signal									No	No		
42	Happy Lane & Old Placerville Road	Two-way stop	Signal									No	No	Realign Happy Lane to Routier Road (2 lanes)	
45	Excelsior Road & Jackson Road	Signal	Signal									No	No		
46	Excelsior Road & Elder Creek Road	Two-way stop	Signal									No	No		
47	Excelsior Road & Florin Road	All-way stop	Signal												
52	Mather Boulevard & Douglas Road	All-way stop	Signal									No	No		
60	Eagles Nest Road & Jackson Road	Two-way stop	Signal									No	No		
80	Grant Line Road & Jackson Road	Signal	Signal									No	No		
90	Excelsior Road & Calvine Rd	All-way stop	Signal									No	No		

[1] High capacity intersections are defined in the Sacramento County General Plan and may include grade separations, additional turn lanes, and/or other features as deemed appropriate by the County.

[2] Alternative mitigations represent proposed mitigations beyond the General Plan, excluding high capacity intersections, as proposed by the County of Sacramento.

Note: Gray shading represents changes in traffic control or approach lanes that the project is responsible to provide.

3.5.4 Existing Plus Jackson Township Project Pedestrian and Bicycle Facility Mitigation

The Jackson Township project applicant shall coordinate with Sacramento County to identify the necessary on- and off-site pedestrian and bicycle facilities to serve the proposed development. These facilities shall be incorporated into the Jackson Township project and could include sidewalks, stop signs, standard pedestrian and school crossing warning signs, lane striping to provide a bicycle lane, bicycle parking, signs to identify pedestrian and bicycle paths, raised crosswalks, pedestrian signal heads, and all appropriate traffic calming measures as defined in the County's Neighborhood Traffic Management Program (NTMP). Sidewalks would be required as part of the frontage improvements along all new roadway construction in the Jackson Township project vicinity in conformance with County design standards. Circulation and access to all proposed public spaces shall include sidewalks that meet Americans with Disabilities Act standards.

3.5.5 Existing Plus Jackson Township Project Transit System Mitigation

The Jackson Township project applicant shall coordinate with Regional Transit (or other transit operators) to provide the additional transit facilities and services assumed in transportation analysis (see Section 3.1.2.3), or a cost-effective equivalent level of transit facilities and services.

The assumed transit routes and service frequency would be required at full development of the Jackson Township project. The full level of transit service would not achieve adequate transit ridership during the early stages of development. Thus the ultimate transit service, like the roadway system serving the Jackson Township project, must be phased with development of the Jackson Township project.

3.5.6 Existing Plus Jackson Township Project Functionality Mitigation

Table 3.15 summarizes the results of the functionality analysis for the study area rural roadway segments with mitigation.

3.5.7 Existing Plus Jackson Township Project Mitigation Summary

Tables 3.16 through 3.19 summarize all of the roadway segments, intersections, and freeway facilities that would exhibit significant LOS impacts along with the mitigation success for these impacts.

Table 3.15
Existing Plus Jackson Township Project (Alt. 2) Functionality Mitigations

ID	Roadway	Segment		Existing + Jackson Township Project (Alt. 2)				Mitigation	Impact after Mitigation?
		From	To	Travel Lanes	Substandard? [1]	Forecasted Volume	Functionality Impact? [2]		
15	Douglas Rd	Mather Blvd	Zinfandel Dr	2	Yes	7,660	**Yes**	Widen to County standards [5]	No
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd	2	Yes	8,990	**Yes**	Widen to County standards [5]	No
25	Elder Creek Rd	South Watt Ave	Hedge Ave	2	Yes	8,730	**Yes**	Widen to County standards [5]	No
26	Elder Creek Rd	Hedge Ave	Mayhew Rd	2	Yes	9,010	**Yes**	Widen to County standards [5]	No
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd	2	Yes	9,020	**Yes**	Widen to County standards [5]	No
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd	2	Yes	9,780	**Yes**	Widen to County standards [5]	No
30	Excelsior Rd	Kiefer Blvd	Jackson Rd	2	Yes	13,870	**Yes**	Widen to County standards [5]	No
31	Excelsior Rd	Jackson Rd	Elder Creek Rd	2	Yes	15,650	**Yes**	Widen to County standards [5]	No
32	Excelsior Rd	Elder Creek Rd	Florin Rd	2	Yes	6,850	**Yes**	Widen to County standards [5]	No
33	Excelsior Rd	Florin Rd	Gerber Rd	2	Yes	7,580	**Yes**	Widen to County standards [5]	No
39	Florin Rd	South Watt Ave	Hedge Ave	2	Yes	9,520	**Yes**	Widen to County standards [5]	No
40	Florin Rd	Hedge Ave	Mayhew Rd	2	Yes	8,640	**Yes**	Widen to County standards [5]	No
41	Florin Rd	Mayhew Rd	Bradshaw Rd	2	Yes	8,680	**Yes**	Widen to County standards [5]	No
50	Grant Line Rd	White Rock Rd	Douglas Rd	2	Yes	8,530	**Yes**	Widen to County standards [5]	No
58	Happy Ln	Old Placerville Rd	Kiefer Blvd	2	Yes	6,610	**Yes**	Widen to County standards [5]	No
70	Jackson Rd	Bradshaw Rd	Excelsior Rd	2	Yes	26,390	**Yes**	Widen to County standards [5]	No
71	Jackson Rd	Excelsior Rd	Eagles Nest Rd	4	No	32,560	**Yes[3]**	Widen to County standards [5]	No
83	Mather Blvd-Excelsior Rd[4]	Douglas Rd	Kiefer Blvd	2	Yes	8,680	**Yes**	Widen to County standards [5]	No
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd	2	Yes	6,860	**Yes**	Widen to County standards [5]	No

Note: Gray shading indicates changes in travel lanes or facility type that the project is responsible to provide. For all roadway segments to be widened, the project is responsible to build the entire roadway to County standards.

[1] Substandard rural roads are defined as rural, 2-lane roadway segments with travel lanes narrower than 12 feet and/or roadside shoulders narrower than 6 feet.

[2] Functionality impacts are triggered when a substandard rural road increases over a threshold of 6,000 ADT, or for a roadway already above 6,000 ADT, increases by more than 600 ADT.

[3] The potential for an impact exists should the project generate traffic volumes on the roadway exceeding 6,000 ADT, or increasing more than 600 ADT on a roadway already above 6,000 ADT, prior to the construction of roadway improvements.

[4] Excluding the roadway segment that is within the developed community of Independence at Mather.

[5] The functionality impact is mitigated by improving the roadway to County standards, including widening travel lanes to 12 feet and/or widening or providing paved shoulders to 6 feet.

Red text with light gray shading indicate project impacts.

Table 3.16
Existing Plus Jackson Township Project (Alt. 2) List of Impacted Roadway Segments

ID	Roadway	Segment	
		From	To
Level of Service Impact Fully Mitigated by General Plan Lanes			
23	Elder Creek Rd	Power Inn Rd	Florin-Perkins Rd
56	Grant Line Rd	Sheldon Rd	Wilton Rd
57	Grant Line Rd	Wilton Rd	Bond Rd
67	Jackson Rd	South Watt Ave	Hedge Ave
68	Jackson Rd	Hedge Ave	Mayhew Rd
69	Jackson Rd	Mayhew Rd	Bradshaw Rd
70	Jackson Rd	Bradshaw Rd	Excelsior Rd
73	Jackson Rd	Sunrise Blvd	Grant Line Rd
83	Mather Blvd	Bleckely St	Femoyer St
106	Sunrise Blvd	Rio Del Oro Pkwy	Douglas Rd
Level of Service Impact Not Fully Mitigated by General Plan Lanes			
44	Folsom Blvd	Howe Ave	Jackson Rd
62	Howe Ave	US 50	Folsom Blvd
110	Watt Ave	US 50	Folsom Blvd

Note: Refer to Table 3.12 for detailed description of impacts and mitigations.

Table 3.17

Existing Plus Jackson Township Project (Alternative 2) Summary of Impacted Intersections

	Intersection	Alternative Mitigation
Level of Service Impact Fully Mitigated by General Plan Lanes		
18	S. Watt Avenue & Elder Creek Road	
38	Bradshaw Road & Jackson Road	
42	Happy Lane & Old Placerville Road	**
45	Excelsior Road & Jackson Road	
46	Excelsior Road & Elder Creek Road	
47	Excelsior Road & Florin Road	
52	Mather Boulevard & Douglas Road	
59	Eagles Nest Road/Zinfandel Drive & Kiefer Boulevard	
60	Eagles Nest Road & Jackson Road	
80	Grant Line Road & Jackson Road	
90	Excelsior Road & Calvine Rd	

[1] Alternative mitigations represent proposed mitigations beyond the General Plan, excluding designated high capacity intersections, as proposed by the County of Sacramento.

* denotes alternative mitigations that improve operations but do not fully mitigate the impact.
** denotes alternative mitigations that fully mitigate the impact.

Table 3.18

Existing Plus Jackson Township (Alternative 2) Project
Summary of Impacted Freeway Merge/Diverge/Weave Segments

Direction	Location	Junction Type
Level of Service Impact Not Mitigated		
Westbound US-50	Southbound Watt Avenue Slip Entrance	Weave
	Howe Avenue Exit	

Source: *DKS Associates, 2018.*

Table 3.19
Existing Plus Jackson Township Project (Alt. 2) Functionality Impact Summary

ID	Roadway	Segment	
		From	To
Functionality Impact Fully Mitigated			
15	Douglas Rd	Mather Blvd	Zinfandel Dr
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd
25	Elder Creek Rd	South Watt Ave	Hedge Ave
26	Elder Creek Rd	Hedge Ave	Mayhew Rd
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd
30	Excelsior Rd	Kiefer Blvd	Jackson Rd
31	Excelsior Rd	Jackson Rd	Elder Creek Rd
32	Excelsior Rd	Elder Creek Rd	Florin Rd
33	Excelsior Rd	Florin Rd	Gerber Rd
39	Florin Rd	South Watt Ave	Hedge Ave
40	Florin Rd	Hedge Ave	Mayhew Rd
41	Florin Rd	Mayhew Rd	Bradshaw Rd
50	Grant Line Rd	White Rock Rd	Douglas Rd
58	Happy Ln	Old Placerville Rd	Kiefer Blvd
70	Jackson Rd	Bradshaw Rd	Excelsior Rd
71	Jackson Rd	Excelsior Rd	Eagles Nest Rd
83	Mather Blvd-Excelsior Rd[4]	Douglas Rd	Kiefer Blvd
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd

4. EXISTING PLUS FOUR PROJECTS SCENARIO (JACKSON TOWNSHIP PROJECT ALTERNATIVE 2)

4.1 PROJECT DESCRIPTION

The existing plus FOUR PROJECTS scenario evaluates the effects of the traffic of four developments (FOUR PROJECTS) added to existing conditions. **Figure 4.1** illustrates the location of the FOUR PROJECTS:

- West Jackson
- Jackson Township
- NewBridge
- Mather South

The FOUR PROJECTS are located in unincorporated Sacramento County, generally east of the City of Sacramento and south of the community of Rosemont and the City of Rancho Cordova. The FOUR PROJECTS are located both north and south of Jackson Road (SR 16). The FOUR PROJECTS are generally bounded to the west by South Watt Avenue, to the north by the Community of Rosemont and Mather Airport, to the east by Sunrise Boulevard, and to the south by Elder Creek Road and Florin Road.

4.1.1 Land Use

Table 4.1 summarizes the land use assumptions for the FOUR PROJECTS in Jackson Corridor. Together, the FOUR PROJECTS would contain over 28,600 dwelling units and contain enough non-residential land uses to employ over 38,200 workers.

4.1.2 Transportation Network

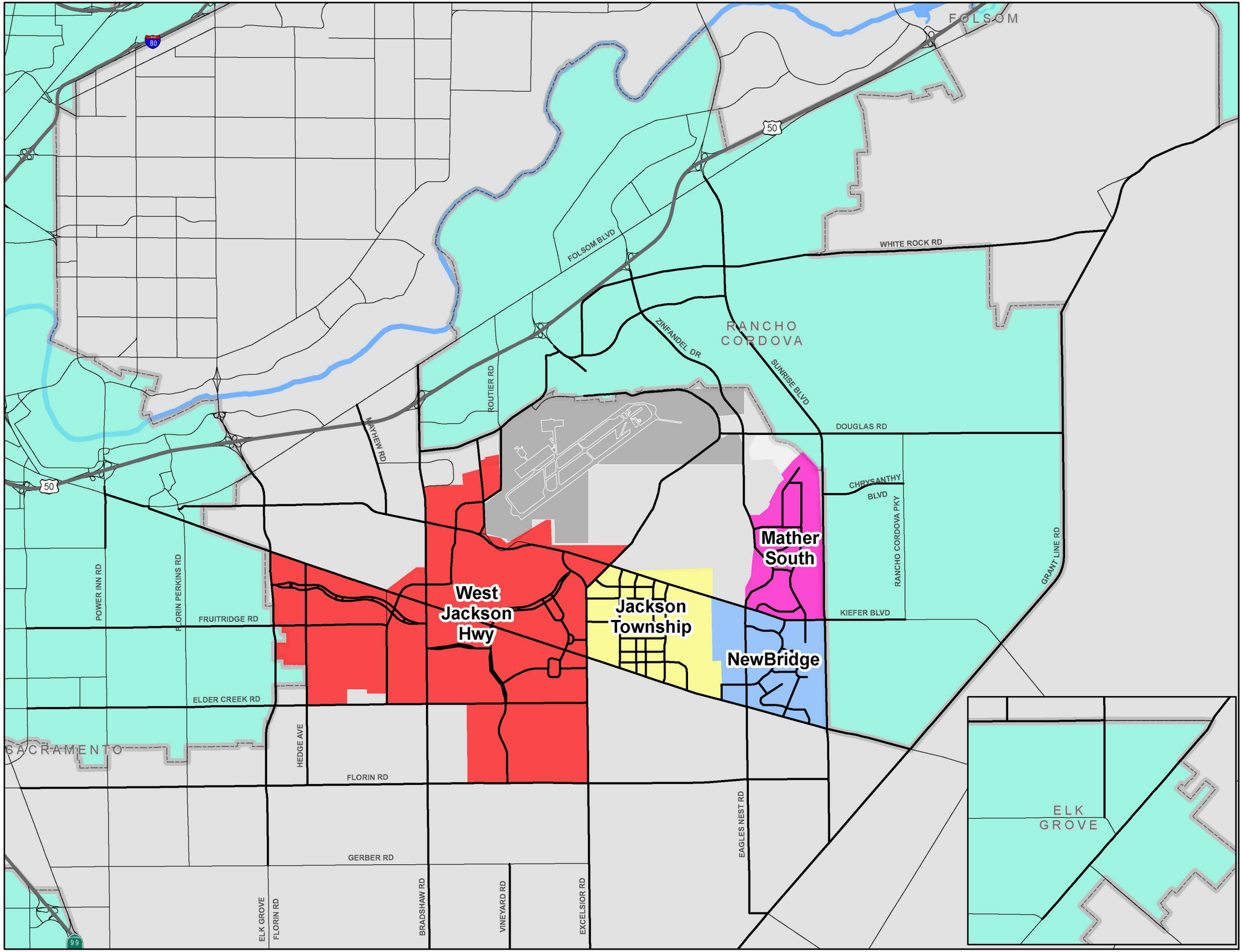
4.1.2.1 Roadway Segments and Intersections

Figure 4.2 illustrates the FOUR PROJECTS transportation network. The FOUR PROJECTS would widen and / or complete many roadways that cross or border the FOUR PROJECTS sites. The FOUR PROJECTS would improve many intersections within or on the borders of the projects. In addition, the FOUR PROJECTS would include new roadways to serve the proposed land use. The proposed improvements associated with the FOUR PROJECTS are summarized later in Sections 4.2.1 and 4.2.2.

4.1.2.2 Pedestrian and Bicycle Facilities

The roadways within the FOUR PROJECTS would meet County standards, which would provide sidewalks and on-street (Class II) bike lanes on all collector, arterial and thoroughfare roadways. The FOUR PROJECTS also provide several off-street (Class I) multi-purpose trails.

FIGURE 4.1
FOUR PROJECTS
PROJECT LOCATIONS



Legend

- Study Roadway Segments
- Freeways
- Other Major Roadways
- West Jackson Hwy Project
- Jackson Township Project
- NewBridge Project
- Mather South Project
- Cities
- Mather Airport

Table 4.1: Assumed Land Use for Existing Plus FOUR PROJECTS (Alt. 2) Scenario			
Project	**General Land Use**	**Acres**	**Dwelling Units**
West Jackson	Residential	1979.9	12,345
	Assumed Density Bonus[1]		237
	Mixed Use	120.9	2,418
	Commercial	342.8	
	Employment	803.3	
	Industrial	154.8	
	Schools	131.7	
	Park/Open Space/Ag	2108.3	
	Institutional	23.4	
	Primary Roadways	248.2	
	Subtotal	**5913.3**	**15,000**
Jackson Township	Residential	589.1	5,590
	Assumed Density Bonus[1]		76
	Commercial/Mixed Use	95.6	100
	Office	35.2	
	Pubic/Quasi Public	102.5	
	Park/Open Space/Ag	409.4	448
	Primary Roadways	84.2	
	Subtotal	**1,391.0**	**6,214**
NewBridge	Residential	368.0	2,915
	Assumed Density Bonus[1]		108
	Commercial/Mixed Use	31.7	160
	Office	13.8	
	Pubic/Quasi Public	13.8	
	Park/Open Space/Ag	514.7	660
	Primary Roadways	47.9	
	Subtotal	**1,095.3**	**3,843**

Table 4.1: Assumed Land Use for Existing Plus FOUR PROJECTS (Alt. 2) Scenario			
Project	**General Land Use**	**Acres**	**Dwelling Units**
Mather South	Residential	428.7	3,352
	Assumed Density Bonus[1]		30
	Commercial	21.1	
	Environmental Education Campus	27.9	200
	Research and Development	21.4	
	Parks & Recreation	43.1	
	Public Utilities	3.5	
	Schools	23.7	
	Open Space	210.5	
	Streets	62.7	
	Subtotal	**848.2**	**3,552**

[1] Reflects estimated potential for additional units that may occur due to County's Housing Incentive Program.

Source: *Project Applicants and Sacramento County, 2018.*

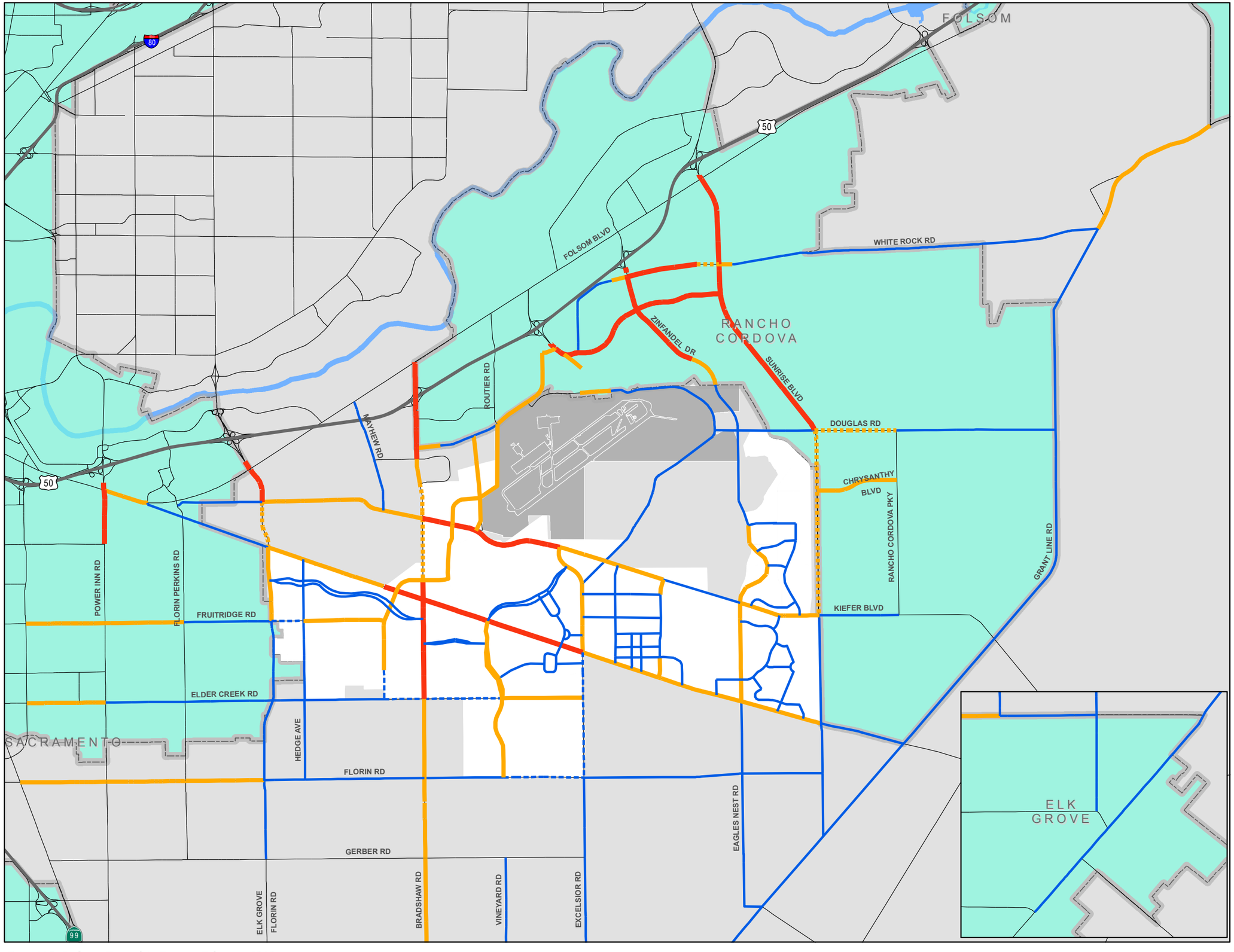


FIGURE 4.2
EXISTING PLUS FOUR PROJECTS (JACKSON TOWNSHIP ALT 2) ROADWAY NETWORK

Legend

- 2 Lanes
- 3 Lanes
- 4 Lanes
- 5 Lanes
- 6 Lanes
- 7 Lanes
- Cities
- Mather Airport

DKS

4.1.2.3 Transit System

As described in Section 2.2, transit service in the vicinity of the FOUR PROJECTS is very limited. The FOUR PROJECTS are designed with significant amounts of higher density and mixed uses to help support transit use but transit service within walking distances of those uses is required to achieve significant transit ridership.

An accurate estimation of transit use requires the definition of specific transit routes and frequency of service on those routes. A separate planning effort, involving staff from Sacramento County and Sacramento Regional Transit (RT), was conducted to define an appropriate transit system for the transportation analysis. That effort is described in Section 3.1.2.3.

The planning effort resulted in four transit lines that would serve the FOUR PROJECTS at a frequency of 15 minutes during the peak commute hours (approximately 6-9 AM and 3-6 PM) and 30 minutes during off-peak service hours (approximately 9AM-3PM and 6PM-8PM) on weekdays. Another key characteristic of the proposed transit system built into the modeling assumptions is the targeted use of queue jumps on portions of key corridors (Bradshaw Road from Kiefer Boulevard to Rock Creek Parkway, and Jackson Road from Watt Avenue to Excelsior Road). Queue jumps ensure that buses are not excessively delayed at signals along congested corridors, and therefore not too heavily penalized from a travel time perspective. This is necessary to achieve the adequate ridership levels that were forecast and ensure reliable operations. **Figure 4.3** shows the assumed transit routes for this scenario.

The assumed transit routes, service frequency, and supporting infrastructure (i.e. queue jumps) would be required at full development of the FOUR PROJECTS. The full level of transit service would not achieve adequate transit ridership during the early stages of development. Thus the ultimate transit service, like the roadway system serving the FOUR PROJECTS, must be phased with development of the FOUR PROJECTS.

4.2 TRIP GENERATION

The SACSIM model that has been utilized for the transportation forecasts in this analysis estimated trip generation of the FOUR PROJECTS. **Table 4.2** summarizes the person trip generation. The FOUR PROJECTS would generate over 85,000 daily work person trip ends, and over 672,000 daily person trip ends for all trip purposes.

Table 4.3 summarizes the estimated mode choice for the Existing plus FOUR PROJECTS scenario. Over 90 percent of all person trips are expected to be accommodated by automobile. Transit will serve about 1.4 percent of all trips, while walk and bike modes will accommodate about 7.7 percent of all trips. The mode choice assumes full implementation of the project's pedestrian and bicycle systems.

Table 4.4 summarizes the vehicular (auto) trip generation of the FOUR PROJECTS. The FOUR PROJECTS are estimated to generate nearly 462,000 daily vehicle trip ends. About 100,700 of the daily vehicle trip ends will be associated with trips with both an origin and destination within

the individual projects, about 21.8 percent of the trip ends. The internal trip ends represent about 50,300 daily vehicle trips (one-half the number of internal trip ends). The FOUR PROJECTS will generate about 361,200 external vehicle trips that have an origin or destination inside one of the FOUR PROJECTS but the other end of the trip is outside the project from which it originated. Table 4.4 also shows the vehicle trips generated during the a.m. and p.m. peak hours.

Table 4.2: Estimated Daily Person Trip Generation (Existing Plus FOUR PROJECTS Alt. 2 Scenario)

Trip Purpose	Daily Person Trip Ends
Work Trips	85,601
Non-Work Trips	587,097
All Trip Purposes	672,698

Source: *DKS Associates, 2018.*

Table 4.3: Mode Split (Existing Plus FOUR PROJECTS Alt. 2 Scenario)

Mode	Percentage of Person Trips by Trip Purpose		
	Work Trips	Non-Work Trips	All Trip Purposes
Auto - SOV	85.5%	48.7%	53.4%
Auto - HOV	10.3%	41.5%	37.5%
Transit	2.7%	1.3%	1.4%
Walk	1.0%	7.7%	6.9%
Bike	0.5%	0.8%	0.8%

Source: *DKS Associates, 2018.*

Table 4.4: Estimated Daily Vehicle Trip Generation (Existing Plus FOUR PROJECTS Alt. 2 Scenario)

Trip Type		AM Peak Hour	PM Peak Hour	Daily
Total Vehicle Trip Ends		39,960	43,388	461,920
Percent Internal Trip Ends[1]		18.5%	22.3%	21.8%
Vehicle Trips	Internal to Projects	3,687	4,838	50,315
	External to Projects	32,585	33,712	361,290
	Total	36,273	38,550	411,605

[1.] Both trip ends within individual projects.

Source: *DKS Associates, 2018.*

4.3 TRIP DISTRIBUTION

The distribution of trips associated with development of the FOUR PROJECTS was derived utilizing SACSIM, incorporating the proposed land use and access locations associated with the FOUR PROJECTS. Trip distribution varies by land use and time period. **Figure 4.4** illustrates the overall trip distribution of daily FOUR PROJECTS trips with the Existing Plus FOUR PROJECTS scenario. The highest percentages of FOUR PROJECTS traffic are accommodated on Jackson Road, Bradshaw Road, Kiefer Boulevard, and Vineyard Road.

4.4 OPERATIONS ANALYSIS AND IMPACTS

For purposes of this analysis, full development of the FOUR PROJECTS is assumed to occur "instantaneously." In this manner, the traffic and impacts associated with the FOUR PROJECTS can be directly compared to known and measured conditions. Existing scenario impacts are determined by comparing the traffic operating conditions associated with the FOUR PROJECTS with the traffic operating conditions associated with the existing (without FOUR PROJECTS) conditions, and comparing the change to the thresholds of significance. **Figure 4.5** illustrates the resultant traffic operating conditions.

4.4.1 Existing Plus FOUR PROJECTS Roadway Segment Impacts

Table 4.5 summarizes the results of the operations analysis for the study area roadway segments. The table includes the number of lanes assumed with the implementation of the FOUR PROJECTS. The shaded table cells under the "Travel Lanes" and "Facility Type" headings illustrate new roadways or widened roadways. The last column of the table shows the project(s) responsible for the increase in the number of roadway lanes. The shaded table cells under the "Level of Service" heading indicate those locations with an LOS impact.

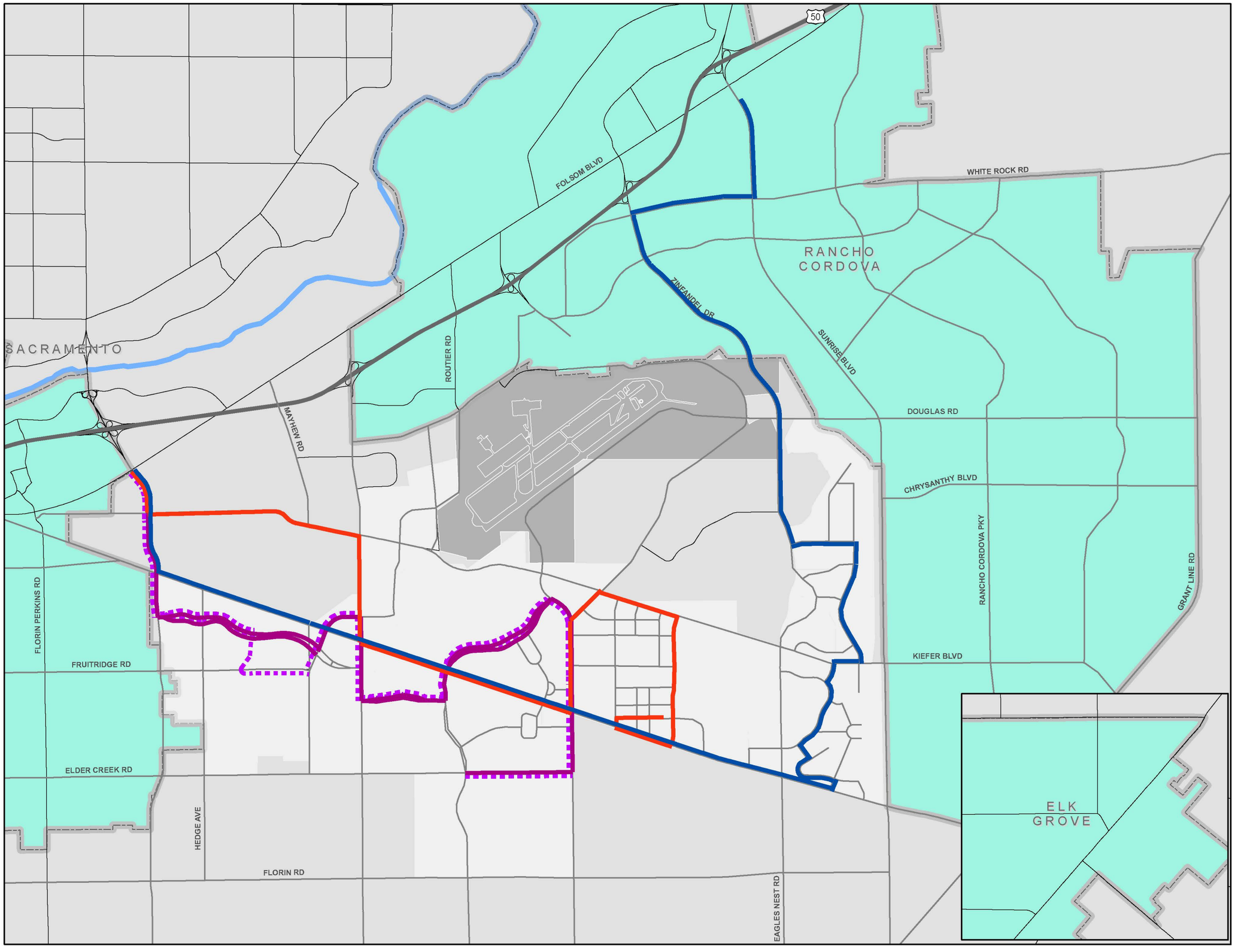


FIGURE 4.3
PROJECT TRANSIT NETWORK
EXISTING PLUS FOUR PROJECTS

Legend

- Jackson Express Route
- Kiefer Jackson Local Route
- West Jackson Local Route A
- West Jackson Local Route B
- Cities
- Mather Airport

DKS

FIGURE 4.4
EXISTING PLUS FOUR PROJECTS
FOUR PROJECTS TRIP DISTRIBUTION
(JACKSON TOWNSHIP ALT 2)

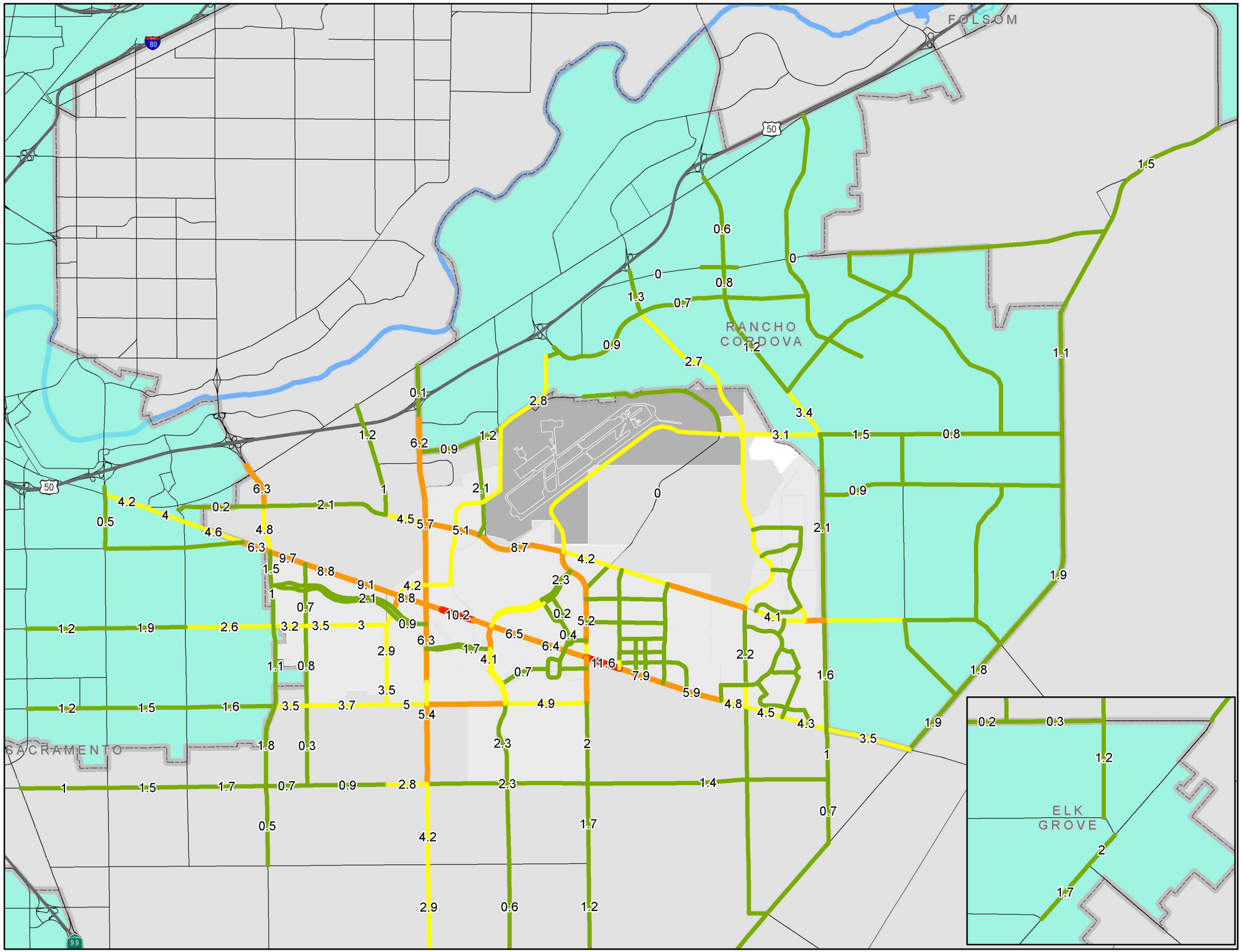
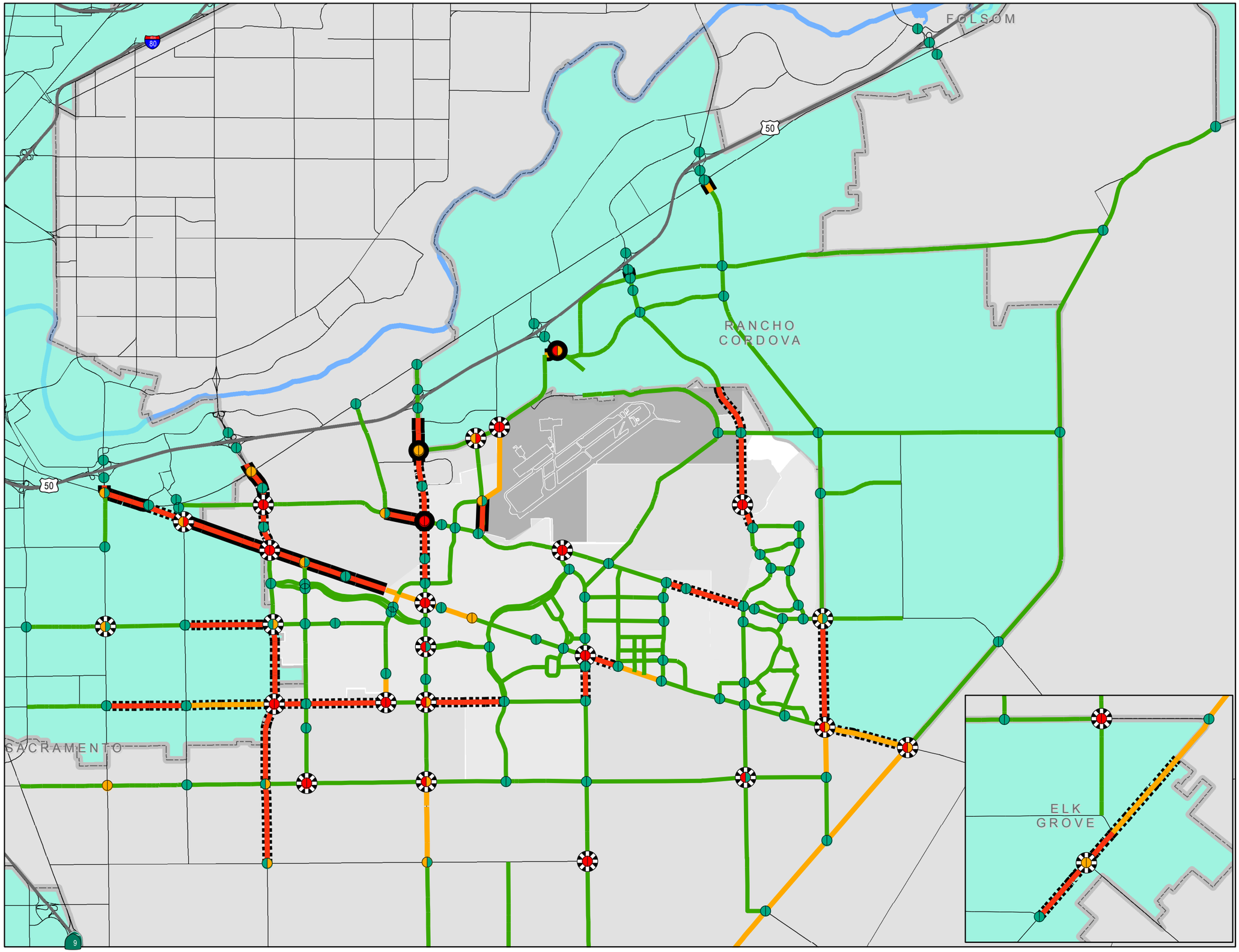


FIGURE 4.5
EXISTING PLUS FOUR PROJECTS (JACKSON TOWNSHIP ALT 2) ROADWAY SEGMENT AND INTERSECTION LOS AND IMPACTS



Legend

Intersections (AM Peak Hour)
- LOS A-D
- LOS E
- LOS F

Intersections (PM Peak Hour)
- LOS A-D
- LOS E
- LOS F
- Mitigable Intersection Impact
- Unavoidable Intersection Impact

Roadway Segments
- LOS A-D
- LOS E
- LOS F

Impacts
- Unavoidable Segment Impact
- Mitigable Segment Impact
- Cities
- Mather Airport

DKS

Table 4.5
Existing Plus FOUR PROJECTS Roadway Segment Levels of Service

ID	Roadway	Segment		Existing					Existing + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
1	Bradshaw Rd	Folsom Blvd	US 50	6	Arterial M	20,592	0.38	A	6	Arterial M	19,200	0.36	A	
2	Bradshaw Rd	US 50	Lincoln Village Dr	6	Arterial M	52,590	0.97	**E**	6	Arterial M	74,850	1.39	**F**	
3	Bradshaw Rd	Lincoln Village Dr	Old Placerville Rd	6	Arterial M	42,787	0.79	C	6	Arterial M	68,340	1.27	**F**	
4	Bradshaw Rd	Old Placerville Rd	Goethe Rd	6	Arterial M	38,984	0.72	C	6	Arterial M	60,800	1.13	**F**	
5.1	Bradshaw Rd	Goethe Rd	Collector WJ-8	4	Arterial M	28,651	0.80	C	4	Arterial M	52,590	1.46	**F**	
5.2	Bradshaw Rd	Collector WJ-8	Kiefer Blvd	4	Arterial M	28,651	0.80	C	5	Arterial M	48,280	1.34	**F**	West Jackson
6.1	Bradshaw Rd	Kiefer Blvd	Collector WJ-9	4	Arterial M	30,726	0.85	D	5	Arterial M	43,190	1.20	**F**	West Jackson
6.2	Bradshaw Rd	Collector WJ-9	Mayhew Rd	4	Arterial M	30,726	0.85	D	5	Arterial M	43,450	1.21	**F**	West Jackson
6.3	Bradshaw Rd	Mayhew Rd	Jackson Rd	4	Arterial M	30,726	0.85	D	6	Arterial M	45,410	0.84	D	West Jackson
7.1	Bradshaw Rd	Jackson Rd	Rock Creek Pkwy	4	Arterial M	22,871	0.64	B	6	Arterial M	35,380	0.66	B	West Jackson
7.2	Bradshaw Rd	Rock Creek Pkwy	Collector WJ-10	4	Arterial M	22,871	0.64	B	6	Arterial M	36,740	0.68	B	West Jackson
7.3	Bradshaw Rd	Collector WJ-10	Collector WJ-11	4	Arterial M	22,871	0.64	B	6	Arterial M	29,220	0.54	A	West Jackson
7.4	Bradshaw Rd	Collector WJ-11	Elder Creek Rd	4	Arterial M	22,871	0.64	B	6	Arterial M	23,920	0.44	A	West Jackson
8	Bradshaw Rd	Elder Creek Rd	Florin Rd	4	Arterial M	22,265	0.62	B	4	Arterial M	32,200	0.89	D	
9	Bradshaw Rd	Florin Rd	Gerber Rd	4	Arterial M	22,883	0.64	B	4	Arterial M	32,640	0.91	E	
10	Bradshaw Rd	Gerber Rd	Calvine Rd	4	Arterial M	16,984	0.47	A	4	Arterial M	24,860	0.69	B	
11	Calvine Rd	Waterman Rd	Bradshaw Rd	4	Arterial M	16,015	0.44	A	4	Arterial M	21,490	0.60	A	
12	Calvine Rd	Bradshaw Rd	Vineyard Rd	4	Arterial M	12,395	0.34	A	4	Arterial M	13,180	0.37	A	
13	Calvine Rd	Vineyard Rd	Excelsior Rd	2	Arterial M	6,036	0.34	A	2	Arterial M	6,840	0.38	A	
14	Chrysanthy Blvd	Sunrise Blvd	Rancho Cordova Pkwy	4	Arterial M	3,411	0.09	A	4	Arterial M	4,910	0.14	A	
15	Douglas Rd	Mather Blvd	Zinfandel Dr	2	Arterial M	6,635	0.37	A	2	Arterial M	5,950	0.33	A	
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd	2	Arterial M	8,369	0.46	A	2	Arterial M	8,740	0.49	A	
17	Douglas Rd	Sunrise Blvd	Rancho Cordova Pkwy	5	Arterial M	3,674	0.10	A	5	Arterial M	5,370	0.15	A	
18	Douglas Rd	Rancho Cordova Pkwy	Grant Line Rd	2	Arterial M	3,674	0.20	A	2	Arterial M	5,150	0.29	A	
19.1	Eagles Nest Rd	Kiefer Blvd	N Bridgewater Dr	2	Arterial M	740	0.04	A	4	Arterial M	8,640	0.24	A	NewBridge
19.2	Eagles Nest Rd	N Bridgewater Dr	S Bridgewater Dr	2	Arterial M	740	0.04	A	4	Arterial M	8,840	0.25	A	NewBridge
19.3	Eagles Nest Rd	S Bridgewater Dr	Jackson Rd	2	Arterial M	740	0.04	A	4	Arterial M	9,500	0.26	A	NewBridge
20	Eagles Nest Rd	Jackson Rd	Florin Rd	2	Arterial M	517	0.03	A	2	Arterial M	6470	0.36	A	
21	Eagles Nest Rd	Florin Rd	Grant Line Rd	2	Arterial M	189	0.01	A	2	Arterial M	3430	0.19	A	
22	Elder Creek Rd	65th St	Power Inn Rd	4	Arterial M	17,891	0.50	A	4	Arterial M	23,360	0.65	B	
23	Elder Creek Rd	Power Inn Rd	Florin-Perkins Rd	2	Arterial M	15,734	0.87	D	2	Arterial M	22,490	1.25	**F**	
24	Elder Creek Rd	Florin Perkins Rd	South Watt Ave	2	Arterial M	11,092	0.62	B	2	Arterial M	17,930	1.00	**E**	
25	Elder Creek Rd	South Watt Ave	Hedge Ave	2	Arterial M	5,576	0.31	A	2	Arterial M	24,370	1.35	**F**	
26	Elder Creek Rd	Hedge Ave	Mayhew Rd	2	Arterial M	5,797	0.32	A	2	Arterial M	23,830	1.32	**F**	

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 4.5
Existing Plus FOUR PROJECTS Roadway Segment Levels of Service

ID	Roadway	Segment		Existing					Existing + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd	2	Arterial M	5,355	0.30	A	3	Arterial M	14,080	0.78	C	West Jackson
28.1	Elder Creek Rd	Bradshaw Rd	Vineyard Rd	2	Arterial M	2,158	0.12	A	3	Arterial M	20,830	1.16	**F**	West Jackson
28.2	Elder Creek Rd	Vineyard Rd	Excelsior Rd	2	Arterial M	2,158	0.12	A	4	Arterial M	17,660	0.49	A	West Jackson
29	Elk Grove-Florin Rd	Florin Rd	Gerber Rd	2	Arterial M	22,960	1.28	**F**	2	Arterial M	24,620	1.37	**F**	
30.1	Excelsior Rd	Kiefer Blvd	Douglas Rd	2	Arterial M	3,716	0.21	A	2	Arterial M	3,900	0.22	A	
30.2	Excelsior Rd	Douglas Rd	Collector WJ-1/ Collector JT-1	2	Arterial M	3,716	0.21	A	4	Arterial M	22,740	0.63	B	West Jackson; Jackson Township
30.3	Excelsior Rd	Collector WJ-1/ Collector JT-1	Collector WJ-2/ Collector JT-2	2	Arterial M	3,716	0.21	A	4	Arterial M	19,950	0.55	A	West Jackson; Jackson Township
30.4	Excelsior Rd	Collector WJ-2/ Collector JT-2	Jackson Rd	2	Arterial M	3,716	0.21	A	4	Arterial M	18,210	0.51	A	West Jackson; Jackson Township
31.1	Excelsior Rd	Jackson Rd	Collector WJ-6	2	Arterial M	5,075	0.28	A	3	Arterial M	28,310	1.57	**F**	West Jackson
31.2	Excelsior Rd	Collector WJ-6	Elder Creek Rd	2	Arterial M	5,075	0.28	A	3	Arterial M	27,210	1.51	**F**	West Jackson
32	Excelsior Rd	Elder Creek Rd	Florin Rd	2	Arterial M	4,203	0.23	A	3	Arterial M	11,850	0.66	B	West Jackson
33	Excelsior Rd	Florin Rd	Gerber Rd	2	Arterial M	5,423	0.30	A	2	Arterial M	12,980	0.72	C	
34	Excelsior Rd	Gerber Rd	Calvine Rd	2	Arterial M	4,229	0.23	A	2	Arterial M	10,200	0.57	A	
35	Excelsior Rd	Calvine Rd	Sheldon Rd	2	Arterial M	4,473	0.25	A	2	Arterial M	8,490	0.47	A	
36	Florin Rd	Stockton Blvd	Power Inn Rd	4	Arterial M	27,495	0.76	C	4	Arterial M	31,530	0.88	D	
37	Florin Rd	Power Inn Rd	Florin-Perkins Rd	4	Arterial M	21,595	0.60	A	4	Arterial M	30,800	0.86	D	
38	Florin Rd	Florin-Perkins Rd	So Watt Ave/ Elk Grove Florin Rd	4	Arterial M	14,163	0.39	A	4	Arterial M	23,570	0.65	B	
39	Florin Rd	South Watt Ave	Hedge Ave	2	Arterial M	7,718	0.43	A	2	Arterial M	16,070	0.89	D	
40	Florin Rd	Hedge Ave	Mayhew Rd	2	Arterial M	6,312	0.35	A	2	Arterial M	13,050	0.73	C	
41	Florin Rd	Mayhew Rd	Bradshaw Rd	2	Arterial M	6,317	0.35	A	2	Arterial M	13,290	0.74	C	
42.1	Florin Rd	Bradshaw Rd	Vineyard Rd	2	Arterial M	3,478	0.19	A	2	Arterial M	12,760	0.71	C	
42.2	Florin Rd	Vineyard Rd	Excelsior Rd	2	Arterial M	3,478	0.19	A	3	Arterial M	10,520	0.58	A	West Jackson
43	Florin Rd	Excelsior Rd	Sunrise Blvd	2	Arterial M	3,835	0.21	A	2	Arterial M	7,380	0.41	A	
44	Folsom Blvd	Howe Ave	Jackson Rd	4	Arterial M	37,516	1.04	**F**	4	Arterial M	54,050	1.50	**F**	
45	Fruitridge Rd	65th St	Power Inn Rd	4	Arterial M	16,634	0.46	A	4	Arterial M	22,930	0.64	B	
46	Fruitridge Rd	Power Inn Rd	Florin Perkins Rd	4	Arterial M	15,214	0.42	A	4	Arterial M	27,790	0.77	C	
47	Fruitridge Rd	Florin Perkins Rd	South Watt Ave	2	Arterial M	10,280	0.57	A	2	Arterial M	22,220	1.23	**F**	
48	Fruitridge Rd	South Watt Ave	Hedge Ave	2	Arterial M	2,890	0.16	A	3	Arterial M	14,950	0.83	D	West Jackson
49.1	Fruitridge Rd	Hedge Ave	Collector WJ-12	2	Arterial M	1,790	0.10	A	4	Arterial M	17,660	0.49	A	West Jackson

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 4.5
Existing Plus FOUR PROJECTS Roadway Segment Levels of Service

ID	Roadway	Segment		Existing					Existing + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
49.2	Fruitridge Rd	Collector WJ-12	Mayhew Rd	2	Arterial M	1,790	0.10	A	4	Arterial M	15,820	0.44	A	West Jackson
50	Grant Line Rd	White Rock Rd	Douglas Rd	2	Rural NS	7,189	0.42	D	2	Rural NS	9,020	0.53	D	
51	Grant Line Rd	Douglas Rd	Kiefer Blvd	2	Rural S	6,143	0.31	C	2	Rural S	8,210	0.41	D	
52	Grant Line Rd	Kiefer Blvd	Jackson Rd	2	Rural S	5,758	0.29	C	2	Rural S	7,480	0.37	D	
53	Grant Line Rd	Jackson Rd	Sunrise Blvd	2	Rural S	14,720	0.74	E	2	Rural S	13,300	0.67	E	
54	Grant Line Rd	Sunrise Blvd	Calvine Rd	2	Rural S	14,812	0.74	E	2	Rural S	18,610	0.93	E	
55.1	Grant Line Rd	Calvine Rd	Elk Grove City Limit	2	Rural S	13,140	0.66	E	2	Rural S	15,900	0.80	E	
55.2	Grant Line Rd	Elk Grove City Limit	Sheldon Rd	2	Rural S	13,140	0.66	**E**	2	Rural S	15,870	0.79	**E**	
56	Grant Line Rd	Sheldon Rd	Wilton Rd	2	Rural S	17,459	0.87	**E**	2	Rural S	22,700	1.14	**F**	
57	Grant Line Rd	Wilton Rd	Bond Rd	2	Rural S	16,064	0.80	**E**	2	Rural S	20,180	1.01	**F**	
58.1	Happy Lane	Old Placerville Road	Routier Ext	2	Rural S	4,635	0.23	C	2	Arterial M	7,540	0.42	A	
58.2	Happy Lane	Routier Ext	Kiefer Boulevard	2	Rural S	4,635	0.23	C	2	Arterial M	19,200	1.07	**F**	
59.1	Hedge Ave	Jackson Rd	Rock Creek Pkwy	2	Arterial M	3,061	0.17	A	2	Arterial M	7,900	0.44	A	
59.2	Hedge Ave	Rock Creek Pkwy	Fruitridge Rd	2	Arterial M	3,061	0.17	A	2	Arterial M	2,480	0.14	A	
60	Hedge Ave	Fruitridge Rd	Elder Creek Rd	2	Arterial M	3,737	0.21	A	2	Arterial M	3,630	0.20	A	
61	Hedge Ave	Elder Creek Rd	Florin Rd	2	Arterial M	2,722	0.15	A	2	Arterial M	3,650	0.20	A	
62	Howe Ave	US 50	Folsom Blvd	6	Arterial M	53,849	1.00	E	6	Arterial M	61,820	1.14	**F**	
63	International Dr	Mather Field Rd	Zinfandel Dr	6	Arterial M	17,500	0.32	A	6	Arterial M	22,320	0.41	A	
64	International Dr	Zinfandel Dr	Sunrise Blvd	6	Arterial M	8,802	0.16	A	6	Arterial M	10,890	0.20	A	
65	Jackson Rd	Folsom Blvd	Florin Perkins Rd	2	Arterial M	12,358	0.69	B	2	Arterial M	33,010	1.83	**F**	
66	Jackson Rd	Florin Perkins Rd	South Watt Ave	2	Arterial M	10,414	0.58	A	2	Arterial M	37,200	2.07	**F**	
67	Jackson Rd	South Watt Ave	Hedge Ave	2	Arterial M	17,060	0.95	E	4	Arterial M	58,720	1.63	**F**	West Jackson
68.1	Jackson Rd	Hedge Ave	Collector WJ-3	2	Arterial M	12,616	0.70	C	4	Arterial M	50,220	1.40	**F**	West Jackson
68.2	Jackson Rd	Collector WJ-3	Mayhew Rd	2	Arterial M	12,616	0.70	C	4	Arterial M	51,620	1.43	**F**	West Jackson
69	Jackson Rd	Mayhew Rd	Bradshaw Rd	2	Arterial M	14,996	0.83	D	6	Arterial M	49,790	0.92	E	West Jackson
70.1	Jackson Rd	Bradshaw Rd	Collector WJ-4	2	Arterial M	13,030	0.72	C	6	Arterial M	52,830	0.98	E	West Jackson
70.2	Jackson Rd	Collector WJ-4	Rock Creek Pkwy	2	Arterial M	13,030	0.72	C	6	Arterial M	52,860	0.98	E	West Jackson
70.3	Jackson Rd	Rock Creek Pkwy	Commercial Access	2	Arterial M	13,030	0.72	C	6	Arterial M	33,860	0.63	B	West Jackson
70.4	Jackson Rd	Commercial Access	Collector WJ-5	2	Arterial M	13,030	0.72	C	6	Arterial M	33,510	0.62	B	West Jackson
70.5	Jackson Rd	Collector WJ-5	Collector WJ-6	2	Arterial M	13,030	0.72	C	6	Arterial M	30,650	0.57	A	West Jackson
70.6	Jackson Rd	Collector WJ-6	Excelsior Rd	2	Arterial M	13,030	0.72	C	6	Arterial M	30,660	0.57	A	West Jackson
71.1	Jackson Rd	Excelsior Rd	Collector JT-3	2	Rural Hwy	10,478	0.46	D	4	Arterial M	46,410	1.29	**F**	Jackson Township
71.2	Jackson Rd	Collector JT-3	Tree View Ln	2	Rural Hwy	10,478	0.46	D	4	Arterial M	32,930	0.91	E	Jackson Township
71.3	Jackson Rd	Tree View Ln	Collector JT-4	2	Rural Hwy	10,478	0.46	D	4	Arterial M	25,300	0.70	C	Jackson Township
71.4	Jackson Rd	Collector JT-4	Eagles Nest Rd	2	Rural Hwy	10,478	0.46	D	4	Arterial M	21,520	0.60	A	Jackson Township

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Table 4.5
Existing Plus FOUR PROJECTS Roadway Segment Levels of Service

ID	Roadway	Segment		Existing					Existing + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
72.1	Jackson Rd	Eagles Nest Rd	Rockbridge Dr	2	Rural Hwy	9,976	0.44	D	4	Arterial M	19,150	0.53	A	NewBridge
72.2	Jackson Rd	Rockbridge Dr	Sunrise Blvd	2	Rural Hwy	9,976	0.44	D	4	Arterial M	18,210	0.51	A	NewBridge
73	Jackson Rd	Sunrise Blvd	Grant Line Rd	2	Rural Hwy	13,306	0.58	D	2	Rural Hwy	17,610	0.77	**E**	
74	Kiefer Blvd	Florin Perkins Rd	South Watt Ave	2	Arterial M	4,616	0.26	A	2	Arterial M	5,490	0.31	A	
75	Kiefer Blvd	South Watt Ave	Mayhew Rd	4	Arterial M	18,668	0.52	A	4	Arterial M	25,980	0.72	C	
76	Kiefer Blvd	Mayhew Rd	Bradshaw Rd	4	Arterial M	9,274	0.26	A	4	Arterial M	36,970	1.03	**F**	
77.1	Kiefer Boulevard	Bradshaw Road	Collector WJ-14	2	Arterial M	4,618	0.26	A	6	Arterial M	42,680	0.79	C	West Jackson
77.2	Kiefer Boulevard	Collector WJ-14	Routier Ext	2	Arterial M	4,618	0.26	A	6	Arterial M	38,960	0.72	C	West Jackson
77.3	Kiefer Boulevard	Routier Ext	Happy Lane	2	Arterial M	4,618	0.26	A	6	Arterial M	38,960	0.72	C	West Jackson
78.1	Kiefer Blvd	Eagles Nest Rd	W Collector MS-1	2	Arterial M	656	0.04	A	4	Arterial M	15,450	0.43	A	NewBridge; Mather South
78.2	Kiefer Blvd	W Collector MS-1	Northbridge Dr	2	Arterial M	656	0.04	A	4	Arterial M	12,100	0.34	A	NewBridge; Mather South
78.3	Kiefer Blvd	Northbridge Dr	E Collector MS-1	2	Arterial M	656	0.04	A	4	Arterial M	12,590	0.35	A	NewBridge; Mather South
78.4	Kiefer Blvd	E Collector MS-1	Sunrise Blvd	2	Arterial M	656	0.04	A	4	Arterial M	14,640	0.41	A	NewBridge; Mather South
79	Kiefer Blvd	Sunrise Blvd	Rancho Cordova Pkwy	2	Arterial M	2,786	0.15	A	2	Arterial M	2,870	0.16	A	
80	Mather Blvd / Norden Ave	Von Karman St	Bleckely St	4	Arterial M	4,373	0.12	A	4	Arterial M	5,110	0.14	A	
81	Mather Blvd	Bleckely St	Femoyer St	4	Arterial M	4,373	0.12	A	4	Arterial M	5,110	0.14	A	
82	Mather Blvd	Femoyer St	Douglas Rd	2	Arterial M	4,373	0.24	A	2	Arterial M	5,060	0.28	A	
83	Mather Blvd-Excelsior Rd	Douglas Rd	Kiefer Blvd	2	Res Collector F	6,751	0.84	E	2	Res Collector F	4,400	0.55	C	
84	Mather Field Rd	US 50	Rockingham Dr	6	Arterial M	37,755	0.70	B	6	Arterial M	39,970	0.74	C	
85	Mather Field Rd	Rockingham Dr	International Dr	6	Arterial M	37,520	0.69	B	6	Arterial M	43,990	0.81	D	
86	Mather Field Rd	International Dr	Peter A McCuen Blvd	4	Arterial M	14,857	0.41	A	4	Arterial M	15,120	0.42	A	
87	Mayhew Rd	Folsom Blvd	Goethe Rd	2	Arterial M	6,977	0.39	A	2	Arterial M	13,250	0.74	C	
88	Mayhew Rd	Goethe Rd	Kiefer Blvd	2	Arterial L	6,593	0.44	A	2	Arterial L	10,550	0.70	C	
89.1	Mayhew Rd	Jackson Rd	Rock Creek Pkwy	2	Arterial L	1,616	0.11	A	4	Arterial M	34,140	0.95	E	West Jackson
89.2	Mayhew Rd	Rock Creek Pkwy	Fruitridge Rd	2	Arterial L	1,616	0.11	A	4	Arterial M	30,710	0.85	D	West Jackson
90	Old Placerville Rd	Bradshaw Rd	Granby Dr	4	Arterial M	15,800	0.44	A	4	Arterial M	13,480	0.37	A	
91	Old Placerville Rd	Granby Dr	Happy Ln	2	Arterial M	13,573	0.75	C	2	Arterial M	10,000	0.56	A	
92	Old Placerville Rd	Happy Ln	Routier Rd	2	Arterial M	10,710	0.60	A	2	Arterial M	6,820	0.38	A	
93	Old Placerville Rd	Routier Rd	Rockingham Dr	4	Arterial M	10,710	0.30	A	4	Arterial M	28,740	0.80	C	

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Table 4.5
Existing Plus FOUR PROJECTS Roadway Segment Levels of Service

ID	Roadway	Segment		Existing					Existing + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
94	Power Inn Rd	Folsom Blvd	14th Ave	6	Arterial M	36,175	0.67	B	6	Arterial M	35,440	0.66	B	
95	Rockingham Dr	Old Placerville Rd	Mather Field Rd	4	Arterial M	19,881	0.55	A	4	Arterial M	32,640	0.91	**E**	
96	South Watt Ave	Folsom Blvd	Kiefer Blvd	6	Arterial M	40,920	0.76	C	6	Arterial M	64,430	1.19	**F**	
97	South Watt Ave	Kiefer Blvd	Jackson Rd	5	Arterial M	32,415	0.90	E	5	Arterial M	49,470	1.37	**F**	
98.1	South Watt Ave	Jackson Rd	Rock Creek Pkwy	2	Arterial M	25,832	1.44	**F**	4	Arterial M	30,560	0.85	D	West Jackson
98.2	South Watt Ave	Rock Creek Pkwy	Fruitridge Rd	2	Arterial M	25,832	1.44	**F**	4	Arterial M	29,530	0.82	D	West Jackson
99	South Watt Ave	Fruitridge Rd	Elder Creek Rd	2	Arterial M	21,567	1.20	**F**	2	Arterial M	22,290	1.24	**F**	
100	South Watt Ave	Elder Creek Rd	Florin Rd	2	Arterial M	19,069	1.06	**F**	2	Arterial M	24,510	1.36	**F**	
101	Sunrise Blvd	US 50	Folsom Blvd	7	Arterial M	54,500	1.01	**F**	7	Arterial M	56,110	1.04	**F**	
102	Sunrise Blvd	Folsom Blvd	Trade Center Dr	6	Arterial M	49,500	0.92	**E**	6	Arterial M	52,840	0.98	**E**	
103	Sunrise Blvd	Trade Center Dr	White Rock Rd	6	Arterial M	34,571	0.64	B	6	Arterial M	39,700	0.74	C	
104.1	Sunrise Blvd	White Rock Rd	International Dr	6	Arterial M	25,811	0.48	A	6	Arterial M	30,620	0.57	A	
104.2	Sunrise Blvd	International Dr	Rio Del Oro Pkwy	6	Arterial M	28,400	0.53	A	6	Arterial M	34,510	0.64	B	
104.3	Sunrise Blvd	Rio Del Oro Pkwy	Douglas Rd	6	Arterial M	25,811	0.48	A	6	Arterial M	33,060	0.61	B	
105	Sunrise Blvd	Douglas Rd	Kiefer Blvd	5	Arterial M	21,878	0.61	B	5	Arterial M	28,140	0.78	C	
106	Sunrise Blvd	Kiefer Blvd	Jackson Rd	2	Arterial M	16,894	0.94	**E**	2	Arterial M	20,300	1.13	**F**	
107	Sunrise Blvd	Jackson Rd	Florin Rd	2	Rural S	11,181	0.56	D	2	Rural S	14,360	0.72	E	
108	Sunrise Blvd	Florin Rd	Grant Line Rd	2	Rural S	7,752	0.39	D	2	Rural S	10,370	0.52	D	
109	Vineyard Rd	Gerber Rd	Calvine Rd	2	Arterial M	5,515	0.31	A	2	Arterial M	5,610	0.31	A	
110	Watt Ave	US 50	Folsom Blvd	6	Arterial H	65,242	1.09	**F**	6	Arterial H	77,770	1.30	**F**	
111	White Rock Rd	International Rd	Quality Dr	2	Arterial M	3,962	0.22	A	2	Arterial M	4,010	0.22	A	
112	White Rock Rd	Quality Dr	Zinfandel Dr	4	Arterial M	11,200	0.31	A	4	Arterial M	10,270	0.29	A	
113	White Rock Rd	Zinfandel Dr	Kilgore Rd	6	Arterial M	14,756	0.27	A	6	Arterial M	14,920	0.28	A	
114	White Rock Rd	Kilgore Rd	Sunrise Blvd	5	Arterial M	14,756	0.41	A	5	Arterial M	15,670	0.44	A	
115	White Rock Rd	Sunrise Blvd	Fitzgerald Rd	4	Arterial M	15,433	0.43	A	4	Arterial M	15,950	0.44	A	
116	White Rock Rd	Fitzgerald Rd	Grant Line Rd	2	Rural NS	2,490	0.15	B	2	Rural NS	2,090	0.12	B	
117	White Rock Rd	Grant Line Rd	Prairie City Rd	4	Arterial M	9,400	0.26	A	4	Arterial M	10,840	0.30	A	
118	Zinfandel Dr	US 50	White Rock Rd	7	Arterial M	45,228	0.84	D	7	Arterial M	49,950	0.93	**E**	
119	Zinfandel Dr	White Rock Rd	International Rd	6	Arterial M	17,923	0.33	A	6	Arterial M	26,460	0.49	A	
120	Zinfandel Dr	International Rd	Baroque Dr	6	Arterial M	7,595	0.14	A	6	Arterial M	20,710	0.38	A	
121	Zinfandel Dr	Baroque Dr	City Limit	4	Arterial M	7,595	0.21	A	4	Arterial M	20,710	0.58	A	
122	Zinfandel Dr	City Limit	Douglas Rd	2	Arterial M	7,595	0.42	A	2	Arterial M	20,710	1.15	**F**	
123.1	Zinfandel Dr	Douglas Rd	Collector MS-2	2	Arterial M	2,848	0.16	A	2	Arterial M	19,830	1.10	**F**	

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Table 4.5
Existing Plus FOUR PROJECTS Roadway Segment Levels of Service

ID	Roadway	Segment		Existing					Existing + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
123.2	Zinfandel Dr	Collector MS-2	Collector MS-3						4	Arterial M	14,290	0.40	A	Mather South
123.3	Zinfandel Dr	Collector MS-3	Collector MS-4						4	Arterial M	13,870	0.39	A	Mather South
123.4	Zinfandel Dr	Collector MS-4	Kiefer Blvd						4	Arterial M	14,340	0.40	A	Mather South
200	Kiefer Blvd	Tree View Ln	Eagles Nest Rd						2	Arterial M	22,170	1.23	**F**	West Jackson; Jackson Township; NewBridge; Mather South
300	Douglas Rd	Excelsior Rd	Rock Creek Pkwy						4	Arterial M	22,870	0.64	B	West Jackson
301	Douglas Rd	Rock Creek Pkwy	Kiefer Blvd						4	Arterial M	25,560	0.71	C	West Jackson
302	Kiefer Blvd	Happy Ln	Douglas Rd						6	Arterial M	48,300	0.89	D	West Jackson
303	Kiefer Blvd	Douglas Rd	Excelsior Rd						4	Arterial M	22,770	0.63	B	West Jackson
304	Mayhew Rd	Routier Ext	Bradshaw Rd						4	Arterial M	24,750	0.69	B	West Jackson
305	Mayhew Rd	Bradshaw Rd	Jackson Rd						4	Arterial M	26,950	0.75	C	West Jackson
306	Mayhew Rd	Fruitridge Rd	Collector WJ-13						4	Arterial M	17,410	0.48	A	West Jackson
307	Mayhew Rd	Collector WJ-13	Elder Creek Rd						3	Arterial M	17,620	0.98	E	West Jackson
308	Rock Creek Pkwy	South Watt Ave	Hedge Ave						2	Arterial M	2,370	0.13	A	West Jackson
309	Rock Creek Pkwy	Hedge Ave	Mayhew Rd						2	Arterial M	7,530	0.42	A	West Jackson
310	Rock Creek Pkwy	Mayhew Rd	Bradshaw Rd						2	Arterial M	3,550	0.20	A	West Jackson
311	Rock Creek Pkwy East	Excelsior Road	Collector WJ-16						2	Arterial M	6,200	0.34	A	West Jackson
312	Rock Creek Pkwy East	Collector WJ-16	Jackson Road						2	Arterial M	12,670	0.70	C	West Jackson
313	Vineyard Rd	Jackson Road	New Collector						4	Arterial M	22,670	0.63	B	West Jackson
314	Vineyard Rd	New Collector	Collector WJ-18						4	Arterial M	19,780	0.55	A	West Jackson
315	Vineyard Rd	Collector WJ-18	Elder Creek Road						4	Arterial M	17,170	0.48	A	West Jackson
316	Vineyard Rd	Elder Creek Road	Florin Road						4	Arterial M	8,760	0.24	A	West Jackson
317	Routier Ext	Old Placerville Road	Happy Lane						4	Arterial M	34,000	0.94	E	West Jackson
318	Routier Ext	Happy Lane	Kiefer Boulevard						4	Arterial M	22,830	0.63	B	West Jackson
319	Routier Ext	Kiefer Boulevard	Mayhew Road						4	Arterial M	23,730	0.66	B	West Jackson
320	Collector WJ-16	Rock Creek Pkwy	Collector WJ-6						2	Res Collector F	780	0.10	A	West Jackson
321	Collector WJ-17	Rock Creek Pkwy	Collector WJ-6						2	Res Collector F	710	0.09	A	West Jackson
322	Collector WJ-6	Collector WJ-16/WJ-17	Jackson Road						2	Res Collector F	2,600	0.33	B	West Jackson

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Table 4.5
Existing Plus FOUR PROJECTS Roadway Segment Levels of Service

ID	Roadway	Segment		Existing					Existing + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
323	Collector WJ-6	Jackson Road	Collector WJ-18						2	Res Collector F	2,860	0.36	B	West Jackson
324	Collector WJ-2	Excelsior Road	Collector WJ-6						2	Res Collector F	2,360	0.30	B	West Jackson
325	Collector WJ-18	Vineyard Rd	Collector WJ-6						2	Res Collector F	2,880	0.36	B	West Jackson
326	Collector WJ-18	Collector WJ-6	Excelsior Road						2	Res Collector F	3,110	0.39	B	West Jackson
327	Collector WJ-19	Bradshaw Road	Vineyard Road						2	Arterial M	4,740	0.26	A	West Jackson
400	Collector JT-1	Excelsior Rd	Collector JT-3						2	Res Collector F	3,340	0.42	C	Jackson Township
401	Collector JT-1	Collector JT-3	Tree View Ln						2	Res Collector F	1,170	0.15	A	Jackson Township
402	Collector JT-3	Kiefer Blvd	Collector JT-1						2	Res Collector F	2,980	0.37	B	Jackson Township
403	Collector JT-3	Collector JT-1	Collector JT-6						2	Res Collector F	1,400	0.18	A	Jackson Township
404	Collector JT-3	Collector JT-6	Collector JT-5						2	Res Collector F	2,670	0.33	B	Jackson Township
405	Collector JT-3	Collector JT-5	Jackson Rd						2	Arterial M	15,060	0.84	D	Jackson Township
406	Collector JT-4	Jackson Rd	Bridgewater Dr						2	Arterial M	3,930	0.22	A	Jackson Township
407	Collector JT-5	Collector JT-3	Tree View Ln						2	Arterial M	7,370	0.41	A	Jackson Township
408	Collector JT-6	Excelsior Rd	Collector JT-3						2	Res Collector F	3,420	0.43	C	Jackson Township
409	Collector JT-6	Collector JT-3	Tree View Ln						2	Res Collector F	630	0.08	A	Jackson Township
410	Kiefer Blvd	Excelsior Rd	Tree View Ln						4	Arterial M	20,080	0.56	A	Jackson Township
411	Tree View Ln	Kiefer Blvd	Collector JT-1						4	Arterial M	9,360	0.26	A	Jackson Township
412	Tree View Ln	Collector JT-1	Collector JT-6						2	Arterial M	8,940	0.50	A	Jackson Township
413	Tree View Ln	Collector JT-6	Collector JT-5						2	Arterial M	8,860	0.49	A	Jackson Township
414	Tree View Ln	Collector JT-5	Jackson Rd						4	Arterial M	4,520	0.13	A	Jackson Township
415	Collector JT-7	Collector JT-3	Tree View Ln						2	Arterial M	1,320	0.07	A	Jackson Township
416	Collector JT-8	Collector JT-3	Tree View Ln						2	Arterial M	1,740	0.10	A	Jackson Township

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Table 4.5
Existing Plus FOUR PROJECTS Roadway Segment Levels of Service

ID	Roadway	Segment		Existing					Existing + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
417	Collector JT-9	Jackson Rd	Collector JT-8						2	Arterial M	6,240	0.35	A	Jackson Township
418	Collector JT-10	Jackson Rd	Collector JT-8						2	Arterial M	1,820	0.10	A	Jackson Township
419	Collector JT-6	Tree View Ln	Jackson Rd						2	Res Collector F	640	0.08	A	Jackson Township
500	S Bridgewater Dr	Collector JT-4	Eagles Nest Rd						2	Res Collector F	4,000	0.50	C	NewBridge
501	S Bridgewater Dr	Eagles Nest Rd	Northbridge Dr						2	Res Collector F	3,240	0.41	C	NewBridge
502	N Bridgewater Dr	Northbridge Dr	Eagles Nest Rd						2	Res Collector F	1,060	0.13	A	NewBridge
503	Northbridge Dr	Kiefer Blvd	Bridgewater Dr						2	Arterial M	2,710	0.15	A	NewBridge
504	Street A	S Bridgewater Dr	Street B						2	Res Collector F	1,470	0.18	A	NewBridge
505	Street B	S Bridgewater Dr	Street A						2	Res Collector F	1,270	0.16	A	NewBridge
506	Rockbridge Dr	Street B	Stonebridge Dr						2	Res Collector F	1,480	0.19	A	NewBridge
507	Rockbridge Dr	Stonebridge Dr	Jackson Rd						2	Arterial M	4,320	0.24	A	NewBridge
508	Stonebridge Dr	S Bridgewater Dr	Rockbridge Dr						2	Arterial M	2,290	0.13	A	NewBridge
509	Stonebridge Dr	Rockbridge Dr	Jackson Rd						2	Res Collector F	2,440	0.31	B	NewBridge
600	Collector MS-1	Kiefer Boulevard	Collector MS-5						2	Arterial M	9,920	0.55	A	Mather South
601	Collector MS-1	Collector MS-5	Collector MS-4						2	Arterial M	4,820	0.27	A	Mather South
602	Collector MS-1	Collector MS-4	Collector MS-3						2	Res Collector F	5,130	0.64	D	Mather South
603	Collector MS-1	Collector MS-3	Collector MS-2						2	Arterial M	2,470	0.14	A	Mather South
604	Collector MS-2	Eagles Nest Road	Collector MS-5						2	Arterial M	7,530	0.42	A	Mather South
605	Collector MS-3	Eagles Nest Road	Collector MS-5						2	Arterial M	6,120	0.34	A	Mather South
606	Collector MS-4	Eagles Nest Road	Collector MS-5						2	Arterial M	5,940	0.33	A	Mather South
607	Collector MS-5	Kiefer Boulevard	Collector MS-1						2	Arterial M	4,650	0.26	A	Mather South

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Table 4.5
Existing Plus FOUR PROJECTS Roadway Segment Levels of Service

ID	Roadway	Segment		Existing					Existing + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	

Note: Gray shading indicates changes in travel lanes or facility type that the project is responsible to provide.

[1] The following classifications are used to determine daily roadway capacity:
Arterial L - Arterial, Low Access Control
Arterial M - Arterial, Moderate Access Control
Arterial H - Arterial, High Access Control
Rural Hwy - Rural 2-lane Highway
Rural S - Rural 2-lane Road, 24'-36' of pavement, Paved Shoulders
Rural NS - Rural 2-lane Road, 24'-36' of pavement, No Shoulders
Res Collector F - Residential Collector with Frontage
Res Collector NF - Residential Collector with No Frontage

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4.4.2 Existing Plus FOUR PROJECTS Intersection Impacts

Tables 4.6 and 4.7 summarize the results of the operations analysis for the study area intersections. The tables include the implementation of intersection changes associated with the FOUR PROJECTS. Table 4.7 illustrates the type of traffic control and number of lanes by type on each study area intersection approach. Shaded table cells indicate those locations where changes in traffic control and / or number of approach lanes by type would be fully funded by the project(s) shown in the last column. Shaded table cells in Table 4.6 illustrate those locations with an LOS impact. Detailed analysis information is included in the technical appendix.

Signal warrant analysis was conducted for all unsignalized intersections along Jackson Road, and other unsignalized intersections in close proximity to the project. The project is considered to have a significant impact at an unsignalized location if both the impact criteria in Table 1.6 are met, and one or more of the signal warrants specified in the California Manual on Uniform Traffic Control Devices (CAMUTCD) are met. The following unsignalized intersections exhibit significant impacts and meet one or more traffic signal warrants:

- Hedge Avenue and Florin Road
- Happy Lane and Old Placerville Road
- Excelsior Road and Gerber Road
- Eagles Nest Road and Florin Road
- Excelsior Road and Calvine Road

4.4.3 Existing Plus FOUR PROJECTS U.S. 50 Freeway Impacts

4.4.3.1 Freeway Basic Segments

Table 4.8 summarizes a.m. and p.m. peak hour US 50 freeway mainline operations. Details of the analysis are included in the technical appendix. The following locations exhibit significant impacts:

- Eastbound US 50
    - Stockton Boulevard to 59th Street - a.m. peak hour
    - Zinfandel Drive to Hazel Avenue - p.m. peak hour
- Westbound US 50
    - Watt Avenue to SR 99 / SR 51 - p.m. peak hour

4.4.3.2 Freeway Merge/Diverge/Weave Segments

Table 4.9 summarizes a.m. and p.m. peak hour freeway operations at ramp junctions and weaving areas. Details of the analysis are included in the technical appendix. The following locations exhibit significant impacts:

- Eastbound
    - 65th Street to Howe Avenue weave - a.m. peak hour
    - Mather Field Road to Zinfandel Drive weave - a.m. peak hour

4.4.3.3 Freeway Ramp Intersection Queuing

Table 4.10 summarizes a.m. and p.m. peak hour freeway ramp intersection queuing. No locations exhibit a significant impact.

Table 4.6

Existing Plus FOUR PROJECTS Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus FOUR PROJECTS			LOS Impact	Existing			Existing Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
1	Howe Avenue & College Town Drive/US 50 WB Ramps	Signal	D	36.6	Signal	B	18.1	No	Signal	D	44.4	Signal	C	25.2	No
2	Howe Avenue & US 50 EB Ramps	Signal	B	16.9	Signal	C	27.2	No	Signal	C	20.5	Signal	B	11.9	No
3	Power Inn Road/Howe Avenue & Folsom Blvd	Signal	D	39.1	Signal	E	73.4	No	Signal	D	55.0	Signal	D	53.3	No
4	Power Inn Road & 14th Avenue	Signal	C	31.5	Signal	B	16.6	No	Signal	D	39.6	Signal	C	20.5	No
5	Power Inn Road & Fruitridge Road	Signal	D	43.4	Signal	E	59.5	Yes	Signal	C	33.5	Signal	D	35.3	No
6	Jackson Road/Notre Dame Dr. & Folsom Blvd.	Signal	D	36.8	Signal	C	30.5	No	Signal	C	32.1	Signal	D	41.8	No
7	Florin Perkins Road/Julliard Dr. & Folsom Boulevard	Signal	D	39.0	Signal	C	23.9	No	Signal	E	55.6	Signal	C	30.1	No
8	Florin Perkins Road & Kiefer Blvd.	Two-way stop			Two-way stop			No	Two-way stop			Two-way stop			No
	Westbound Left Turn		*C*	*20.1*		*C*	*19.4*			*C*	*23.3*		D	33.5	
	Westbound Right Turn		*B*	*13.3*		*B*	*11.3*			*B*	*12.6*		*B*	*13.3*	
	Southbound Left Turn		*A*	*10.0*		*A*	*9.3*			*B*	*10.9*		*B*	*12.9*	
9	Florin Perkins Road & Jackson Road	Signal	D	51.5	Signal	**E**	**70.0**	No	Signal	D	54.1	Signal	F	144.0	Yes
10	Florin Perkins Road & Fruitridge Road	Signal	C	25.1	Signal	C	29.3	No	Signal	C	25.4	Signal	C	22.6	No
11	Florin Perkins Road & Elder Creek Road	Signal	C	25.7	Signal	B	18.5	No	Signal	C	26.2	Signal	C	26.9	No
12	Watt Avenue & Folsom Blvd.	Signal	E	66.2	Signal	E	78.0	No	Signal	E	71.9	Signal	E	75.9	No
13	S. Watt Ave. & Reith Ct/Manlove Road	Signal	B	19.6	Signal	B	10.6	No	Signal	D	54.1	Signal	B	13.4	No
14	S. Watt Avenue & Kiefer Blvd.	Signal	E	56.0	Signal	F	121.3	Yes	Signal	E	75.9	Signal	F	105.7	Yes

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Table 4.6

Existing Plus FOUR PROJECTS (**Alternative 2**) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus FOUR PROJECTS			LOS Impact	Existing			Existing Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
15	S. Watt Avenue & Canberra Dr.	Signal	B	11.5	Signal	A	8.4	No	Signal	A	9.7	Signal	A	6.4	No
16	S. Watt Avenue & Jackson Road	Signal	E	62.5	Signal	F	331.7	Yes	Signal	E	66.4	Signal	F	773.1	Yes
17	S. Watt Avenue & Fruitridge Road	Signal	D	38.1	Signal	D	52.2	No	Signal	D	41.7	Signal	E	65.2	Yes
18	S. Watt Avenue & Elder Creek Road	Signal	E	62.7	Signal	F	125.6	Yes	Signal	E	68.8	Signal	F	143.8	Yes
20	Elk Grove Florin Road/S. Watt Ave. & Florin Road	Signal	D	54.7	Signal	D	45.9	No	Signal	D	51.8	Signal	E	56.1	No
21	Elk Grove Florin Road & Gerber Road	Signal	D	49.1	Signal	D	44.5	No	Signal	E	64.6	Signal	E	73.9	No
23	Hedge Avenue & Jackson Road	Signal	D	35.1	Signal	E	75.7	No	Signal	D	37.3	Signal	C	32.0	No
24	Hedge Avenue & Fruitridge Road	All-way stop	B	13.6	Signal	B	17.4	No	All-way stop	A	9.4	Signal	B	14.6	No
25	Hedge Avenue & Elder Creek Road	All-way stop	C	15.9	Signal	B	18.2	No	All-way stop	B	11.6	Signal	C	23.5	No
26	Hedge Avenue & Tokay Lane	Two-way stop			Two-way stop			No	Two-way stop			Two-way stop			No
	Northbound Left Turn		*A*	*0.0*		*A*	*0.0*			*A*	*0.0*		*A*	*0.0*	
	Southbound Left Turn		*A*	*8.0*		*A*	*0.0*			*A*	*7.3*		*A*	*7.4*	
	Eastbound		*B*	*12.2*		*B*	*14.6*			*B*	*10.2*		*B*	*12.4*	
	Westbound		*B*	*11.1*		*B*	*13.1*			*A*	*9.6*		*B*	*10.9*	
27	Hedge Avenue & Florin Road	All-way stop	B	12.9	All-way stop	F	217.6	Yes	All-way stop	B	11.1	All-way stop	F	68.8	Yes
28	Mayhew Road & Kiefer Boulevard	Signal	D	48.6	Signal	E	74.9	No	Signal	D	51.1	Signal	D	49.5	No

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Table 4.6

Existing Plus FOUR PROJECTS (**Alternative 2**) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus FOUR PROJECTS			LOS Impact	Existing			Existing Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
29	Mayhew Road & Jackson Road	Two-way stop			Signal	D	48.6	No	Two-way stop			Signal	D	51.0	No
	Northbound Through - Left Turn		*D*	*27.6*						*D*	*34.0*				
	Northbound Right Turn		*B*	*11.8*						*C*	*15.0*				
	Southbound		*C*	*18.3*						*C*	*24.9*				
	Eastbound Left Turn		*A*	*8.9*						*A*	*8.4*				
	Westbound Left Turn		*A*	*8.3*						*A*	*9.3*				
30	Mayhew Road & Fruitridge Road	Two-way stop			Signal	B	13.8	No	Two-way stop			Signal	B	19.7	No
	Northbound Left Turn		*A*	*0.0*						*A*	*7.4*				
	Eastbound		*A*	*9.2*						*A*	*9.2*				
31	Mayhew Road & Elder Creek Road	Two-way stop			Signal	F	294.2	Yes	Two-way stop			Signal	F	275.9	Yes
	Northbound		*B*	*11.9*						*B*	*10.9*				
	Southbound		*B*	*11.1*						*A*	*9.8*				
	Eastbound Left Turn		*A*	*8.3*						*A*	*7.6*				
	Westbound Left Turn		*A*	*7.5*						*A*	*0.0*				
32	Woodring Drive & Zinfandel Drive	Two-way stop			Two-way stop			Yes	Two-way stop			Two-way stop			Yes
	Eastbound		*A*	*9.3*		F	83.8			*A*	*9.3*		F	78.8	
	Northbound Left Turn		*A*	*0.0*		*A*	*9.4*			*A*	*0.0*		*B*	*10.1*	
33	Bradshaw Road & Folsom Blvd.	Signal	E	56.7	Signal	B	19.7	No	Signal	D	49.9	Signal	B	18.7	No
34	Bradshaw Road & US 50 WB Ramps	Signal	B	15.9	Signal	A	7.6	No	Signal	B	15.2	Signal	C	22.4	No
35	Bradshaw Road & US 50 EB Ramps	Signal	C	24.4	Signal	D	37.8	No	Signal	B	16.0	Signal	C	28.9	No
36	Bradshaw Road & Old Placerville Road	Signal	D	45.9	Signal	E	61.2	Yes	Signal	D	52.0	Signal	E	62.7	Yes
37	Bradshaw Road & Kiefer Boulevard	Signal	D	45.7	Signal	F	101.3	Yes	Signal	E	66.2	Signal	F	104.5	Yes

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Table 4.6

Existing Plus FOUR PROJECTS (**Alternative 2**) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus FOUR PROJECTS			LOS Impact	Existing			Existing Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
38	Bradshaw Road & Jackson Road	Signal	E	73.1	Signal	F	92.6	Yes	Signal	E	59.4	Signal	F	82.1	Yes
39	Bradshaw Road & Elder Creek Road	Signal	D	36.8	Signal	F	80.1	Yes	Signal	D	36.1	Signal	E	71.5	No
40	Bradshaw Road & Florin Road	Signal	D	38.1	Signal	F	109.0	Yes	Signal	D	53.6	Signal	E	72.3	No
41	Bradshaw Road & Gerber Road	Signal	E	72.2	Signal	E	74.9	No	Signal	D	49.9	Signal	D	44.1	No
42	Happy Lane & Old Placerville Road	Two-way stop			Two-way stop			Yes	Two-way stop			Two-way stop			Yes
	Northbound Left Turn		*F*	*64.8*		*E*	*40.0*			*F*	*95.9*		*F*	*>300*	
	Northbound Right Turn		*D*	*30.6*		C	16.2			*C*	*15.4*		B	13.6	
	Westbound Left Turn		*B*	*10.2*		A	9.0			*B*	*10.1*		*A*	*9.2*	
43	Happy Lane & Kiefer Boulevard	Free Turn			Signal	D	46.8	No	Free Turn			Signal	C	26.5	No
44	Excelsior Road & Kiefer Boulevard	West Jackson/Jackson Township Project Int.			Signal	C	30.2	No	West Jackson/Jackson Township Project Int.			Signal	C	21.3	No
45	Excelsior Road & Jackson Road	Signal	D	36.7	Signal	F	273.0	Yes	Signal	D	40.3	Signal	F	222.4	Yes
46	Excelsior Road & Elder Creek Road	Two-way stop			Signal	D	44.9	No	Two-way stop			Signal	D	42.5	No
	Northbound Left Turn		*A*	*7.5*						*A*	*8.0*				
	Eastbound		*C*	*18.6*						*B*	*12.3*				
47	Excelsior Road & Florin Road	All-way stop	C	24.9	Signal	D	48.4	No	All-way stop	B	12.5	Signal	D	41.2	No
48	Excelsior Road & Gerber Road/Birch Ranch Drive	All-way stop	B	14.0	All-way stop	F	151.9	Yes	All-way stop	B	10.6	All-way stop	F	108.0	Yes
49	Mather Field Road & US 50 WB Ramps	Signal	C	24.7	Signal	B	13.5	No	Signal	A	9.4	Signal	A	6.0	No
50	Mather Field Road & US 50 EB Ramps	Signal	C	27.7	Signal	B	17.7	No	Signal	B	13.4	Signal	A	6.8	No

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Table 4.6

Existing Plus FOUR PROJECTS (**Alternative 2**) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus FOUR PROJECTS			LOS Impact	Existing			Existing Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
51	Mather Field Road & Rockingham Drive	Signal	E	56.4	Signal	F	125.6	Yes	Signal	D	54.7	Signal	E	61.8	Yes
52	Mather Boulevard & Douglas Road	All-way stop	E	39.3	All-way stop	B	14.9	No	All-way stop	C	15.5	All-way stop	B	12.3	No
53	Zinfandel Drive & US 50 WB Ramps	Signal	B	16.4	Signal	B	10.1	No	Signal	D	51.7	Signal	C	28.7	No
54	Zinfandel Drive & US 50 EB Ramps/Gold Center Drive	Signal	D	40.0	Signal	D	54.5	No	Signal	E	60.1	Signal	D	47.6	No
55	Zinfandel Drive & White Rock Road	Signal	D	47.7	Signal	C	22.9	No	Signal	D	54.7	Signal	D	40.2	No
56	Zinfandel Drive & Data Drive	Signal	D	49.3	Signal	B	15.8	No	Signal	D	52.9	Signal	C	21.9	No
57	Zinfandel Drive & International Dr	Signal	C	34.0	Signal	C	23.0	No	Signal	D	48.5	Signal	C	29.4	No
58	Zinfandel Drive & Douglas Road	Signal	E	55.5	Signal	D	38.3	No	Signal	D	54.2	Signal	C	25.5	No
59	Eagles Nest Road/Zinfandel Drive & Kiefer Boulevard	Free Turn			Signal	C	27.6	No	Free Turn			Signal	C	22.2	No
60	Eagles Nest Road & Jackson Road	Two-way stop			Signal	C	23.1	No	Two-way stop			Signal	C	20.3	No
	Northbound		*C*	*22.0*						*C*	*23.8*				
	Southbound		*B*	*13.9*						*C*	*22.0*				
	Eastbound Left Turn		*A*	*8.8*						*A*	*7.9*				
	Westbound Left Turn		*A*	*7.9*						*A*	*8.7*				
61	Eagles Nest Road & Florin Road	Two-way stop			Two-way stop			Yes	Two-way stop			Two-way stop			Yes
	Northbound		*B*	*12.7*		*F*	*147.4**			*B*	*12.1*		D	25.4	
	Southbound		*B*	*10.0*		C	20.3*			*B*	*10.5*		*F*	*71.3*	
	Eastbound Left Turn		*A*	*7.7*		*A*	*5.4**			*A*	*7.7*		*A*	*8.0*	
	Westbound Left Turn		*A*	*0.0*		*A*	*0.0**			*A*	*7.6*		*A*	*0.0*	

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Table 4.6

Existing Plus FOUR PROJECTS (**Alternative 2**) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus FOUR PROJECTS			LOS Impact	Existing			Existing Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
62	Sunrise Boulevard & US 50 WB Ramps	Signal	D	44.7	Signal	D	35.8	No	Signal	B	19.7	Signal	A	9.5	No
63	Sunrise Boulevard & US 50 EB Ramps	Signal	B	16.9	Signal	B	13.7	No	Signal	B	17.6	Signal	B	12.6	No
64	Sunrise Boulevard & Folsom Boulevard	Signal	D	54.4	Signal	C	31.6	No	Signal	D	48.6	Signal	D	37.1	No
65	Sunrise Boulevard & White Rock Road	Signal	D	47.8	Signal	C	33.0	No	Signal	D	51.6	Signal	D	38.3	No
66	Sunrise Boulevard & International Drive/Monier Circle	Signal	D	47.8	Signal	B	16.1	No	Signal	D	45.8	Signal	C	22.8	No
67	Sunrise Boulevard & Douglas Road	Signal	D	51.7	Signal	C	32.3	No	Signal	D	46.5	Signal	C	20.8	No
68	Sunrise Boulevard & Chrysanthy Boulevard	Signal	C	27.0	Signal	B	10.3	No	Signal	C	21.0	Signal	A	8.0	No
69	Sunrise Boulevard & Kiefer Boulevard	Signal	D	53.6	Signal	E	59.7	Yes	Signal	C	27.0	Signal	D	40.0	No
70	Sunrise Boulevard & Jackson Road	Signal	E	57.0	Signal	F	124.5	Yes	Signal	D	47.2	Signal	E	69.9	Yes
71	Sunrise Boulevard & Florin Road	Signal	B	11.3	Signal	A	8.9	No	Signal	D	48.3	Signal	B	15.3	No
72	Sheldon Lake Drive/Sunrise Boulevard & Grant Line Road	Signal	D	43.2	Signal	C	22.8	No	Signal	D	40.7	Signal	C	20.7	No
73	Hazel Avenue & Tributary Point Drive/US 50 WB Off-ramp	Signal	C	31.2	Signal	C	27.7	No	Signal	D	41.4	Signal	B	17.1	No
74	Hazel Avenue & US 50 EB Ramps	Signal	C	20.6	Signal	B	10.3	No	Signal	C	29.9	Signal	A	4.8	No
75	Hazel Avenue & Folsom Boulevard	Signal	D	51.7	Signal	C	30.8	No	Signal	D	46.7	Signal	D	39.4	No
76	Prairie City Road & White Rock Road	Signal	B	19.2	Signal	B	12.4	No	Signal	B	15.0	Signal	A	9.8	No

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Table 4.6

Existing Plus FOUR PROJECTS (**Alternative 2**) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus FOUR PROJECTS			LOS Impact	Existing			Existing Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
77	Grant Line Road & White Rock Road	Signal	B	10.9	Signal	A	6.7	No	Signal	B	11.2	Signal	A	7.3	No
78	Grant Line Road & Douglas Road	Two-way stop	C	15.2	Signal	D	38.5	No	Two-way stop	B	12.3	Signal	B	10.9	No
79	Grant Line Road & Kiefer Boulevard	All-way stop	B	11.4	All-way stop	B	14.1	No	All-way stop	B	10.5	All-way stop	B	14.6	No
80	Grant Line Road & Jackson Road	Signal	E	74.0	Signal	F	86.2	Yes	Signal	E	78.9	Signal	E	63.6	No
81	Watt Avenue & US-50 EB Ramps	Signal	B	13.0	Signal	B	12.1	No	Signal	B	14.9	Signal	B	13.3	No
82	Watt Avenue & US-50 WB Ramps	Signal	C	32.9	Signal	C	33.8	No	Signal	C	28.6	Signal	C	28.9	No
83	Mayhew Rd & Folsom Blvd.	Signal	B	19.8	Signal	B	15.6	No	Signal	C	20.1	Signal	B	16.7	No
84	65th Street Expy & Fruitridge Road	Signal	C	31.2	Signal	C	34.5	No	Signal	D	35.3	Signal	C	29.8	No
85	Power Inn Road & Elder Creek Road	Signal	D	35.2	Signal	D	35.7	No	Signal	D	36.3	Signal	C	34.2	No
86	Power Inn Road & Florin Rd	Signal	D	36.3	Signal	E	67.2	No	Signal	D	45.9	Signal	E	65.7	No
87	Florin Perkins Road & Florin Rd	Signal	D	36.7	Signal	D	38.4	No	Signal	C	32.5	Signal	D	44.0	No
88	Bradshaw Rd & Calvine Rd	Signal	C	30.5	Signal	C	34.0	No	Signal	D	36.9	Signal	D	51.1	No
89	Vineyard Rd & Calvine Rd	Signal	C	30.8	Signal	B	14.1	No	Signal	C	34.9	Signal	B	12.8	No
90	Excelsior Road & Calvine Rd	All-way stop	C	16.6	All-way stop	F	106.7	Yes	All-way stop	B	13.0	All-way stop	F	82.2	Yes
91	Grant Line Rd & Eagles Nest Rd/Sloughhouse Rd	Signal	D	51.7	Signal	B	16.2	No	Signal	D	46.5	Signal	D	51.3	No

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Table 4.6

Existing Plus FOUR PROJECTS (**Alternative 2**) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus FOUR PROJECTS			LOS Impact	Existing			Existing Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
92	Grant Line Rd & Calvine Rd	Signal	C	21.4	Signal	C	21.9	No	Signal	C	24.0	Signal	C	24.8	No
93	Grant Line Rd & Dwy/Wilton Rd	Signal	E	65.9	Signal	E	79.8	Yes	Signal	E	64.8	Signal	E	71.9	Yes
94	Grant Line Rd & Bond Rd/Wrangler Dr	Signal	C	33.3	Signal	B	13.8	No	Signal	D	46.4	Signal	B	15.6	No
200	Excelsior Road & Collector WJ-1/Collector JT-1	West Jackson/Jackson Township Project Int.			Signal	B	18.3	No	West Jackson/Jackson Township Project Int.			Signal	B	17.4	No
201	Excelsior Road & Collector WJ-2/Collector JT-2	West Jackson/Jackson Township Project Int.			Signal	B	15.8	No	West Jackson/Jackson Township Project Int.			Signal	B	17.6	No
202	W Collector MS-1 & Kiefer Boulevard	Mather South Project Int.			Signal	B	18.5	No	Mather South Project Int.			Signal	B	14.5	No
203	Northbridge Dr & Kiefer Boulevard	NewBridge Project Int.			Signal	B	11.2	No	NewBridge Project Int.			Signal	A	6.6	No
204	E Collector MS-5 & Kiefer Boulevard	Mather South Project Int.			Signal	B	11.9	No	Mather South Project Int.			Signal	B	13.2	No
300	Collector WJ-3 & Jackson Road	West Jackson Project Int.			Signal	B	14.2	No	West Jackson Project Int.			Signal	A	8.9	No
301	Collector WJ-4 & Jackson Road	West Jackson Project Int.			Signal	B	17.4	No	West Jackson Project Int.			Signal	B	17.7	No
302	Happy Lane & Jackson Road	West Jackson Project Int.			Signal	E	63.0	No	West Jackson Project Int.			Signal	E	65.3	No
304	Collector WJ-5 & Jackson Road	West Jackson Project Int.			Signal	B	12.7	No	West Jackson Project Int.			Signal	B	14.7	No
305	Collector WJ-6 & Jackson Road	West Jackson Project Int.			Signal	B	13.1	No	West Jackson Project Int.			Signal	B	13.9	No
306	Excelsior Road & Collector WJ-6	West Jackson Project Int.			Signal	C	20.9	No	West Jackson Project Int.			Signal	A	6.4	No
307	S. Watt Avenue & Rock Creek Pkwy	West Jackson Project Int.			Signal	A	6.0	No	West Jackson Project Int.			Signal	A	7.9	No

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Existing Plus FOUR PROJECTS (**Alternative 2**) Intersection Levels of Service

Intersection		AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus FOUR PROJECTS			LOS Impact	Existing			Existing Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
308	Hedge Avenue & Rock Creek Pkwy WB	West Jackson Project Int.			Roundabout	A	7.3	No	West Jackson Project Int.			Roundabout	A	6.3	No
309	Hedge Avenue & Rock Creek Pkwy EB	West Jackson Project Int.			Roundabout	A	6.9	No	West Jackson Project Int.			Roundabout	A	6.2	No
310	Mayhew Road & Rock Creek Pkwy WB	West Jackson Project Int.			Roundabout	C	21.6	No	West Jackson Project Int.			Roundabout	C	24.2	No
311	Mayhew Road & Rock Creek Pkwy EB	West Jackson Project Int.			Roundabout	C	24.5	No	West Jackson Project Int.			Roundabout	C	18.2	No
312	Bradshaw Road & Rock Creek Pkwy	West Jackson Project Int.			Signal	A	6.6	No	West Jackson Project Int.			Signal	B	13.1	No
315	Douglas Road & Rock Creek Pkwy	West Jackson Project Int.			Signal	A	9.8	No	West Jackson Project Int.			Signal	B	11.7	No
316	Bradshaw Road & Collector WJ-8	West Jackson Project Int.			Signal	B	12.1	No	West Jackson Project Int.			Signal	A	7.7	No
317	Bradshaw Road & Collector WJ-9	West Jackson Project Int.			Signal	A	2.6	No	West Jackson Project Int.			Signal	A	3.2	No
318	Bradshaw Road & Mayhew Road	West Jackson Project Int.			Signal	D	41.0	No	West Jackson Project Int.			Signal	D	41.5	No
319	Bradshaw Road & Rock Creek Pkwy	West Jackson Project Int.			Signal	F	96.4	Yes	West Jackson Project Int.			Signal	B	16.5	No
320	Bradshaw Road & Collector WJ-11	West Jackson Project Int.			Signal	A	7.4	No	West Jackson Project Int.			Signal	A	9.4	No
321	Collector WJ-12 & Fruitridge Road	West Jackson Project Int.			Signal	A	6.9	No	West Jackson Project Int.			Signal	A	6.8	No
322	Mayhew Road & Collector WJ-13	West Jackson Project Int.			Signal	B	12.5	No	West Jackson Project Int.			Signal	B	13.8	No
323	Collector WJ-14 & Kiefer Boulevard	West Jackson Project Int.			Signal	B	16.9	No	West Jackson Project Int.			Signal	B	17.2	No
325	Douglas Road & Kiefer Boulevard	West Jackson Project Int.			Signal	F	111.2	Yes	West Jackson Project Int.			Signal	F	133.8	Yes

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 4.6

Existing Plus FOUR PROJECTS (**Alternative 2**) Intersection Levels of Service

Intersection		AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus FOUR PROJECTS			LOS Impact	Existing			Existing Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
327	Vineyard Road & Elder Creek Road	West Jackson Project Int.			Signal	B	16.1	No	West Jackson Project Int.			Signal	B	16.1	No
328	Vineyard Road & Florin Road	West Jackson Project Int.			Signal	B	10.6	No	West Jackson Project/CEQA Cumulative Intersection			Signal	A	6.3	No
329	Routier Ext & Kiefer Boulevard	West Jackson Project Int.			Signal	C	32.5	No	West Jackson Project Int.			Signal	C	27.3	No
330	Happy Ln & Routier Ext	West Jackson Project Int.			Signal	E	63.8	No	West Jackson Project Int.			Signal	D	49.5	No
331	Routier Ext/Routier Rd & Old Placerville Rd.	West Jackson Project Int.			Signal	F	231.2	Yes	West Jackson Project Int.			Signal	F	189.8	Yes
400	Collector JT-3 & Jackson Road	Jackson Township Project Int.			Signal	B	19.6	No	Jackson Township Project Int.			Signal	C	25.1	No
401	Tree View Lane & Jackson Road	Jackson Township Project Int.			Signal	A	9.6	No	Jackson Township Project Int.			Signal	A	7.0	No
402	Collector JT-4 & Jackson Road	Jackson Township Project Int.			Signal	B	10.3	No	Jackson Township Project Int.			Signal	A	7.1	No
403	Tree View Lane & Collector JT-5	Jackson Township Project Int.			Signal	B	13.5	No	Jackson Township Project Int.			Signal	B	13.1	No
404	Tree View Lane & Collector JT-6	Jackson Township Project Int.			Signal	A	4.2	No	Jackson Township Project Int.			Signal	A	4.5	No
405	Tree View Lane & Collector JT-1	Jackson Township Project Int.			Signal	B	14.8	No	Jackson Township Project Int.			Signal	B	14.0	No
406	Tree View Lane & Kiefer Boulevard	Jackson Township Project Int.			Signal	B	11.1	No	Jackson Township Project Int.			Signal	C	24.4	No
407	HS/MS Dwy & Kiefer Boulevard	Jackson Township Project Int.			Signal	A	7.3	No	Jackson Township Project Int.			Signal	A	7.5	No
500	Rockbridge Dr & Jackson Road	NewBridge Project Int.			Signal	A	9.8	No	NewBridge Project Int.			Signal	A	7.3	No
501	Eagles Nest Road & N Bridgewater Dr	NewBridge Project Int.			Signal	A	5.5	No	NewBridge Project Int.			Signal	A	4.0	No

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 4.6

Existing Plus FOUR PROJECTS (**Alternative 2**) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus FOUR PROJECTS			LOS Impact	Existing			Existing Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
502	Eagles Nest Road & S Bridgewater Dr	NewBridge Project Int.			Signal	B	14.5	No	NewBridge Project Int.			Signal	B	13.8	No
600	Zinfandel Drive & Collector MS-2	Mather South Project Int.			Roundabout	C	16.8	No	Mather South Project Int.			Roundabout	C	21.8	No
601	Zinfandel Drive & Collector MS-3	Mather South Project Int.			Roundabout	B	13.8	No	Mather South Project Int.			Roundabout	B	13.7	No
602	Zinfandel Drive & Collector MS-4	Mather South Project Int.			Roundabout	C	15.2	No	Mather South Project Int.			Roundabout	B	13.2	No
603	Collector MS-5 & Collector MS-2	Mather South Project Int.			Two-way stop	A	2.6	No	Mather South Project Int.			Two-way stop	A	4.6	No
604	Collector MS-5 & Collector MS-3	Mather South Project Int.			Two-way stop			No	Mather South Project Int.			Two-way stop			No
	Northbound Left Turn					*A*	*1.2*						*A*	*0.4*	
	Southbound Left Turn					*A*	*0.0*						*A*	*0.0*	
	Eastbound					*A*	*9.7*						*A*	*8.3*	
605	Collector MS-5 & Collector MS-4	Mather South Project Int.			Two-way stop	A	5.1	No	Mather South Project Int.			Two-way stop	A	8.3	No
606	Collector MS-5 & W Collector MS-1/E Collector MS-1	Mather South Project Int.			Two-way stop	A	1.0	No	Mather South Project Int.			Two-way stop	A	2.0	No

Note: Gray shading represents changes in traffic control for which the project is responsible to pay a fair share.

* : 2000 HCM methodology was used, 2010 HCM does not produce an output for SB movement.

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 4.7

Existing and Existing Plus FOUR PROJECTS Intersection Geometrics

	Intersection	Traffic Control		Existing Lane Geometrics				Existing Plus FOUR PROJECTS Lane Geometrics				Project(s) Responsible for Change
		Existing	Existing Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
1	Howe Avenue & College Town Drive/US 50 Westbound Ramps	Signal	Signal	↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↓ ↓	↰ ⌜⌜	↰ ↰ ↰ ↱ ⌜	↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↓ ↓	↰ ⌜⌜	↰ ↰ ↰ ↱ ⌜	
2	Howe Avenue & US 50 Eastbound Ramps/US 50 Eastbound Entrance	Signal	Signal	↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↓	↰ ↰ ⌜ ⌜		↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↓	↰ ↰ ⌜ ⌜		
3	Power Inn Road/Howe Avenue & Folsom Blvd.	Signal	Signal	↰ ↰ ↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↓ ↳ ↳	↰ ↰ ↑ ↱	↰ ↰ ↑ ↑ ⌜⌜	↰ ↰ ↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↓ ↳ ↳	↰ ↰ ↑ ↱	↰ ↰ ↑ ↑ ⌜⌜	
4	Power Inn Road & 14th Avenue	Signal	Signal	↰ ↰ ↑ ↑ ↱	⌟ ↓ ↓ ↳	↰ ↰ ⌜	↱	↰ ↰ ↑ ↑ ↱	⌟ ↓ ↓ ↳	↰ ↰ ⌜	↱	
5	Power Inn Road & Fruitridge Road	Signal	Signal	↰ ↰ ↑ ↱	⌟ ↓ ↓ ↳ ↳	↰ ↑ ↱	↰ ↑ ↑ ⌜	↰ ↰ ↑ ↱	⌟ ↓ ↓ ↳ ↳	↰ ↑ ↱	↰ ↑ ↑ ⌜	
6	Jackson Road/Notre Dame Dr. & Folsom Blvd.	Signal	Signal	↰ ↰ ⌜	⌟ ↱	↰ ↑ ↑ ⌜	↰ ↑ ↑ ⌜	↰ ↰ ⌜	⌟ ↱	↰ ↑ ↑ ⌜	↰ ↑ ↑ ⌜	
7	Florin Perkins Road/Julliard Dr. & Folsom Boulevard	Signal	Signal	↰ ↰ ⌜	⌟ ↱	↰ ↑ ↑ ⌜	↰ ↑ ↱	↰ ↰ ⌜	⌟ ↱	↰ ↑ ↑ ⌜	↰ ↑ ↱	
8	Florin Perkins Road & Kiefer Blvd.	Two-way stop	Two-way stop	↑ ↱	↓ ↓ ↳		↰ ⌜	↑ ↱	↓ ↓ ↳		↰ ⌜	
9	Florin Perkins Road & Jackson Road	Signal	Signal	↰ ↑ ↑ ⌜	⌟ ↓ ↳	↰ ↑ ⌜⌜	↰ ↑ ↱	↰ ↑ ↑ ⌜	⌟ ↓ ↳	↰ ↑ ⌜⌜	↰ ↑ ↱	
10	Florin Perkins Road & Fruitridge Road	Signal	Signal	↰ ↑ ↑ ⌜	⌟ ↓ ↓ ↳	↰ ↑ ↑ ⌜	↰ ↑ ↱	↰ ↑ ↑ ⌜	⌟ ↓ ↓ ↳	↰ ↑ ↑ ⌜	↰ ↑ ↱	
11	Florin Perkins Road & Elder Creek Road	Signal	Signal	↰ ↑ ↑ ⌜	⌟ ↓ ↓ ↳	↰ ↑ ↑ ⌜	↰ ↑ ↑ ⌜	↰ ↑ ↑ ⌜	⌟ ↓ ↓ ↳	↰ ↑ ↑ ⌜	↰ ↑ ↑ ⌜	
12	S. Watt Ave./Watt Avenue & Folsom Blvd.	Signal	Signal	↰ ↰ ↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↓ ↳ ↳	↰ ↰ ↑ ↑ ⌜	↰ ↰ ↑ ↑ ⌜	↰ ↰ ↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↓ ↳ ↳	↰ ↰ ↑ ↑ ⌜	↰ ↰ ↑ ↑ ⌜	
13	S. Watt Ave. & Reith Ct/Manlove Road	Signal	Signal	↰ ↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↳	↰	↰ ↱ ⌜	↰ ↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↳	↰	↰ ↱ ⌜	
14	S. Watt Avenue & Kiefer Blvd.	Signal	Signal	↰ ↰ ↑ ↑ ↱	⌟ ↓ ↓ ↳ ↳	↰ ↰ ↑ ↑ ⌜	↰ ↰ ↑ ↑ ⌜	↰ ↰ ↑ ↑ ↱	⌟ ↓ ↓ ↳ ↳	↰ ↰ ↑ ↑ ⌜	↰ ↰ ↑ ↑ ⌜	
15	S. Watt Avenue & Canberra Dr.	Signal	Signal	↑ ↑ ↱	↓ ↓ ↳		↰ ⌜	↑ ↑ ↱	↓ ↓ ↳		↰ ⌜	
16	S. Watt Avenue & Jackson Road	Signal	Signal	↰ ↑ ↑ ⌜	⌟ ↓ ↓ ↳	↰ ↱	↰ ↑ ⌜	↰ ↰ ↑ ↑ ⌜	⌟ ↓ ↓ ↳	↰ ↱	↰ ↰ ↑ ↑ ⌜	West Jackson
17	S. Watt Avenue & Fruitridge Road	Signal	Signal	↰ ↑ ↱	⌟ ↓ ↓ ↳	↰ ↑ ⌜	↰ ↱	↰ ↑ ↱	⌟ ↓ ↓ ↳	↰ ↑ ⌜	↰ ↑ ↱	West Jackson
18	S. Watt Avenue & Elder Creek Road	Signal	Signal	↰ ↑ ⌜	⌟ ↓ ↳	↰ ⌜	↰ ↑ ⌜	↰ ↑ ⌜	⌟ ↓ ↳	↰ ⌜	↰ ↑ ⌜	
20	Elk Grove Florin Road/S. Watt Ave. & Florin Road	Signal	Signal	↰ ↑ ↱	⌟ ↓ ↳	↰ ↑ ↱	↰ ↑ ↑ ⌜	↰ ↑ ↱	⌟ ↓ ↳	↰ ↑ ↱	↰ ↑ ↑ ⌜	
21	Elk Grove Florin Road & Gerber Rd./Gerber Road	Signal	Signal	↰ ↰ ↑ ↱	⌟ ↓ ↓ ↳ ↳	↰ ↰ ↑ ↑ ⌜	↰ ↰ ↑ ↑ ⌜	↰ ↰ ↑ ↱	⌟ ↓ ↓ ↳ ↳	↰ ↰ ↑ ↑ ⌜	↰ ↰ ↑ ↑ ⌜	
23	Hedge Avenue & Jackson Road	Signal	Signal	↰ ↱	⌟ ↳	↰ ↑ ⌜	↰ ↑ ⌜	↰ ↱	⌟ ↳	↰ ↑ ↱	↰ ↑ ↱	West Jackson
24	Hedge Avenue & Fruitridge Road	All-way stop	Signal	↰	↰	↰	↰	↰ ↑ ⌜	⌟ ↓ ↳	↰ ↑ ↱	↰ ↑ ↱	West Jackson
25	Hedge Avenue & Elder Creek Road	All-way stop	Signal	↰	↰	↰	↰	↰ ↑ ⌜	⌟ ↓ ↳	↰ ↑ ↱	↰ ↑ ↱	West Jackson
26	Hedge Avenue & Tokay Lane	Two-way stop	Two-way stop	↰	↰	↰	↰	↰	↰	↰	↰	
27	Hedge Avenue & Florin Road	All-way stop	All-way stop	↰	↰	↰	↰	↰	↰	↰	↰	
28	Mayhew Road & Kiefer Boulevard	Signal	Signal	↰ ↑ ⌜	⌟ ↓ ↳	↰ ↑ ↱	↰ ↑ ↱	↰ ↑ ⌜	⌟ ↓ ↳	↰ ↑ ↱	↰ ↑ ↱	

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 4.7

Existing and Existing Plus FOUR PROJECTS Intersection Geometrics

	Intersection	Traffic Control		Existing Lane Geometrics				Existing Plus FOUR PROJECTS Lane Geometrics				Project(s) Responsible for Change
		Existing	Existing Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
29	Mayhew Road & Jackson Road	Two-way stop	Signal	↰ ↱	⅄	↰ ↑ ↱	↰ ↱	↰ ↰ ↑ ↑ ↱	↲ ↓ ↓ ↘ ↘	↰ ↰ ↑ ↑ ↑ ↱	↰ ↰ ↑ ↑ ↑ ↱	West Jackson
30	Mayhew Road & Fruitridge Road	Two-way stop	Signal	↰	⅄	⅄		↰ ↰ ↑ ↑	↲ ↓ ↓	↰ ↰ ↱		West Jackson
31	Mayhew Road & Elder Creek Road	Two-way stop	Signal	⅄	⅄	⅄	⅄	⅄	⅄	⅄	↰ ↑ ↱	West Jackson
32	Zinfandel Drive & Woodring Drive	Two-way stop	Two-way stop	↰	⅄	⅄		↰ ↑	⅄	⅄		Mather South
33	Bradshaw Road & Folsom Blvd.	Signal	Signal	↰ ↰ ↑ ↱	↲ ↓ ↓ ↘	↰ ↑ ↑ ↱	↰ ↰ ↑ ↑ ↱	↰ ↰ ↑ ↱	↲ ↓ ↓ ↘	↰ ↑ ↑ ↱	↰ ↰ ↑ ↑ ↱	
34	Bradshaw Road & US 50 Westbound Ramps	Signal	Signal	↑ ↑ ↑ ↱	↲ ↓ ↓ ↓		↰ ↰ ↱ ↱	↑ ↑ ↑ ↱	↲ ↓ ↓ ↓		↰ ↰ ↱ ↱	
35	Bradshaw Road & US 50 Eastbound Ramps	Signal	Signal	↑ ↑ ↑ ↱	↲ ↓ ↓ ↓	↰ ↰ ↱ ↱		↑ ↑ ↑ ↱	↲ ↓ ↓ ↓	↰ ↰ ↱ ↱		
36	Bradshaw Road & Old Placerville Road	Signal	Signal	↰ ↑ ↑ ↑ ↱	⅄ ↓ ↓ ↘ ↘	↰ ↱	↰ ↰ ↑ ↱	↰ ↑ ↑ ↑ ↱	⅄ ↓ ↓ ↘ ↘	↰ ↱	↰ ↰ ↑ ↱	
37	Bradshaw Road & Kiefer Boulevard	Signal	Signal	↰ ↰ ↑ ↑ ↑ ↱	↲ ↓ ↓ ↘ ↘	↰ ↰ ↑ ↱	↰ ↰ ↑ ↱	↰ ↰ ↑ ↑ ↑ ↱	↲ ↓ ↓ ↘ ↘	↰ ↰ ↑ ↑ ↱	↰ ↰ ↑ ↑ ↱	West Jackson
38	Jackson Road & Bradshaw Road	Signal	Signal	↰ ↑ ↱	↲ ↓ ↓ ↘	↰ ↑ ↱	↰ ↑ ↱	↰ ↰ ↑ ↑ ↑ ↱	↲ ↓ ↓ ↓ ↘ ↘	↰ ↰ ↑ ↑ ↑ ↱	↰ ↰ ↑ ↑ ↑ ↱	West Jackson
39	Bradshaw Road & Elder Creek Road	Signal	Signal	↰ ↑ ↱	⅄ ↓ ↘	↰ ↰ ↱	↰ ↰ ↱	↰ ↑ ↱	↲ ↓ ↓ ↘ ↘	↰ ↰ ↱	↰ ↰ ↑ ↑ ↱	West Jackson
40	Bradshaw Road & Florin Road	Signal	Signal	↰ ↑ ↱	⅄ ↓ ↘	↰ ↰ ↱	↰ ↰ ↱	↰ ↑ ↱	⅄ ↓ ↘	↰ ↰ ↱	↰ ↰ ↱	
41	Bradshaw Road & Gerber Road	Signal	Signal	↰ ↑ ↱	⅄ ↓ ↘	↰ ↰ ↱	↰ ↱	↰ ↑ ↱	⅄ ↓ ↘	↰ ↰ ↱	↰ ↱	
42	Happy Lane & Old Placerville Road	Two-way stop	Two-way stop	↰ ↱		↑ ↱	↰ ↑	↰ ↱		↑ ↱	↰ ↑	
43	Kiefer Boulevard & Happy Ln		Signal		↲	↰			↲ ↓ ↘	↰ ↰ ↑ ↑ ↑	↑ ↑ ↑ ↱	West Jackson
44	Excelsior Road & Kiefer Boulevard	Two-way stop	Signal	↱	⅄		↰ ↱	↰ ↑ ↱	↲ ↓ ↘	↰ ↑ ↱	↰ ↑ ↱	West Jackson; Jackson Township
45	Excelsior Road & Jackson Road	Signal	Signal	↰ ↱	⅄ ↘	↰ ↑ ↱	↰ ↑ ↱	↰ ↱	↲ ↓ ↓ ↘ ↘	↰ ↑ ↑ ↱	↰ ↑ ↑ ↱	West Jackson; Jackson Township
46	Excelsior Road & Elder Creek Road	Two-way stop	Signal	↰	↲ ↓	↰		↰ ↑	↲ ↓	↰ ↱		West Jackson
47	Excelsior Road & Florin Road	All-way stop	Signal	⅄	⅄	⅄	⅄	↰ ↱	⅄ ↘	↰ ↱	↰ ↱	West Jackson
48	Excelsior Road & Gerber Road/Birch Ranch Drive	All-way stop	All-way stop	⅄	⅄	⅄	⅄	⅄	⅄	⅄	⅄	
49	Mather Field Road & US 50 Westbound Ramps	Signal	Signal	↑ ↑ ↱	↲ ↓ ↓		↰ ⅄	↑ ↑ ↱	↲ ↓ ↓		↰ ⅄	
50	Mather Field Road & US 50 Eastbound Ramps	Signal	Signal	↑ ↑ ↑ ↱	↲ ↓ ↓	↰ ⅄ ↱		↑ ↑ ↑ ↱	↲ ↓ ↓	↰ ⅄ ↱		
51	Mather Field Road & Rockingham Drive	Signal	Signal	↰ ↑ ↑ ↱	↲ ↓ ↓ ↓ ↘	↰ ↰ ↱	↰ ↱	↰ ↑ ↑ ↱	↲ ↓ ↓ ↓ ↘	↰ ↰ ↱	↰ ↱	
52	Mather Boulevard & Douglas Road	All-way stop	All-way stop	⅄	⅄ ↘	⅄	⅄	⅄	⅄ ↘	⅄	⅄	
53	Zinfandel Drive & US 50 Westbound	Signal	Signal	↑ ↑ ↑ ↱	↲ ↓ ↓		↰ ↰ ↱	↑ ↑ ↑ ↱	↲ ↓ ↓		↰ ↰ ↱	
54	Zinfandel Drive & US 50 Eastbound Ramps/Gold Center Drive	Signal	Signal	↑ ↑ ↑ ↱	↲ ↓ ↓	↰ ↰ ↱ ↱	↱ ↱	↑ ↑ ↑ ↱	↲ ↓ ↓	↰ ↰ ↱ ↱	↱ ↱	

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 4.7

Existing and Existing Plus FOUR PROJECTS Intersection Geometrics

	Intersection	Traffic Control		Existing Lane Geometrics				Existing Plus FOUR PROJECTS Lane Geometrics				Project(s) Responsible for Change
		Existing	Existing Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
55	Zinfandel Drive & White Rock Road	Signal	Signal									
56	Zinfandel Drive & Data Drive	Signal	Signal									
57	Zinfandel Dr & International Dr	Signal	Signal									
58	Zinfandel Drive & Douglas Road	Signal	Signal									
59	Eagles Nest Road/Zinfandel Drive & Kiefer Boulevard		Signal									NewBridge; Mather South
60	Eagles Nest Road & Jackson Road	Two-way stop	Signal									NewBridge
61	Eagles Nest Rd/Eagles Nest Road & Florin Road	Two-way stop	Two-way stop									
62	Sunrise Boulevard & US 50 Westbound Ramps	Signal	Signal									
63	Sunrise Boulevard & US 50 Eastbound Ramps	Signal	Signal									
64	Sunrise Boulevard & Folsom Boulevard	Signal	Signal									
65	Sunrise Boulevard & White Rock Road	Signal	Signal									
66	Sunrise Boulevard & International Drive/Monier Circle	Signal	Signal									
67	Sunrise Boulevard & Douglas Road	Signal	Signal									
68	Sunrise Boulevard & Chrysanthy Boulevard	Signal	Signal									
69	Sunrise Boulevard & Kiefer Boulevard	Signal	Signal									NewBridge; Mather South
70	Sunrise Boulevard & Jackson Road	Signal	Signal									
71	Sunrise Boulevard & Florin Road	Signal	Signal									
72	Sheldon Lake Drive/Sunrise Boulevard & Grant Line Road	Signal	Signal									
73	Hazel Avenue & Tributary Point Drive/US 50 Westbound Off-ramp	Signal	Signal									
74	Hazel Aveneu/Hazel Avenue & US 50 Eastbound Ramps	Signal	Signal									
75	Hazel Avenue & Folsom Boulevard	Signal	Signal									
76	White Rock Road & Prairie City Road	Signal	Signal									
77	Grant Line Road & White Rock Road	Signal	Signal									
78	Grant Line Road & Douglas Road	All-way stop	Signal[1]									
79	Grant Line Road & Kiefer Boulevard	All-way stop	All-way stop									
80	Grant Line Road & Jackson Road	Signal	Signal									

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 4.7

Existing and Existing Plus FOUR PROJECTS Intersection Geometrics

	Intersection	Traffic Control		Existing Lane Geometrics				Existing Plus FOUR PROJECTS Lane Geometrics				Project(s) Responsible for Change
		Existing	Existing Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
81	Watt Avenue & US-50 EB Ramps	Signal	Signal	↑↑↑↑ ↱	↲↰↓↓	↰↰↱↱		↑↑↑↑ ↱	↲↰↓↓	↰↰↱↱		
82	Watt Avenue & US-50 WB Ramps	Signal	Signal	↑↑ ↱↱	↲↰↓↓↓		↰↰↱↱↱	↑↑ ↱↱	↲↰↓↓↓		↰↰↱↱↱	
83	Mayhew Rd & Folsom Blvd.	Signal	Signal	↰↰↱		↑↑ ↱	↰↑↑	↰↰↱		↑↑ ↱	↰↑↑	
84	65th Street Expy & Fruitridge Road	Signal	Signal	↰↑↑ ↱	↲↓↓↘	↰↑↑	↰↑↑ ↱	↰↑↑ ↱	↲↓↓↘	↰↑↑	↰↑↑ ↱	
85	Power Inn Road & Elder Creek Road	Signal	Signal	↰↑↱	↰↓↘	↰↑↑ ↱	↰↑ ↱	↰↑↱	↰↓↘	↰↑↑ ↱	↰↑ ↱	
86	Power Inn Road & Florin Rd	Signal	Signal	↰↑↱	↲↓↓↘	↰↑↑ ↱	↰↑↑ ↱	↰↑↱	↲↓↓↘	↰↑↑ ↱	↰↑↑ ↱	
87	Florin Perkins Road & Florin Rd	Signal	Signal	↰↑↑ ↱	↲↓↓↘	↰↑ ↱	↰↑ ↱	↰↑↑ ↱	↲↓↓↘	↰↑ ↱	↰↑ ↱	
88	Bradshaw Rd & Calvine Rd	Signal	Signal	↰↰↑↱	↲↓↓↘↘	↰↰↑↑ ↱	↰↰↑ ↱	↰↰↑↱	↲↓↓↘↘	↰↰↑↑ ↱	↰↰↑ ↱	
89	Vineyard Rd & Calvine Rd	Signal	Signal	↓	↲↰↘	↰↑ ↱	↰↑ ↱	↓	↲↰↘	↰↑ ↱	↰↑ ↱	
90	Excelsior Road & Calvine Rd	All-way stop	All-way stop	↓	↰	↓	↓	↓	↰	↓	↓	
91	Grant Line Road & Eagles Nest Rd/Sloughhouse Rd	Signal	Signal	↰↑↱	↰↘	↓	↰↱	↰↑↱	↰↘	↓	↰↱	
92	Grant Line Road & Calvine Rd	Signal	Signal	↰↑	↰	↓		↰↑	↰	↓		
93	Grant Line Road & Driveway/Wilton Rd	Signal	Signal	↰↱	↰↘	↰↱	↰↱	↰↱	↰↘	↰↱	↰↱	
94	Bond Rd/Wrangler Dr & Grant Line Road	Signal	Signal	↰↱	↲↓↘	↰↱	↓	↰↱	↲↓↘	↰↱	↓	
200	Excelsior Road & Collector WJ-1/Collector JT-1		Signal					↰↑↱	↰↓↘	↰↑ ↱	↰↑ ↱	West Jackson; Jackson Township
201	Excelsior Road & Collector WJ-2/Collector JT-2		Signal					↰↑↱	↰↓↘	↰↑ ↱	↰↑ ↱	West Jackson; Jackson Township
202	Kiefer Boulevard & W Collector MS-1		Signal						↲↘	↰↑↑	↑ ↱	Mather South
203	Northbridge Dr & Kiefer Boulevard		Signal					↰↱		↑ ↱	↰↑↑	NewBridge
204	Kiefer Boulevard & E Collector MS-5		Signal						↲↘	↰↑	↑↑ ↱	Mather South
300	Collector WJ-3 & Jackson Road		Signal					↰↱		↑ ↱	↰↑↑	West Jackson
301	Collector WJ-4 & Jackson Road		Signal					↰↑↱	↲↓↘	↰↑↑ ↱	↰↑↑ ↱	West Jackson
302	Rock Creek Pkwy & Jackson Road		Signal					↰↰↑↱	↲↓↘	↰↑↑↑ ↱	↰↰↑↑↑ ↱	West Jackson
304	Collector WJ-5 & Jackson Road		Signal					↰↑↱	↲↓↘	↰↑↑ ↱	↰↑↑ ↱	West Jackson
305	Collector WJ-6 & Jackson Road		Signal					↰↑↱	↲↓↘	↰↑↑ ↱	↰↑↑ ↱	West Jackson
306	Excelsior Road & Collector WJ-6		Signal					↰↑	↰↓	↰↱		West Jackson

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 4.7

Existing and Existing Plus FOUR PROJECTS Intersection Geometrics

Intersection		Traffic Control		Existing Lane Geometrics				Existing Plus FOUR PROJECTS Lane Geometrics				Project(s) Responsible for Change
		Existing	Existing Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
307	S. Watt Avenue & Rock Creek Pkwy		Signal					↑ ↱	↓ ↓ ↳↳		↰ ↱	West Jackson
308	Hedge Avenue & Rock Creek Pkwy WB		Roundabout					↰	↲		↟	West Jackson
309	Hedge Avenue & Rock Creek Pkwy EB		Roundabout					↱	↳	↟		West Jackson
310	Mayhew Road & Rock Creek Pkwy WB		Roundabout					↰ ↑	↲ ↓		↟	West Jackson
311	Mayhew Road & Rock Creek Pkwy EB		Roundabout					↑ ↱	↓ ↳	↰ ↱		West Jackson
312	Bradshaw Road & Rock Creek Pkwy		Signal					↰ ↑ ↑ ↑	↲ ↓ ↓	↰ ↱		West Jackson
314	Vineyard Road & Rock Creek Pkwy		Signal					↰ ↑ ↑	↲ ↓	↰ ↱		West Jackson
315	Douglas Road & Rock Creek Pkwy		Signal					↰ ↑ ↑	↲ ↓	↰ ↱		West Jackson
316	Bradshaw Road & Collector WJ-8		Signal					↑ ↑ ↱	↓ ↓ ↳		↰ ↱	West Jackson
317	Bradshaw Road & Collector WJ-9		Signal					↑ ↑ ↱	↓ ↓ ↳		↰ ↱	West Jackson
318	Bradshaw Road & Mayhew Road		Signal					↰ ↰ ↑ ↑ ↱	↲ ↓ ↓ ↓ ↳↳	↰ ↰ ↑ ↑ ↱	↰ ↰ ↑ ↑ ↱	West Jackson
319	Bradshaw Road & Rock Creek Pkwy		Signal					↑ ↑ ↱	↓ ↓ ↓ ↳		↰ ↱	West Jackson
320	Bradshaw Road & Collector WJ-11		Signal					↰ ↑ ↑ ↑	↲ ↓ ↓	↰ ↱		West Jackson
321	Collector WJ-12 & Fruitridge Road		Signal					↰ ↑ ↱	↲ ↓ ↳	↰ ↑ ↱	↰ ↑ ↱	West Jackson
322	Collector WJ-13 & Mayhew Road		Signal					↰ ↑ ↑	↲ ↓	↰ ↱		West Jackson
323	Collector WJ-14 & Kiefer Boulevard		Signal					↰ ↱	↲ ↓ ↳	↰ ↑ ↑ ↱	↰ ↑ ↑ ↱	West Jackson
325	Douglas Road & Kiefer Boulevard		Signal					↰ ↰ ↑ ↱	↲ ↓ ↳	↰ ↑ ↑ ↑ ↱	↰ ↰ ↑ ↑ ↱	West Jackson
327	Vineyard Road & Elder Creek Road		Signal					↰ ↰ ↑ ↑ ↱	↲ ↓ ↓ ↳↳	↰ ↰ ↑ ↑ ↱	↰ ↰ ↑ ↑ ↱	West Jackson
328	Florin Road & Vineyard Road		Signal						↲ ↳	↰ ↑	↑ ↱	West Jackson
329	Routier Ext & Kiefer Boulevard		Signal					↰ ↰ ↑ ↑ ↱	↲ ↓ ↓ ↳↳	↰ ↰ ↑ ↑ ↑ ↱	↰ ↰ ↑ ↑ ↑ ↱	West Jackson
330	Happy Ln & Routier Ext		Signal					↰ ↑ ↑ ↱	↲ ↓ ↓ ↳	↰ ↰ ↑ ↱	↰ ↰ ↑ ↱	West Jackson
331	Routier Ext/Routier Rd & Old Placerville Rd		Signal					↰ ↑ ↑ ↱	↲ ↓ ↓ ↳↳	↰ ↑ ↱	↰ ↰ ↑ ↱	West Jackson
400	Jackson Road & Collector JT-3		Signal						↲ ↳	↰ ↰ ↑ ↑	↑ ↑ ↱	Jackson Township
401	Jackson Road & Tree View Lane		Signal						↲ ↳↳	↰ ↰ ↑ ↑	↑ ↑ ↱	Jackson Township
402	Jackson Road & Collector JT-4		Signal						↲ ↳	↰ ↑ ↑	↑ ↱	Jackson Township
403	Tree View Lane & Collector JT-5		Signal					↰ ↑ ↱	↲ ↓ ↳	↰ ↑ ↱	↰ ↑ ↱	Jackson Township
404	Tree View Lane & Collector JT-6		Signal					↰ ↑ ↱	↲ ↓ ↳	↰ ↑ ↱	↰ ↑ ↱	Jackson Township

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 4.7

Existing and Existing Plus FOUR PROJECTS Intersection Geometrics

Intersection		Traffic Control		Existing Lane Geometrics				Existing Plus FOUR PROJECTS Lane Geometrics				Project(s) Responsible for Change
		Existing	Existing Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
405	Tree View Lane & Collector JT-1		Signal									Jackson Township
406	Tree View Lane & Kiefer Boulevard		Signal									Jackson Township
407	HS/MS Dwy & Kiefer Boulevard		Signal									Jackson Township
500	Jackson Road & Rockbridge Dr		Signal									NewBridge
501	Eagles Nest Road & N Bridgewater Dr		Signal									NewBridge
502	Eagles Nest Road & S Bridgewater Dr		Signal									NewBridge
600	Zinfandel Drive & Collector MS-2		Roundabout									Mather South
601	Zinfandel Drive & Collector MS-3		Roundabout									Mather South
602	Zinfandel Drive & Collector MS-4		Roundabout									Mather South
603	Collector MS-5 & Collector MS-2		Two-way stop									Mather South
604	Collector MS-5 & Collector MS-3		Two-way stop									Mather South
605	Collector MS-5 & Collector MS-4		Two-way stop									Mather South
606	E Collector MS-1/Collector MS-5 & W Collector MS-1		Two-way stop									Mather South

1. Reflects 2017 intersection improvements.

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 4.8: Existing Plus FOUR PROJECTS (Alternative 2) Peak Hour Freeway Basic Segment Level of Service									
Direc-tion	**Location**	**Existing**				**Existing Plus FOUR PROJECTS**			
		AM Peak Hour		**PM Peak Hour**		**AM Peak Hour**		**PM Peak Hour**	
		Volume	**LOS**	**Volume**	**LOS**	**Volume**	**LOS**	**Volume**	**LOS**
East-bound US 50	SR 99 / SR 51 to Stockton Boulevard	7,068	C	6,415	C	7,705	C	6,711	C
	Stockton Boulevard to 59th Street	7,470	**F**	7,228	**F**	8,136	**F**	7,546	**F**
	59th Street to 65th Street	6,767	D	6,641	D	7,439	D	6,931	D
	65th Street to Howe Avenue	7,962	D	7,562	D	8,668	D	7,854	D
	Howe Avenue to Watt Avenue	7,405	D	7,602	D	7,609	D	7,700	D
	Watt Avenue to Bradshaw Road	7,935	D	7,176	C	8,145	D	7,310	C
	Bradshaw Rd to Mather Field Rd	7,725	**F**	7,366	C	7,761	**F**	7,248	C
	Mather Field Rd to Zinfandel Drive	7,275	C	7,224	C	7,713	C	7,560	C
	Zinfandel Drive to Sunrise Blvd	5,121	C	6,649	**F**	5,726	C	7,083	**F**
	Sunrise Boulevard to Hazel Avenue	4,985	C	5,323	**F**	5,461	C	5,611	**F**
West-bound US 50	Hazel Avenue to Sunrise Boulevard	6,068	D	4,370	C	6,334	E	4,707	C
	Sunrise Blvd to Zinfandel Drive	7,502	D	4,762	C	7,846	E	5,134	C
	Zinfandel Drive to Mather Field Rd	7,548	C	5,765	B	7,829	C	5,928	B
	Mather Field Rd to Bradshaw Road	7,859	**F**	6,939	D	7,810	**F**	6,892	D
	Bradshaw Road to Watt Avenue	7,550	**F**	6,466	D	7,424	**F**	6,913	E
	Watt Avenue to Howe Avenue	7,376	**F**	5,106	**F**	7,192	**F**	5,395	**F**
	Howe Avenue to 65th Street	8,157	**F**	7,407	**F**	8,489	**F**	8,031	**F**
	65th Street to 59th Street	8,278	**F**	7,358	**F**	8,605	**F**	7,953	**F**
	59th Street to Stockton Boulevard	9,115	D	7,945	**F**	9,448	D	8,537	**F**
	Stockton Boulevard to SR 99 / SR 51	8,546	D	8,136	**F**	8,836	D	8,635	**F**

Bold values denote level of service "F" conditions.

Red shaded values indicate project impacts.

Source: *DKS Associates, 2018.*

Table 4.9: Existing Plus FOUR PROJECTS (Alt. 2) Peak Hour Freeway Merge/Diverge/Weave Segment Level of Service										
Direc-tion	**Location**	**Junction Type**	**Existing**				**Existing Plus FOUR PROJECTS**			
			A.M. Peak Hour		**P.M. Peak Hour**		**A.M. Peak Hour**		**P.M. Peak Hour**	
			Ramp Volume	**LOS**	**Ramp Volume**	**LOS**	**Ramp Volume**	**LOS**	**Ramp Volume**	**LOS**
East-bound US 50	Northbound 65th Street Slip Entrance	Weave	765	D	653	C	730	F	576	C
	Howe Avenue / Hornet Drive Exit		1,631		1,417		2,175		1,627	
	Southbound Howe Avenue Loop Entrance	One-Lane Merge	484	C	881	C	556	C	927	D
	Northbound Howe Avenue Slip Entrance	One-Lane Merge	419	C	431	C	390	C	401	C
	Watt Avenue Exit	Two-Lane Diverge	1,317	B	1,634	B	1,149	B	1,470	B
	Watt Avenue Entrance	One-Lane Merge	2,134	**F**	1,724	D	1,951	E	1,553	D
	Bradshaw Road Exit	Two-Lane Diverge	1,520	B	1,228	B	1,891	C	1,574	B
	Southbound Bradshaw Road Loop Entrance	One-Lane Merge	220	C	422	C	151	C	423	C
	Northbound Bradshaw Road Slip Entrance	One-Lane Merge	971	C	918	C	1,280	D	1,105	C
	Mather Field Road Exit	Two-Lane Diverge	1,266	B	1,062	A	1,188	B	987	A
	Southbound Mather Field	One-Lane Merge	125	C	101	B	121	C	107	B

Table 4.9: Existing Plus FOUR PROJECTS (Alt. 2) Peak Hour Freeway Merge/Diverge/Weave Segment Level of Service										
Direc-tion	**Location**	**Junction Type**	**Existing**				**Existing Plus FOUR PROJECTS**			
			A.M. Peak Hour		**P.M. Peak Hour**		**A.M. Peak Hour**		**P.M. Peak Hour**	
			Ramp Volume	**LOS**	**Ramp Volume**	**LOS**	**Ramp Volume**	**LOS**	**Ramp Volume**	**LOS**
	Road Loop Entrance									
	Northbound Mather Field Road Slip Entrance	Weave	317	**F**	816	C	634	**F**	1,187	D
	Zinfandel Drive Exit		2,932		1,452		2,918		1,419	
	Southbound Zinfandel Drive Loop Entrance	One-Lane Merge	182	B	129	C	177	B	116	C
	Northbound Zinfandel Drive Slip Entrance	One-Lane Merge	348	B	540	C	522	C	627	C
	Sunrise Boulevard Exit	Major Diverge	1,773	C	1,959	D	1,953	C	2,073	D
	Sunrise Boulevard Entrance	One-Lane Merge	992	C	889	D	1,028	C	834	D
	Hazel Avenue Exit	Two-Lane Diverge	933	B	1,541	C	1,094	C	1,673	C
	Hazel Avenue Entrance	Weave	804	C	945	C	704	C	945	C
	Aerojet Road Exit		241		55		241		52	
West-bound US 50	Hazel Avenue Exit	Two-Lane Diverge	631	A	869	A	622	A	849	B
	Northbound Hazel Avenue Loop Entrance	One-Lane Merge	160	B	600	B	174	B	593	B
	Southbound Hazel Avenue	One-Lane Merge	1,550	B	800	B	1,748	C	962	B

Table 4.9: Existing Plus FOUR PROJECTS (Alt. 2) Peak Hour Freeway Merge/Diverge/Weave Segment Level of Service										
Direc-tion	Location	Junction Type	Existing				Existing Plus FOUR PROJECTS			
			A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
			Ramp Volume	LOS	Ramp Volume	LOS	Ramp Volume	LOS	Ramp Volume	LOS
	Slip Entrance									
	Sunrise Boulevard Exit	One-Lane Diverge	749	E	758	D	655	E	763	D
	Sunrise Blvd Entrance	Lane Addition	2,183	**F**	1,656	D	2,192	**F**	1,686	D
	Zinfandel Drive Exit	One-Lane Diverge	1,034	E	608	C	1,088	E	759	C
	Northbound Zinfandel Drive Loop Entrance	Lane Addition	585	B	1,197	B	532	B	1,118	B
	Southbound Zinfandel Drive Slip Entrance	One-Lane Merge	442	C	561	B	410	C	550	B
	Mather Field Road Exit	One-Lane Drop	1,093	C	556	A	1,496	C	740	A
	Northbound Mather Field Road Loop Entrance	One-Lane Merge	515	B	861	B	385	B	843	B
	Southbound Mather Field Road Slip Entrance	One-Lane Merge	387	B	380	B	519	B	363	B
	Bradshaw Road Exit	Two-Lane Diverge	1,236	B	1,327	B	1,583	B	1,510	B
	Northbound Bradshaw Road Loop Entrance	One-Lane Merge	914	D	910	C	1,236	D	1,523	D
	Southbound Bradshaw Road Slip Entrance	One-Lane Merge	338	D	590	C	365	D	669	D
	Watt Avenue Exit	Major Diverge	1,373	D	1,188	C	1,257	D	1,181	C
	Northbound Watt Avenue	One-Lane Merge	820	D	943	C	788	D	900	C

Table 4.9: Existing Plus FOUR PROJECTS (Alt. 2) Peak Hour Freeway Merge/Diverge/Weave Segment Level of Service										
Direc-tion	**Location**	**Junction Type**	**Existing**				**Existing Plus FOUR PROJECTS**			
			A.M. Peak Hour		**P.M. Peak Hour**		**A.M. Peak Hour**		**P.M. Peak Hour**	
			Ramp Volume	**LOS**	**Ramp Volume**	**LOS**	**Ramp Volume**	**LOS**	**Ramp Volume**	**LOS**
	Entrance									
	Southbound Watt Avenue Slip Entrance	Lane Addition / Weave	1,232	C	1,317	D	1,091	C	1,196	B
	Howe Avenue Exit	Major Diverge / Weave	1,531	D	1,419		1,349	D	1,313	D
	Northbound Howe Avenue Loop Entrance	One-Lane Merge	654	D	602	C	689	D	647	C
	Southbound Howe Avenue Slip Entrance	One-Lane Merge	574	C	574	C	688	C	484	C

Bold values denote level of service "F" conditions.
Red shaded values indicate project impacts.
Source: *DKS Associates, 2018.*

Table 4.10: Existing Plus FOUR PROJECTS (Alternative 2) Peak Hour Freeway Ramp Termini Queuing

Direction	US 50 Exit Ramp	Available Storage Length (feet / lane)			Maximum Queue Length (feet / lane)					
					AM Peak Hour			PM Peak Hour		
		L	T	R	L	T	R	L	T	R
Eastbound US-50	Howe Avenue	765	-	765	118	-	603	120	-	248
	Watt Avenue	1,500	-	1,500	110	-	221	162	-	242
	Bradshaw Road	1,250	-	1,250	119	-	759	67	-	604
	Mather Field Road	1,385	-	1,385	157	-	354	103	-	63
	Zinfandel Drive	1,025	1,025	1,025	231	776	698	439	324	180
	Sunrise Boulevard	1,695	-	1,695	231	-	119	217	-	72
	Hazel Avenue	1,310	-	1,310	186	-	50	201	-	8
Westbound US-50	Hazel Avenue	1,995		1,995	262		47	177		218
	Sunrise Boulevard	1,540	-	1,540	67	-	48	136	-	122
	Zinfandel Drive	1,065	-	1,065	203	-	38	94	-	89
	Mather Field Road	1,335	-	1,335	417	-	396	121	-	101
	Bradshaw Road	1,330	-	1,330	184	-	32	189	-	13
	Watt Avenue	1,480	-	1,480	205	-	571	104	-	460
	Howe Avenue	1,355	1,355	1,355	81	412	79	147	412	160

Red shaded values indicate project impacts.

L = left turn movement, T = through movement, R = right turn movement

Source: *DKS Associates, 2018.*

4.4.4 Existing Plus FOUR PROJECTS Pedestrian and Bicycle Facility Impacts

The FOUR PROJECTS would not remove any existing or planned pedestrian facility. The FOUR PROJECTS would not remove any existing bicycle facility or any facility that is planned in the Bikeway Master Plan. The FOUR PROJECTS would add pedestrian and bicycle demands within the FOUR PROJECTS site and to and from nearby land uses. Complete information on improvements to on- and off-site bicycle and pedestrian facilities is not available at this time. Because the FOUR PROJECTS would add demand for pedestrian and bicycle facilities that may not be available, the impact of the FOUR PROJECTS on pedestrian and bicycle circulation is potentially significant.

4.4.5 Existing Plus FOUR PROJECTS Transit System Impacts

Public transit service is currently limited in the vicinity of the FOUR PROJECTS. In the preparation of this analysis, a conceptual transit system to serve the FOUR PROJECTS was developed (see Section 3.1.2.3). The additional transit service was assumed to be funded by the FOUR PROJECTS. However, the timing and implementation of the transit system are uncertain at this time. The FOUR PROJECTS would increase demands for public transit facilities. Therefore, the impact of the FOUR PROJECTS on the transit system is potentially significant.

4.4.6 Existing Plus FOUR PROJECTS Functionality Impacts

Table 4.11 summarizes the results of the rural roadway segment functionality analysis. **Figure 4.6** illustrates the resultant functionality impacts. The table includes the number of lanes assumed with the implementation of the FOUR PROJECTS, which in many cases is greater than the number of lanes in the existing condition. The shaded table cells under the "Travel Lanes" heading illustrates new roadways and widened roadways that are assumed part of the FOUR PROJECTS. The "Substandard?" heading indicates whether or not a roadway meets the County standards of 12-foot lanes and 6-foot shoulders. If the FOUR PROJECTS make improvements to a roadway segment such as widening, they would be required to reconstruct the entire substandard roadway segment to County standards. The shaded table cells under the "Functionality Impact?" heading indicate those locations with a functionality impact.

As stated above, the traffic analysis assumed that the FOUR PROJECTS would construct a number of travel lanes on roadway segments that are internal to or on the boundary of the FOUR PROJECTS, and the entire roadway segment would be reconstructed to County standards at that time. The timing of implementation of such additional traffic lanes on these internal or boundary roadway segments will affect whether or not impacts would exist at some time prior to full build out of the FOUR PROJECTS.

Table 4.11
Existing Plus FOUR PROJECTS Functionality Impacts

ID	Roadway	Segment		Jurisdiction	Existing Substandard Roadways				Existing + FOUR PROJECTS			
		From	To		Travel Lanes	Pavement (ft)	Substandard? [1]	Existing Volume	Travel Lanes	Substandard? [1]	Forecasted Volume	Functionality Impact? [2]
15	Douglas Rd	Mather Blvd	Zinfandel Dr	County	2	23	Yes	6,635	2	Yes	5,950	No
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd	Rancho Cordova/County	2	23	Yes	8,369	2	Yes	8,740	No
19	Eagles Nest Rd	Kiefer Blvd	Jackson Rd	County	2	20	Yes	740	4	No	9,500	Yes[3]
20	Eagles Nest Rd	Jackson Rd	Florin Rd	County	2	<21	Yes	517	2	Yes	6,470	Yes
21	Eagles Nest Rd	Florin Rd	Grant Line Rd	County	2	<21	Yes	189	2	Yes	3,430	No
25	Elder Creek Rd	South Watt Ave	Hedge Ave	County	2	23	Yes	5,576	2	Yes	24,370	Yes
26	Elder Creek Rd	Hedge Ave	Mayhew Rd	County	2	23	Yes	5,797	2	Yes	23,830	Yes
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd	County	2	23	Yes	5,355	3	No	14,080	Yes[3]
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd	County	2	23	Yes	2,158	3	No	20,830	Yes[3]
30	Excelsior Rd	Kiefer Blvd	Jackson Rd	County	2	22	Yes	3,716	2	Yes	22,740	Yes
31	Excelsior Rd	Jackson Rd	Elder Creek Rd	County	2	<21	Yes	5,075	3	No	27,210	Yes[3]
32	Excelsior Rd	Elder Creek Rd	Florin Rd	County	2	<21	Yes	4,203	3	No	11,850	Yes[3]
33	Excelsior Rd	Florin Rd	Gerber Rd	County	2	<21	Yes	5,423	2	Yes	12,980	Yes
34	Excelsior Rd	Gerber Rd	Calvine Rd	County	2	<21	Yes	4,229	2	Yes	10,200	Yes
39	Florin Rd	South Watt Ave	Hedge Ave	County	2	22	Yes	7,718	2	Yes	16,070	Yes
40	Florin Rd	Hedge Ave	Mayhew Rd	County	2	22	Yes	6,312	2	Yes	13,050	Yes
41	Florin Rd	Mayhew Rd	Bradshaw Rd	County	2	22	Yes	6,317	2	Yes	13,290	Yes
42	Florin Rd	Bradshaw Rd	Excelsior Rd	County	2	22	Yes	3,478	2	Yes	12,760	Yes
43	Florin Rd	Excelsior Rd	Sunrise Blvd	County	2	22	Yes	3,835	2	Yes	7,380	Yes
48	Fruitridge Rd	South Watt Ave	Hedge Ave	City of Sacramento/ County	2	22	Yes	2,890	3	No	14,950	Yes[3]
49	Fruitridge Rd	Hedge Ave	Mayhew Rd	County	2	22	Yes	1,790	4	No	15,820	Yes[3]
50	Grant Line Rd	White Rock Rd	Douglas Rd	Rancho Cordova/County	2	22	Yes	7,189	2	Yes	9,020	Yes
58	Happy Ln	Old Placerville Rd	Kiefer Blvd	County	2	22	Yes	4,635	2	Yes	7,540	Yes
59	Hedge Ave	Jackson Rd	Fruitridge Rd	County	2	22	Yes	3,061	2	Yes	7,900	Yes

Red text with light gray shading indicate project impacts.

Table 4.11
Existing Plus FOUR PROJECTS Functionality Impacts

ID	Roadway	Segment		Jurisdiction	Existing Substandard Roadways				Existing + FOUR PROJECTS			
		From	To		Travel Lanes	Pavement (ft)	Substandard? [1]	Existing Volume	Travel Lanes	Substandard? [1]	Forecasted Volume	Functionality Impact? [2]
60	Hedge Ave	Fruitridge Rd	Elder Creek Rd	City of Sacramento/County	2	22	Yes	3,737	2	Yes	3,630	No
61	Hedge Ave	Elder Creek Rd	Florin Rd	County	2	22	Yes	2,722	2	Yes	3,650	No
70	Jackson Rd	Bradshaw Rd	Excelsior Rd	County	2	26	Yes	13,030	6	No	52,830	Yes[3]
71	Jackson Rd	Excelsior Rd	Eagles Nest Rd	County	2	26	Yes	10,478	4	No	46,410	Yes[3]
74	Kiefer Blvd	Florin Perkins Rd	South Watt Ave	City of Sacramento/County	2	22	Yes	4,616	2	Yes	5,490	No
77	Kiefer Blvd	Bradshaw Rd	Happy Ln	County	2	22	Yes	4,618	6	No	42,680	Yes[3]
78	Kiefer Blvd	Zinfandel Dr	Sunrise Blvd	County	2	22	Yes	656	3	No	14,640	Yes[3]
83	Mather Blvd-Excelsior Rd[4]	Douglas Rd	Kiefer Blvd	County	2	22	Yes	6,751	2	Yes	4,400	No
89	Mayhew Rd	Jackson Rd	Fruitridge Rd	County	2	22	Yes	1,616	4	No	34,140	Yes[3]
116	White Rock Rd	Fitzgerald Rd	Grant Line Rd	Rancho Cordova/County	2	20	Yes	2,490	2	Yes	2,090	No
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd	County	2	<21	Yes	2,848	2	Yes	19,830	Yes

Note: Gray shading indicates changes in travel lanes or facility type that the project is responsible to provide. For all roadway segments to be widened, the project is responsible to build the entire roadway to County standards.

[1] Substandard rural roads are defined as rural, 2-lane roadway segments with travel lanes narrower than 12 feet and/or roadside shoulders narrower than 6 feet.
[2] Functionality impacts are triggered when a substandard rural road increases over a threshold of 6,000 ADT, or for a roadway already above 6,000 ADT, increases by more than 600 ADT.
[3] The potential for an impact exists should the project generate traffic volumes on the roadway exceeding 6,000 ADT, or increasing more than 600 ADT on a roadway already above 6,000 ADT, prior to the construction of roadway improvements.
[4] Excluding the roadway segment that is within the developed community of Independence at Mather.
[5] The functionality impact is mitigated by improving the roadway to County standards, including widening travel lanes to 12 feet and/or widening or providing paved shoulders to 6 feet.

Red text with light gray shading indicate project impacts.

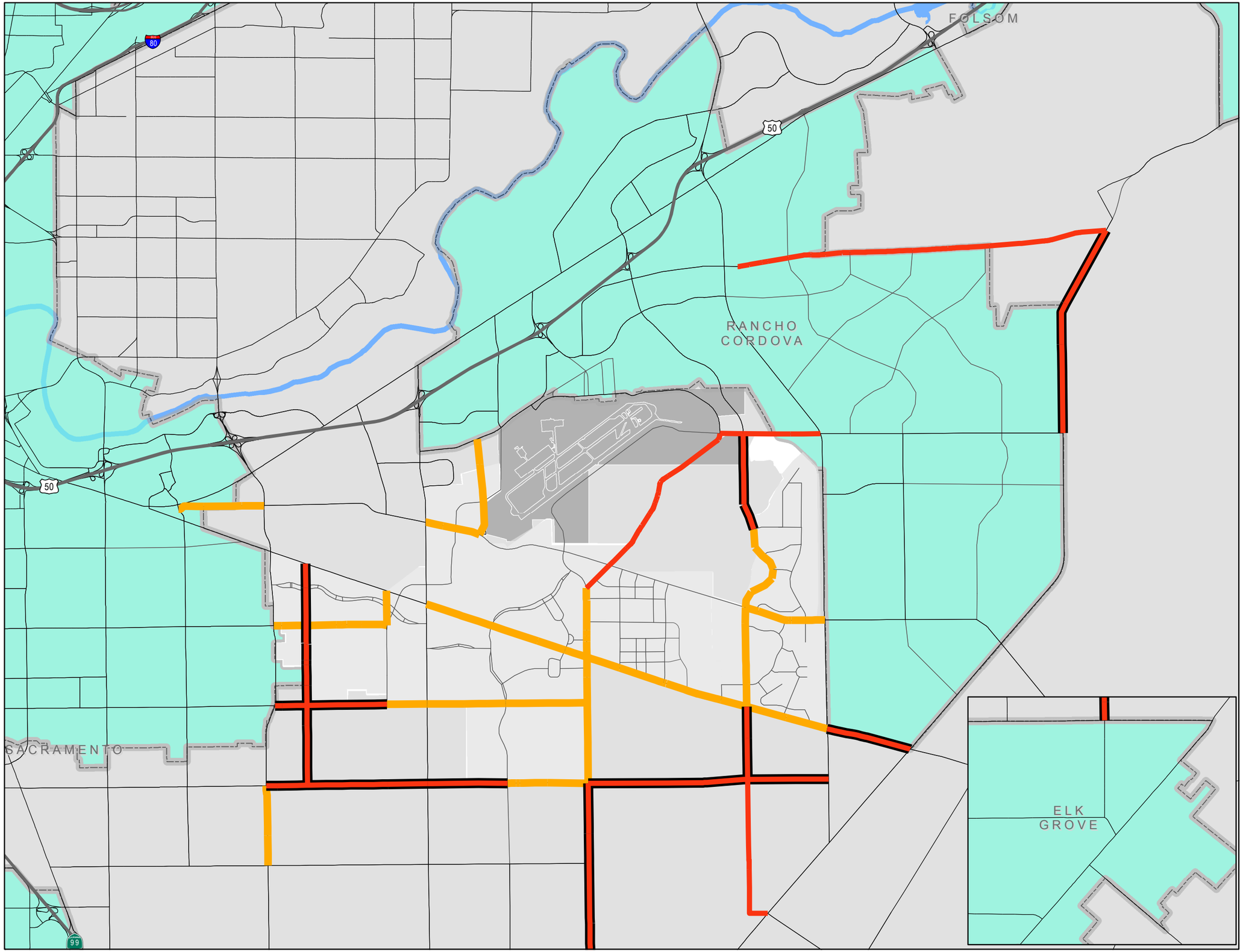

FIGURE 4.6
EXISTING PLUS FOUR PROJECTS
FUNCTIONALITY IMPACTS

Legend

- Substandard Roadways
- Functionality Impact
- Functionality Impact if Roadway is Not Already Improved
- Cities
- Mather Airport

DKS

4.5 MITIGATION

4.5.1 Existing Plus FOUR PROJECTS Roadway Segment Mitigation

Table 4.12 summarizes the results of the operations analysis for the study area roadway segments with mitigation. Where feasible, the number of roadway lanes was increased to mitigate the impact. However, the increased number of lanes could not exceed the maximum General Plan designations of the appropriate jurisdictions. The shaded table cells under the "Travel Lanes" and "Facility Type" headings illustrate widened roadways for mitigation purposes, which would be the responsibility of the FOUR PROJECTS to fund and provide. The Jackson Township project would contribute a fair share. The shaded table cells under the "Level of Service" heading indicate those locations that would continue to have LOS impacts after mitigation. The table also includes the constraint that precluded full mitigation of the LOS impact.

The "LOS Impact with Mitigation?" column shows whether there is still an LOS impact after the mitigation measure is applied. In other words, this column shows whether a mitigation measure successfully mitigates the impact or not. In several locations where the improvements allowed under the General Plan would not mitigate an LOS impact, the County has proposed alternative mitigation measures, which are shown in the "Alternative Mitigation" column. These alternative mitigation measures will either fully mitigate the impact or substantially reduce the level of impact.

4.5.2 Existing Plus FOUR PROJECTS Intersection Mitigation

Tables 4.13 and 4.14 summarize the results of the operations analysis for the study area intersections with mitigation. However, the increased number of lanes on each approach does not exceed the County's standard number of approach lanes. Shaded table cells in Table 4.14 indicate those locations where changes in traffic control and / or number of approach lanes by type have been made to mitigate impacts, which would be the responsibility of the FOUR PROJECTS to fund and provide. The Jackson Township project would contribute a fair share. The shaded table cells in Table 4.13 under the "Level of Service" heading indicate those locations with an LOS impact after mitigation. Table 4.14 also identifies those intersections that would continue to have LOS impacts after mitigation, along with the constraint that precluded full mitigation. Detailed analysis information is included in the technical appendix.

The "LOS Impact with Mitigation?" column shows whether there is still an LOS impact after the mitigation measure is applied. In other words, this column shows whether a mitigation measure successfully mitigates the impact or not. In several locations where the LOS impact could not be mitigated by implementing the County's standard number of approach lanes, the County has proposed alternative mitigation measures, which are shown in the "Alternative Mitigation" column. These generally include providing additional turn lanes, carrying an additional through lane past the intersection, or designating the intersection as a High Capacity Intersection. These alternative mitigation measures will either fully mitigate the impact or substantially reduce the level of impact.

High Capacity Intersections

Three intersections are currently designated as "High Capacity Intersections" on the County's General Plan: Watt Avenue & Folsom Boulevard, Watt Avenue & Kiefer Boulevard, and Watt Avenue & Jackson Road.

A high capacity intersection would utilize special treatments to increase the capacity of the intersection so as to reduce congestion and travel delay. Since each intersection could have unique travel movements, volumes and existing context sensitive conditions, the special treatments utilized at each high capacity intersection will be selected to meet the specific needs of each intersection. The range of special treatments is quite wide, ranging from the restriction of certain turning movements to various combinations that could include grade separating certain movements. While the field of traffic engineering is ever expending and evolving resulting in the use of new technologies and treatments, special treatments such as the following could be utilized at a high capacity intersection:

- Restricting turning movements
- Median U-turns
- Roundabouts
- Split intersections
- Quadrant roadway intersections
- Bowtie intersections
- Directional flyovers
- Center turn overpass
- Grade separated Roundabout
- Diverging diamond grade separation
- Compact diamond grade separation
- Single point urban grade separation
- Traditional urban grade separation

The County has conducted conceptual engineering to define potential improvements at the three study area intersections on Watt Avenue that are currently designated as "High Capacity Intersections" on the County's General Plan. These are:

- At the **Watt Avenue & Folsom Boulevard** intersection, the County proposes an ultimate configuration involving grade separation of the northbound and southbound through movements of Watt Avenue. Access to and from Folsom Boulevard would be accomplished via on and off-ramps from the left lanes of Watt Avenue to a single signalized intersection. A bus rapid transit (BRT) lane along Watt Avenue would also intersect Folsom Boulevard at the traffic signal. This design is consistent with the recommendations of the South Watt Area Transportation Study (SWATS) dated November 1, 2002 and approved by the Board of Supervisors on November 26, 2002, and with the planning study for the *State Route 16 (Jackson Road) Corridor Study* (Fehr & Peers, 2012). It should be noted that the State Route 16 study has only had a staff-level review done by Caltrans, Sacramento County Department of Transportation, City of

Rancho Cordova, and City of Sacramento. Other equivalent mitigation measures may be selected to the satisfaction of the Department of Transportation to mitigate the project's impact.

- At the **Watt Avenue & Kiefer Boulevard** intersection, the County proposes a tight diamond interchange as the ultimate improvement. The through movements (and BRT lane) on Watt Avenue would be grade separated from Kiefer Boulevard. Access to and from Kiefer Boulevard would be accomplished via on and off-ramps at two signalized intersections along Kiefer Boulevard. This design is proposed in the planning study prepared for *State Route 16 (Jackson Road) Corridor Study* (Fehr & Peers, 2012). It should be noted that the State Route 16 study has only had a staff-level review done by Caltrans, Sacramento County Department of Transportation, City of Rancho Cordova, and City of Sacramento. Other equivalent mitigation measures may be selected to the satisfaction of the Department of Transportation to mitigate the project's impact.

- At the **Watt Avenue & Jackson Road** intersection, the County proposes a standard six-by-six signalized intersection (two left-turn lanes, three through lanes, and one right-turn lane, on each approach) with three modifications. 1) The southbound left-turn movement would be grade separated; 2) The westbound right-turn movement would be grade separated; and 3) Three northbound left-turn lanes are proposed. This configuration represents an enhanced version of Alternative 6 in the planning study prepared for *State Route 16 (Jackson Road) Corridor Study* (Fehr and Peers, 2012). It should be noted that the State Route 16 study has only had a staff-level review done by Caltrans, Sacramento County Department of Transportation, City of Rancho Cordova, and City of Sacramento. Other equivalent mitigation measures may be selected to the satisfaction of the Department of Transportation to mitigate the project's impact.

Table 4.12
Existing Plus FOUR PROJECTS Roadway Segment Mitigations

ID	Roadway	Segment		Existing + FOUR PROJECTS					Mitigated Existing + FOUR PROJECTS						
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Volume / Capacity Ratio	Level of Service	LOS Impact with Mitigation?	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
2	Bradshaw Rd	US 50	Lincoln Village Dr	6	Arterial M	74,850	1.39	**F**	6	Arterial M	1.39	**F**	Yes		Maximum General Plan lanes
3	Bradshaw Rd	Lincoln Village Dr	Old Placerville Rd	6	Arterial M	68,340	1.27	**F**	6	Arterial M	1.27	**F**	Yes		Maximum General Plan lanes
4	Bradshaw Rd	Old Placerville Rd	Goethe Rd	6	Arterial M	60,800	1.13	**F**	6	Arterial M	1.13	**F**	Yes		Maximum General Plan lanes
5.1	Bradshaw Rd	Goethe Rd	Collector WJ-8	4	Arterial M	52,590	1.46	**F**	6	Arterial M	0.97	E	No		
5.2	Bradshaw Rd	Collector WJ-8	Kiefer Blvd	5	Arterial M	48,280	1.34	**F**	6	Arterial M	0.89	D	No		
6.1	Bradshaw Rd	Kiefer Blvd	Collector WJ-9	5	Arterial M	43,190	1.20	**F**	6	Arterial M	0.80	C	No		
6.2	Bradshaw Rd	Collector WJ-9	Mayhew Rd	5	Arterial M	43,450	1.21	**F**	6	Arterial M	0.80	D	No		
23	Elder Creek Rd	Power Inn Rd	Florin-Perkins Rd	2	Arterial M	22,490	1.25	**F**	4	Arterial M	0.62	B	No		
24	Elder Creek Rd	Florin Perkins Rd	South Watt Ave	2	Arterial M	17,930	1.00	**E**	4	Arterial M	0.50	A	No		
25	Elder Creek Rd	South Watt Ave	Hedge Ave	2	Arterial M	24,370	1.35	**F**	4	Arterial M	0.68	B	No		
26	Elder Creek Rd	Hedge Ave	Mayhew Rd	2	Arterial M	23,830	1.32	**F**	4	Arterial M	0.66	B	No		
28.1	Elder Creek Rd	Bradshaw Rd	Vineyard Rd	3	Arterial M	20,830	1.16	**F**	4	Arterial M	0.58	A	No		
29	Elk Grove-Florin Rd	Florin Rd	Gerber Rd	2	Arterial M	24,620	1.37	**F**	4	Arterial M	0.68	B	No		
31.1	Excelsior Rd	Jackson Rd	Collector WJ-6	3	Arterial M	28,310	1.57	**F**	4	Arterial M	0.79	C	No		
31.2	Excelsior Rd	Collector WJ-6	Elder Creek Rd	3	Arterial M	27,210	1.51	**F**	4	Arterial M	0.76	C	No		
44	Folsom Blvd	Howe Ave	Jackson Rd	4	Arterial M	54,050	1.50	**F**	4	Arterial M	1.50	**F**	Yes		Maximum General Plan lanes
47	Fruitridge Rd	Florin Perkins Rd	South Watt Ave	2	Arterial M	22,220	1.23	**F**	4	Arterial M	0.62	B	No		
55.1	Grant Line Rd	Calvine Rd	Elk Grove City Limit	2	Rural S	15,900	0.80	E		Arterial M			No		
55.2	Grant Line Rd	Elk Grove City Limit	Sheldon Rd	2	Rural S	15,870	0.79	**E**	4	Arterial M	0.44	A	No		
56	Grant Line Rd	Sheldon Rd	Wilton Rd	2	Rural S	22,700	1.14	**F**	4	Arterial M	0.63	B	No		
57	Grant Line Rd	Wilton Rd	Bond Rd	2	Rural S	20,180	1.01	**F**	4	Arterial M	0.56	A	No		

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 4.12
Existing Plus FOUR PROJECTS Roadway Segment Mitigations

ID	Roadway	Segment		Existing + FOUR PROJECTS					Mitigated Existing + FOUR PROJECTS						
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Volume / Capacity Ratio	Level of Service	LOS Impact with Mitigation?	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
58.2	Happy Ln	Routier Ext	Kiefer Blvd	2	Arterial M	19,200	1.07	**F**	2	Arterial M	1.07	**F**	Yes	Construct Routier extension.	
62	Howe Ave	US 50	Folsom Blvd	6	Arterial M	61,820	1.14	**F**	6	Arterial M	1.14	**F**	Yes		Maximum General Plan lanes
65	Jackson Rd	Folsom Blvd	Florin Perkins Rd	2	Arterial M	33,010	1.83	**F**	4	Arterial M	0.92	E	No		
66	Jackson Rd	Florin Perkins Rd	South Watt Ave	2	Arterial M	37,200	2.07	**F**	4	Arterial M	1.03	**F**	Yes		Maximum General Plan lanes
67	Jackson Rd	South Watt Ave	Hedge Ave	4	Arterial M	58,720	1.63	**F**	6	Arterial M	1.09	**F**	Yes		Maximum General Plan lanes
68.1	Jackson Rd	Hedge Ave	Collector WJ-3	4	Arterial M	50,220	1.40	**F**	6	Arterial M	0.93	E	No		
68.2	Jackson Rd	Collector WJ-3	Mayhew Rd	4	Arterial M	51,620	1.43	**F**	6	Arterial M	0.96	E	No		
71.1	Jackson Rd	Excelsior Rd	Collector JT-3	4	Arterial M	46,410	1.29	**F**	6	Arterial M	0.86	D	No		
73	Jackson Rd	Sunrise Blvd	Grant Line Rd	2	Rural Hwy	17,610	0.77	**E**	4	Arterial M	0.49	A	No		
76	Kiefer Blvd	Mayhew Rd	Bradshaw Rd	4	Arterial M	36,970	1.03	**F**	4	Arterial M	1.03	**F**	Yes		Maximum General Plan lanes

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Table 4.12
Existing Plus FOUR PROJECTS Roadway Segment Mitigations

ID	Roadway	Segment		Existing + FOUR PROJECTS					Mitigated Existing + FOUR PROJECTS						
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Volume / Capacity Ratio	Level of Service	LOS Impact with Mitigation?	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
95	Rockingham Dr	Old Placerville Rd	Mather Field Rd	4	Arterial M	32,640	0.91	**E**	4	Arterial M	0.91	**E**	Yes		Maximum General Plan lanes
96	South Watt Ave	Folsom Blvd	Kiefer Blvd	6	Arterial M	64,430	1.19	**F**	6	Arterial M	1.19	**F**	Yes		Maximum General Plan lanes
97	South Watt Ave	Kiefer Blvd	Jackson Rd	5	Arterial M	49,470	1.37	**F**	6	Arterial M	0.92	E	No		
99	South Watt Ave	Fruitridge Rd	Elder Creek Rd	2	Arterial M	22,290	1.24	**F**	4	Arterial M	0.62	B	No		
100	South Watt Ave	Elder Creek Rd	Florin Rd	2	Arterial M	24,510	1.36	**F**	4	Arterial M	0.68	B	No		
102	Sunrise Blvd	Folsom Blvd	Trade Center Dr	6	Arterial M	52,840	0.98	**E**	6	Arterial M	0.98	**E**	Yes		Maximum General Plan lanes
106	Sunrise Blvd	Kiefer Blvd	Jackson Rd	2	Arterial M	20,300	1.13	**F**	4	Arterial M	0.56	A	No		
110	Watt Ave	US 50	Folsom Blvd	6	Arterial H	77,770	1.30	**F**	6	Arterial H	1.30	**F**	Yes		Maximum General Plan lanes
118	Zinfandel Dr	US 50	White Rock Rd	7	Arterial M	49,950	0.93	**E**	7	Arterial M	0.93	**E**	Yes		Maximum General Plan lanes
122	Zinfandel Dr	City Limit	Douglas Rd	2	Arterial M	20,710	1.15	**F**	4	Arterial M	0.58	A	No		
123.1	Zinfandel Dr	Douglas Rd	Collector MS-2	2	Arterial M	19,830	1.10	**F**	4	Arterial M	0.55	A	No		
200	Kiefer Blvd	Tree View Ln	Eagles Nest Rd	2	Arterial M	22,170	1.23	**F**	4	Arterial M	0.62	B	No		

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Table 4.12
Existing Plus FOUR PROJECTS Roadway Segment Mitigations

ID	Roadway	Segment		Existing + FOUR PROJECTS					Mitigated Existing + FOUR PROJECTS						
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Volume / Capacity Ratio	Level of Service	LOS Impact with Mitigation?	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible

Note: Gray shading represents changes in travel lanes or facility type that the project is responsible to provide.

[1] The following classifications are used to determine daily roadway capacity:
Arterial L - Arterial, Low Access Control
Arterial M - Arterial, Moderate Access Control
Arterial H - Arterial, High Access Control
Rural Hwy - Rural 2-lane Highway
Rural S - Rural 2-lane Road, 24'-36' of pavement, Paved Shoulders
Rural NS - Rural 2-lane Road, 24'-36' of pavement, No Shoulders
Res Collector F - Residential Collector with Frontage
Res Collector NF - Residential Collector with No Frontage

[2] Alternative mitigations represent proposed mitigations beyond the General Plan, as proposed by the County of Sacramento.

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 4.13

Existing Plus FOUR PROJECTS (**Alternative 2**) Impacted Intersections and Mitigations

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing Plus FOUR PROJECTS				Mitigated Existing Plus FOUR PROJECTS			Existing Plus FOUR PROJECTS				Mitigated Existing Plus FOUR PROJECTS		
		Control	Int LOS	Delay (sec)	LOS Impact	Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	LOS Impact	Control	Int LOS	Delay (sec)
5	Power Inn Road & Fruitridge Road	Signal	E	59.5	Yes	Signal	D	46.8	Signal	D	35.3	No	Signal	C	33.0
9	Florin Perkins Road & Jackson Road	Signal	E	70.0	Yes	Signal	C	29.8	Signal	F	144.0	Yes	Signal	D	44.0
14	S. Watt Avenue & Kiefer Blvd.	Signal	F	121.3	Yes	Signal	E	71.2	Signal	F	105.7	Yes	Signal	E	59.3
16	S. Watt Avenue & Jackson Road	Signal	F	331.7	Yes	Signal	E	62.0	Signal	F	773.1	Yes	Signal	E	61.7
17	S. Watt Avenue & Fruitridge Road	Signal	D	52.2	No	Signal	D	30.7	Signal	E	65.2	Yes	Signal	D	50.0
18	S. Watt Avenue & Elder Creek Road	Signal	F	125.6	Yes	Signal	D	38.8	Signal	F	143.8	Yes	Signal	D	43.6
27	Hedge Avenue & Florin Road	All-way stop	F	217.6	Yes	Signal	D	47.5	All-way stop	F	68.8	Yes	Signal	B	10.1
31	Mayhew Road & Elder Creek Road	Signal	F	294.2	Yes	Signal	C	33.0	Signal	F	275.9	Yes	Signal	C	25.6
32	Woodring Drive & Zinfandel Drive	Two-way stop			Yes	Roundabout	C	18.0	Two-way stop			Yes	Roundabout	C	19.6
	Eastbound		F	83.8						F	78.8				
	Northbound Left Turn		*A*	*9.4*						B	10.1				
36	Bradshaw Road & Old Placerville Road	Signal	E	61.2	Yes	Signal	-	-	Signal	E	62.7	Yes	Signal	-	-
37	Bradshaw Road & Kiefer Boulevard	Signal	F	101.3	Yes	Signal	F	96.5	Signal	F	104.5	Yes	Signal	E	73.1
38	Bradshaw Road & Jackson Road	Signal	F	92.6	Yes	Signal	E	73.9	Signal	F	82.1	Yes	Signal	E	69.3
39	Bradshaw Road & Elder Creek Road	Signal	F	80.1	Yes	Signal	D	52.0	Signal	E	71.5	No	Signal	E	63.7

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 4.13

Existing Plus FOUR PROJECTS (**Alternative 2**) Impacted Intersections and Mitigations

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing Plus FOUR PROJECTS				Mitigated Existing Plus FOUR PROJECTS			Existing Plus FOUR PROJECTS				Mitigated Existing Plus FOUR PROJECTS		
		Control	Int LOS	Delay (sec)	LOS Impact	Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	LOS Impact	Control	Int LOS	Delay (sec)
40	Bradshaw Road & Florin Road	Signal	F	109.0	Yes	Signal	D	54.9	Signal	E	72.3	No	Signal	E	71.9
42	Happy Lane & Old Placerville Road	Two-way stop			Yes	Modify access control to allow only right-in and right-out on Happy Lane. Median will allow Westbound left-turns to Happy Lane. Construct Routier extension.			Two-way stop			Yes	Modify access control to allow only right-in and right-out on Happy Lane. Median will allow Westbound left-turns to Happy Lane. Construct Routier Extension.		
	Northbound Left Turn		*E*	*40.0*						F	>300				
	Northbound Right Turn		C	16.2						B	13.6				
	Westbound Left Turn		A	9.0						A	9.2				
45	Excelsior Road & Jackson Road	Signal	F	273.0	Yes	Signal	D	47.6	Signal	F	222.4	Yes	Signal	D	38.3
48	Excelsior Road & Gerber Road/Birch Ranch Drive	All-way stop	F	151.9	Yes	Signal	C	30.0	All-way stop	F	108.0	Yes	Signal	A	8.6
51	Mather Field Road & Rockingham Drive	Signal	F	125.6	Yes	Signal	-	-	Signal	E	61.8	Yes	Signal	-	-
61	Eagles Nest Road & Florin Road	Two-way stop			Yes	Signal	C	26.7	Two-way stop			Yes	Signal	C	29.9
	Northbound		*F*	*147.4**						D	25.4				
	Southbound		C	20.3*						F	71.3				
	Eastbound Left Turn		*A*	*5.4**						A	8.0				
	Westbound Left Turn		*A*	*0.0**						A	0.0				
69	Sunrise Boulevard & Kiefer Boulevard	Signal	E	59.7	Yes	Signal	D	47.1	Signal	D	40.0	No	Signal	C	30.1
70	Sunrise Boulevard & Jackson Road	Signal	F	124.5	Yes	Signal	D	39.4	Signal	E	69.9	Yes	Signal	D	46.0
80	Grant Line Road & Jackson Road	Signal	F	86.2	Yes	Signal	D	44.6	Signal	E	63.6	No	Signal	E	**61.4**
90	Excelsior Road & Calvine Rd	All-way stop	F	106.7	Yes	Signal	C	30.8	All-way stop	F	82.2	Yes	Signal	C	30.3
93	Grant Line Rd & Dwy/Wilton Rd	Signal	E	79.8	Yes	Signal	C	31.2	Signal	E	71.9	Yes	Signal	C	34.1

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 4.13

Existing Plus FOUR PROJECTS (**Alternative 2**) Impacted Intersections and Mitigations

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing Plus FOUR PROJECTS				Mitigated Existing Plus FOUR PROJECTS			Existing Plus FOUR PROJECTS				Mitigated Existing Plus FOUR PROJECTS		
		Control	Int LOS	Delay (sec)	LOS Impact	Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	LOS Impact	Control	Int LOS	Delay (sec)
319	Bradshaw Road & Collector WJ-10	Signal	F	96.4	Yes	Signal	C	33.5	Signal	B	16.5	No	Signal	B	14.0
325	Douglas Road & Kiefer Boulevard	Signal	F	111.2	Yes	Signal	D	52.3	Signal	F	133.8	Yes	Signal	D	48.6
331	Routier Ext/Routier Rd & Old Placerville Rd.	Signal	F	231.2	Yes	Signal	E	65.5	Signal	F	189.8	Yes	Signal	E	56.6

Note: Gray shading represents changes in traffic control for which the project is responsible to pay a fair share.
(-): No change to tintersection geometry or operation.

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 4.14

Existing Plus FOUR PROJECTS Intersection Impacts and Mitigations

	Intersection	Traffic Control		Existing Plus FOUR PROJECTS Lane Geometrics				Mitigated Existing Plus FOUR PROJECTS Lane Geometrics				LOS Impact with Mitgation?	High Capacity Intersection?[1]	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
		Existing Plus FOUR PROJECTS	Mitigated Existing Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach				
5	Power Inn Road & Fruitridge Road	Signal	Signal	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	No	No		
9	Florin Perkins Road & Jackson Road	Signal	Signal	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	No	No		
14	S. Watt Avenue & Kiefer Blvd.	Signal	Signal	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	No	No	WBR Overlap	
16	S. Watt Avenue & Jackson Road	Signal	Signal	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	No	Yes	Free WBR	
17	S. Watt Avenue & Fruitridge Road	Signal	Signal	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	No	No		
18	S. Watt Avenue & Elder Creek Road	Signal	Signal	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	No	No		
27	Hedge Avenue & Florin Road	All-way stop	Signal	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	No	No		
31	Mayhew Road & Elder Creek Road	Signal	Signal	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	No	No	Dual SBR	
32	Zinfandel Drive & Woodring Drive	Two-way stop	Roundabout	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	No	No		
36	Bradshaw Road & Old Placerville Road	Signal	Signal	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	Yes	No		Existing development
37	Bradshaw Road & Kiefer Boulevard	Signal	Signal	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	Yes	No	Carry 3 EBT and 3 WBT lanes through intersection	Maximum General Plan Lanes
38	Jackson Road & Bradshaw Road	Signal	Signal	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	No	No	Dual EBR	
39	Bradshaw Road & Elder Creek Road	Signal	Signal	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	No	No		
40	Bradshaw Road & Florin Road	Signal	Signal	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	No	No		
42	Happy Lane & Old Placerville Road	Two-way stop	Access Control	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	Happy Lane to become right-in and right-out only. Median will allow westbound left turns.				Yes	No	Construct Routier extension from Old Placerville Road to Kiefer Road.	
45	Excelsior Road & Jackson Road	Signal	Signal	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	No	No	NBR overlap	
48	Excelsior Road & Gerber Road/Birch Ranch Drive	All-way stop	Signal	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175		No		
51	Mather Field Road & Rockingham Drive	Signal	Signal	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	Yes	No		Existing development
61	Eagles Nest Rd/Eagles Nest Road & Florin Road	Two-way stop	Signal	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	3:0.111,0.139,0.132,0.175	3:0.139,0.139,0.164,0.175	3:0.164,0.139,0.183,0.175	3:0.183,0.139,0.202,0.175	No	No		

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 4.14

Existing Plus FOUR PROJECTS Intersection Impacts and Mitigations

	Intersection	Traffic Control		Existing Plus FOUR PROJECTS Lane Geometrics				Mitigated Existing Plus FOUR PROJECTS Lane Geometrics				LOS Impact with Mitgation?	High Capacity Intersection?[1]	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
		Existing Plus FOUR PROJECTS	Mitigated Existing Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach				
69	Sunrise Boulevard & Kiefer Boulevard	Signal	Signal									No	No		
70	Sunrise Boulevard & Jackson Road	Signal	Signal									No	No		
80	Grant Line Road & Jackson Road	Signal	Signal									No	No		
90	Excelsior Road & Calvine Rd	All-way stop	Signal									No	No		
93	Grant Line Road & Driveway/Wilton Rd	Signal	Signal									No	No		
319	Tree View Lane & Collector JT-1	Signal	Signal									No	No	Dual WBR	
325	Douglas Road & Kiefer Boulevard	Signal	Signal									No	No	Dual EBR	
331	Routier Ext/Routier Rd & Old Placerville Road	Signal	Signal									No	No	NBR overlap	

[1] High capacity intersections are defined in the Sacramento County General Plan and may include grade separations, additional turn lanes, and/or other features as deemed appropriate by the County.

[2] Alternative mitigations represent proposed mitigations beyond the General Plan, excluding high capacity intersections, as proposed by the County of Sacramento.

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

4.5.3 Existing Plus FOUR PROJECTS U.S. 50 Freeway Mitigation

According to Caltrans' US-50 Transportation Concept Report (TCR) and Corridor System Management Plan (CSMP), all mainline freeway lanes of the 8-lane ultimate facility (4 lanes in each direction) have already been built, with the exception of the segment between Zinfandel Drive and Sunrise Boulevard (where 6 of the 8 ultimate lanes exist today). With the exception of this segment, capacity improvements to widen the freeway mainline are precluded by the ultimate configuration in the TCR/CSMP. The TCR/CSMP does conceptualize other projects that will benefit the US-50 corridor without adding additional mainline travel lanes. These improvements generally fall into one of three categories:

- Intelligent transportation systems (ITS) and integrated corridor management (ICM) projects. Some examples may include ramp metering and multimodal improvements.
- Improvements to parallel local facilities. Such projects are expected to reduce travel demand on US-50.
- Future HOV lanes and auxiliary lanes. These projects would extend, or bridge gaps in, the existing HOV and auxiliary lane network. Constructing these lanes is permissible even when further widening of the mainline is not allowable, and is consistent with the ultimate configuration in the TCR/CSMP.

The FOUR PROJECTS shall participate in one or more of these alternative improvements that could directly reduce the severity of the project's impact and/or provide operational benefits to the US-50 corridor in general.

4.5.3.1 US-50 Eastbound Alternative Improvements

To lessen the impact to the eastbound US-50 mainline between Stockton Boulevard and 59th Street, the project may pay a fair share toward the construction of:

- Ramp meter improvements (Caltrans ITS/OPS Project List)

To lessen the impact to the eastbound US-50 weave between 65th Street and Howe Avenue, the project may pay a fair share toward the construction of:

- Ramp meter improvements (Caltrans ITS/OPS Project List)
- Widen 65th Street to 5 lanes from US-50 to Broadway (2035 SACOG MTP)

To lessen the impact to the eastbound US-50 weave between Mather Field Road and Zinfandel Drive, the project may pay a fair share toward the construction of:

- An interchange modification of US-50 at Mather Field Road (2035 SACOG MTP)

To lessen the impact to the eastbound US-50 mainline between Zinfandel Drive and Hazel Avenue, the project may pay a fair share toward the construction of:

- Auxiliary lanes between Zinfandel Drive and Sunrise Boulevard (2035 SACOG MTP)
- Auxiliary lanes between Sunrise Boulevard and Hazel Avenue (2035 SACOG MTP)
- Widen Sunrise Boulevard to 6 lanes with special treatments, including intersection improvements at White Rock Road, Folsom Boulevard, Coloma Road, Gold Express Drive, and Gold Country Boulevard (2035 SACOG MTP)
- A new interchange at Rancho Cordova Parkway, including a 4-lane arterial from US-50 to White Rock Road (2035 SACOG MTP)

- Multi-modal corridor improvements and interchange improvements at Hazel Avenue (2035 SACOG MTP)

4.5.3.2 US-50 Westbound Alternative Improvements

To lessen the impact to the westbound US-50 mainline between Watt Avenue and SR-51/SR-99, the project may pay a fair share toward the construction of:

- Bus/HOV lanes from Watt Avenue to Downtown Sacramento (2035 SACOG MTP)
- Replacement of existing communication lines with fiber optics to improve performance between SR-51/SR-99 and Watt Avenue (2013 10-Year SHOPP Plan)
- Auxiliary lane between the NB Howe Avenue on-ramp and the SB Howe Avenue on-ramp (2035 SACOG MTP)
- Ramp meter improvements (Caltrans ITS/OPS Project List)

4.5.4 Existing Plus FOUR PROJECTS Pedestrian and Bicycle Facility Mitigation

The FOUR PROJECTS applicants shall coordinate with Sacramento County to identify the necessary on- and off-site pedestrian and bicycle facilities to serve the proposed development. These facilities shall be incorporated into the FOUR PROJECTS and could include sidewalks, stop signs, standard pedestrian and school crossing warning signs, lane striping to provide a bicycle lane, bicycle parking, signs to identify pedestrian and bicycle paths, raised crosswalks, pedestrian signal heads, and all appropriate traffic calming measures as defined in the County's Neighborhood Traffic Management Program (NTMP). Sidewalks would be required as part of the frontage improvements along all new roadway construction in the FOUR PROJECTS vicinity in conformance with County design standards. Circulation and access to all proposed public spaces shall include sidewalks that meet Americans with Disabilities Act standards.

4.5.5 Existing Plus FOUR PROJECTS Transit System Mitigation

The applicants of the FOUR PROJECTS shall coordinate with Regional Transit (or other transit operators) to provide the additional transit facilities and services assumed in transportation analysis (see Section 3.1.2.3), or a cost-effective equivalent level of transit facilities and services.

The assumed transit routes and service frequency would be required at full development of the FOUR PROJECTS. The full level of transit service would not achieve adequate transit ridership during the early stages of development. Thus the ultimate transit service, like the roadway system serving the FOUR PROJECTS, must be phased with development of the FOUR PROJECTS.

4.5.6 Existing Plus FOUR PROJECTS Functionality Mitigation

Table 4.15 summarizes the results of the functionality analysis for the study area rural roadway segments with mitigation.

4.5.7 Existing Plus FOUR PROJECTS Mitigation Summary

Tables 4.16 through 4.21 summarize all of the roadway segments, intersections, and freeway facilities that would exhibit significant LOS impacts along with the mitigation success for these impacts.

Table 4.15
Existing Plus FOUR PROJECTS Functionality Mitigations

ID	Roadway	Segment		Existing + FOUR PROJECTS				Mitigation	Impact after Mitigation?
		From	To	Travel Lanes	Substandard? [1]	Forecasted Volume	Functionality Impact? [2]		
19	Eagles Nest Rd	Kiefer Blvd	Jackson Rd	4	No	9,500	Yes[3]	Widen to County standards [5]	No
20	Eagles Nest Rd	Jackson Rd	Florin Rd	2	Yes	6,470	Yes	Widen to County standards [5]	No
25	Elder Creek Rd	South Watt Ave	Hedge Ave	2	Yes	24,370	Yes	Widen to County standards [5]	No
26	Elder Creek Rd	Hedge Ave	Mayhew Rd	2	Yes	23,830	Yes	Widen to County standards [5]	No
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd	3	No	14,080	Yes[3]	Widen to County standards [5]	No
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd	3	No	20,830	Yes[3]	Widen to County standards [5]	No
30	Excelsior Rd	Kiefer Blvd	Jackson Rd	2	Yes	22,740	Yes	Widen to County standards [5]	No
31	Excelsior Rd	Jackson Rd	Elder Creek Rd	3	No	27,210	Yes[3]	Widen to County standards [5]	No
32	Excelsior Rd	Elder Creek Rd	Florin Rd	3	No	11,850	Yes[3]	Widen to County standards [5]	No
33	Excelsior Rd	Florin Rd	Gerber Rd	2	Yes	12,980	Yes	Widen to County standards [5]	No
34	Excelsior Rd	Gerber Rd	Calvine Rd	2	Yes	10,200	Yes	Widen to County standards [5]	No
39	Florin Rd	South Watt Ave	Hedge Ave	2	Yes	16,070	Yes	Widen to County standards [5]	No
40	Florin Rd	Hedge Ave	Mayhew Rd	2	Yes	13,050	Yes	Widen to County standards [5]	No
41	Florin Rd	Mayhew Rd	Bradshaw Rd	2	Yes	13,290	Yes	Widen to County standards [5]	No
42	Florin Rd	Bradshaw Rd	Excelsior Rd	2	Yes	12,760	Yes	Widen to County standards [5]	No
43	Florin Rd	Excelsior Rd	Sunrise Blvd	2	Yes	7,380	Yes	Widen to County standards [5]	No
48	Fruitridge Rd	South Watt Ave	Hedge Ave	3	No	14,950	Yes[3]	Widen to County standards [5]	No
49	Fruitridge Rd	Hedge Ave	Mayhew Rd	4	No	15,820	Yes[3]	Widen to County standards [5]	No
50	Grant Line Rd	White Rock Rd	Douglas Rd	2	Yes	9,020	Yes	Widen to County standards [5]	No
58	Happy Ln	Old Placerville Rd	Kiefer Blvd	2	Yes	7,540	Yes	Widen to County standards [5]	No
59	Hedge Ave	Jackson Rd	Fruitridge Rd	2	Yes	7,900	Yes	Widen to County standards [5]	No
70	Jackson Rd	Bradshaw Rd	Excelsior Rd	6	No	52,830	Yes[3]	Widen to County standards [5]	No
71	Jackson Rd	Excelsior Rd	Eagles Nest Rd	4	No	46,410	Yes[3]	Widen to County standards [5]	No
77	Kiefer Blvd	Bradshaw Rd	Happy Ln	6	No	42,680	Yes[3]	Widen to County standards [5]	No
78	Kiefer Blvd	Zinfandel Dr	Sunrise Blvd	3	No	14,640	Yes[3]	Widen to County standards [5]	No

Red text with light gray shading indicate project impacts.

Table 4.15
Existing Plus FOUR PROJECTS Functionality Mitigations

ID	Roadway	Segment		Existing + FOUR PROJECTS				Mitigation	Impact after Mitigation?
		From	To	Travel Lanes	Substandard? [1]	Forecasted Volume	Functionality Impact? [2]		
89	Mayhew Rd	Jackson Rd	Fruitridge Rd	4	No	34,140	Yes[3]	Widen to County standards [5]	No
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd	2	Yes	19,830	Yes	Widen to County standards [5]	No

Note: Gray shading indicates changes in travel lanes or facility type that the project is responsible to provide. For all roadway segments to be widened, the project is responsible to build the entire roadway to County standards.

[1] Substandard rural roads are defined as rural, 2-lane roadway segments with travel lanes narrower than 12 feet and/or roadside shoulders narrower than 6 feet.
[2] Functionality impacts are triggered when a substandard rural road increases over a threshold of 6,000 ADT, or for a roadway already above 6,000 ADT, increases by more than 600 ADT.
[3] The potential for an impact exists should the project generate traffic volumes on the roadway exceeding 6,000 ADT, or increasing more than 600 ADT on a roadway already above 6,000 ADT, prior to the construction of roadway improvements.
[4] Excluding the roadway segment that is within the developed community of Independence at Mather.
[5] The functionality impact is mitigated by improving the roadway to County standards, including widening travel lanes to 12 feet and/or widening or providing paved shoulders to 6 feet.

Red text with light gray shading indicate project impacts.

Table 4.16
Existing Plus FOUR PROJECTS Summary of Impacted Roadway Segments

ID	Roadway	Segment	
		From	To
Level of Service Impact Fully Mitigated by General Plan Lanes			
5.1	Bradshaw Rd	Goethe Rd	Collector WJ-8
5.2	Bradshaw Rd	Collector WJ-8	Kiefer Blvd
6.1	Bradshaw Rd	Kiefer Blvd	Collector WJ-9
6.2	Bradshaw Rd	Collector WJ-9	Mayhew Rd
23	Elder Creek Rd	Power Inn Rd	Florin-Perkins Rd
24	Elder Creek Rd	Florin Perkins Rd	South Watt Ave
25	Elder Creek Rd	South Watt Ave	Hedge Ave
26	Elder Creek Rd	Hedge Ave	Mayhew Rd
28.1	Elder Creek Rd	Bradshaw Rd	Vineyard Rd
29	Elk Grove-Florin Rd	Florin Rd	Gerber Rd
31.1	Excelsior Rd	Jackson Rd	Collector WJ-6
31.2	Excelsior Rd	Collector WJ-6	Elder Creek Rd
47	Fruitridge Rd	Florin Perkins Rd	South Watt Ave
55.1	Grant Line Rd	Calvine Rd	Elk Grove City Limit
55.2	Grant Line Rd	Elk Grove City Limit	Sheldon Rd
56	Grant Line Rd	Sheldon Rd	Wilton Rd
57	Grant Line Rd	Wilton Rd	Bond Rd
65	Jackson Rd	Folsom Blvd	Florin Perkins Rd
68.1	Jackson Rd	Hedge Ave	Collector WJ-3
68.2	Jackson Rd	Collector WJ-3	Mayhew Rd
71.1	Jackson Rd	Excelsior Rd	Collector JT-3
73	Jackson Rd	Sunrise Blvd	Grant Line Rd
97	South Watt Ave	Kiefer Blvd	Jackson Rd
99	South Watt Ave	Fruitridge Rd	Elder Creek Rd
100	South Watt Ave	Elder Creek Rd	Florin Rd
106	Sunrise Blvd	Kiefer Blvd	Jackson Rd
122	Zinfandel Dr	City Limit	Douglas Rd
123.1	Zinfandel Dr	Douglas Rd	Collector MS-2
200	Kiefer Blvd	Tree View Ln	Eagles Nest Rd
Level of Service Impact Not Fully Mitigated by General Plan Lanes			
2	Bradshaw Rd	US 50	Lincoln Village Dr
3	Bradshaw Rd	Lincoln Village Dr	Old Placerville Rd
4	Bradshaw Rd	Old Placerville Rd	Goethe Rd
44	Folsom Blvd	Howe Ave	Jackson Rd
58.2	Happy Lane	Routier Ext	Kiefer Boulevard
62	Howe Ave	US 50	Folsom Blvd

Note: Refer to Table 4.12 for detailed description of impacts and mitigations.

Table 4.16
Existing Plus FOUR PROJECTS Summary of Impacted Roadway Segments

ID	Roadway	Segment	
		From	To
66	Jackson Rd	Florin Perkins Rd	South Watt Ave
67	Jackson Rd	South Watt Ave	Hedge Ave
76	Kiefer Blvd	Mayhew Rd	Bradshaw Rd
95	Rockingham Dr	Old Placerville Rd	Mather Field Rd
96	South Watt Ave	Folsom Blvd	Kiefer Blvd
102	Sunrise Blvd	Folsom Blvd	Trade Center Dr
110	Watt Ave	US 50	Folsom Blvd
118	Zinfandel Dr	US 50	White Rock Rd

Note: Refer to Table 4.12 for detailed description of impacts and mitigations.

Table 4.17
Existing Plus FOUR PROJECTS (Alternative 2) Summary of Impacted Intersections

	Intersection	Alternative Mitigation
Level of Service Impact Fully Mitigated by General Plan Lanes		
5	Power Inn Road & Fruitridge Road	
9	Florin Perkins Road & Jackson Road	
14	S. Watt Avenue & Kiefer Blvd.	**
17	S. Watt Avenue & Fruitridge Road	
18	S. Watt Avenue & Elder Creek Road	
27	Hedge Avenue & Florin Road	
31	Mayhew Road & Elder Creek Road	**
32	Woodring Drive & Zinfandel Drive	
38	Bradshaw Road & Jackson Road	**
39	Bradshaw Road & Elder Creek Road	
40	Bradshaw Road & Florin Road	
45	Excelsior Road & Jackson Road	**
48	Excelsior Road & Gerber Road/Birch Ranch Drive	
61	Eagles Nest Road & Florin Road	
69	Sunrise Boulevard & Kiefer Boulevard	
70	Sunrise Boulevard & Jackson Road	
80	Grant Line Road & Jackson Road	
90	Excelsior Road & Calvine Rd	

Table 4.17
Existing Plus FOUR PROJECTS (Alternative 2) Summary of Impacted Intersections

	Intersection	Alternative Mitigation
93	Grant Line Rd & Dwy/Wilton Rd	
319	Bradshaw Road & Rock Creek Pkwy	
325	Douglas Road & Kiefer Boulevard	**
331	Routier Ext/Routier Rd & Old Placerville Rd.	**
	Level of Service Impact Not Fully Mitigated by General Plan Lanes But Designated High Capacity Intersection	
16	S. Watt Avenue & Jackson Road	**
	Level of Service Impact Not Fully Mitigated by General Plan Lanes	
36	Bradshaw Road & Old Placerville Road	
37	Bradshaw Road & Kiefer Boulevard	
42	Happy Lane & Old Placerville Road	**
51	Mather Field Road & Rockingham Drive	

[1] Alternative mitigations represent proposed mitigations beyond the General Plan, excluding designated high capacity intersections, as proposed by the County of Sacramento.

* denotes alternative mitigations that improve operations but do not fully mitigate the impact.
** denotes alternative mitigations that fully mitigate the impact.

Table 4.18

Existing Plus FOUR PROJECTS (Alternative 2)
Summary of Impacted Freeway Basic Segments

Direction	Location
Level of Service Impact Not Mitigated	
Eastbound US-50	Stockton Boulevard to 59th Street
	Zinfandel Drive to Sunrise Boulevard
	Sunrise Boulevard to Hazel Avenue
Westbound US-50	Watt Avenue to Howe Avenue
	Howe Avenue to 65th Street
	65th Street to 59th Street
	59th Street to Stockton Boulevard
	Stockton Boulevard to SR 99 / SR 51

Source: *DKS Associates, 2018.*

Table 4.19

Existing Plus FOUR PROJECTS (Alternative 2)
Summary of Impacted Freeway Merge/Diverge/Weave Segments

Direction	Location	Junction Type
Level of Service Impact Not Mitigated		
Eastbound US-50	Northbound 65th Street Slip Entrance	Weave
	Howe Avenue / Hornet Drive Exit	
	Northbound Mather Field Road Slip Entrance	Weave
	Zinfandel Drive Exit	

Source: *DKS Associates, 2018.*

Table 4.20
Existing Plus FOUR PROJECTS (Alt 2) Functionality Impact Summary

ID	Roadway	Segment	
		From	To
Functionality Impact Fully Mitigated			
19	Eagles Nest Rd	Kiefer Blvd	Jackson Rd
20	Eagles Nest Rd	Jackson Rd	Florin Rd
25	Elder Creek Rd	South Watt Ave	Hedge Ave
26	Elder Creek Rd	Hedge Ave	Mayhew Rd
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd
30	Excelsior Rd	Kiefer Blvd	Jackson Rd
31	Excelsior Rd	Jackson Rd	Elder Creek Rd
32	Excelsior Rd	Elder Creek Rd	Florin Rd
33	Excelsior Rd	Florin Rd	Gerber Rd
34	Excelsior Rd	Gerber Rd	Calvine Rd
39	Florin Rd	South Watt Ave	Hedge Ave
40	Florin Rd	Hedge Ave	Mayhew Rd
41	Florin Rd	Mayhew Rd	Bradshaw Rd
42	Florin Rd	Bradshaw Rd	Excelsior Rd
43	Florin Rd	Excelsior Rd	Sunrise Blvd
48	Fruitridge Rd	South Watt Ave	Hedge Ave
49	Fruitridge Rd	Hedge Ave	Mayhew Rd
50	Grant Line Rd	White Rock Rd	Douglas Rd
58	Happy Ln	Old Placerville Rd	Kiefer Blvd
59	Hedge Ave	Jackson Rd	Fruitridge Rd
70	Jackson Rd	Bradshaw Rd	Excelsior Rd
71	Jackson Rd	Excelsior Rd	Eagles Nest Rd
77	Kiefer Blvd	Bradshaw Rd	Happy Ln
78	Kiefer Blvd	Zinfandel Dr	Sunrise Blvd
89	Mayhew Rd	Jackson Rd	Fruitridge Rd
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd

5. MTP CUMULATIVE PLUS FOUR PROJECTS SCENARIO

5.1 FOUR PROJECTS DESCRIPTION

The MTP Cumulative plus FOUR PROJECTS scenario evaluates the effects of the traffic of four developments (the FOUR PROJECTS) added to MTP Cumulative conditions.

5.1.1 MTP Cumulative Land Use

Outside the FOUR PROJECTS, SACOG's 2035 development forecasts (the amount and location of housing and employment) for the adopted 2012 Metropolitan Transportation Plan (MTP) were used to prepare travel demand forecasts for this scenario.

Table 5.1 summarizes the MTP Cumulative Plus Four Project scenario land use.

Table 5.1: Assumed Land Use for MTP Cumulative Plus FOUR PROJECTS Scenario			
Project	**General Land Use**	**Acres**	**Dwelling Units**
West Jackson	Residential	1979.9	12,345
	Assumed Density Bonus[1]		237
	Mixed Use	120.9	2,418
	Commercial	342.8	
	Employment	803.3	
	Industrial	154.8	
	Schools	131.7	
	Park/Open Space/Ag	2108.3	
	Institutional	23.4	
	Primary Roadways	248.2	
	Subtotal	**5913.3**	**15,000**
Jackson Township	Residential	589.1	5,590
	Assumed Density Bonus[1]		76
	Commercial/Mixed Use	95.6	100
	Office	35.2	
	Pubic/Quasi Public	102.5	
	Park/Open Space/Ag	409.4	448
	Primary Roadways	84.2	
	Subtotal	**1,391.0**	**6,214**
New Bridge	Residential	368.0	2,915
	Assumed Density Bonus[1]		108
	Commercial/Mixed Use	31.7	160
	Office	13.8	
	Pubic/Quasi Public	13.8	
	Park/Open Space/Ag	514.7	660
	Primary Roadways	47.9	
	Subtotal	**1,095.3**	**3,843**

Project	General Land Use	Acres	Dwelling Units
Mather South	Residential	428.7	3,352
	Assumed Density Bonus[1]		30
	Commercial	21.1	
	Environmental Education Campus	27.9	200
	Research and Development	21.4	
	Parks & Recreation	43.1	
	Public Utilities	3.5	
	Schools	23.7	
	Open Space	210.5	
	Streets	62.7	
	Subtotal	**848.2**	**3,552**

[1] Reflects estimated potential for additional units that may occur due to County's Housing Incentive Program.

Source: *Project Applicants and Sacramento County, 2018*

5.1.2 Transportation Network

Figure 5.1 illustrates the transportation network associated with the MTP Cumulative without FOUR PROJECTS scenario, consisting of the improvements in the adopted 2012 Metropolitan Transportation Plan (MTP).

Figure 5.2 shows the transportation network associated with the MTP Cumulative with FOUR PROJECTS scenario. The FOUR PROJECTS would widen and / or complete many roadways that cross or border the PROJECT site. The FOUR PROJECTS would include new roadways to serve the proposed land use.

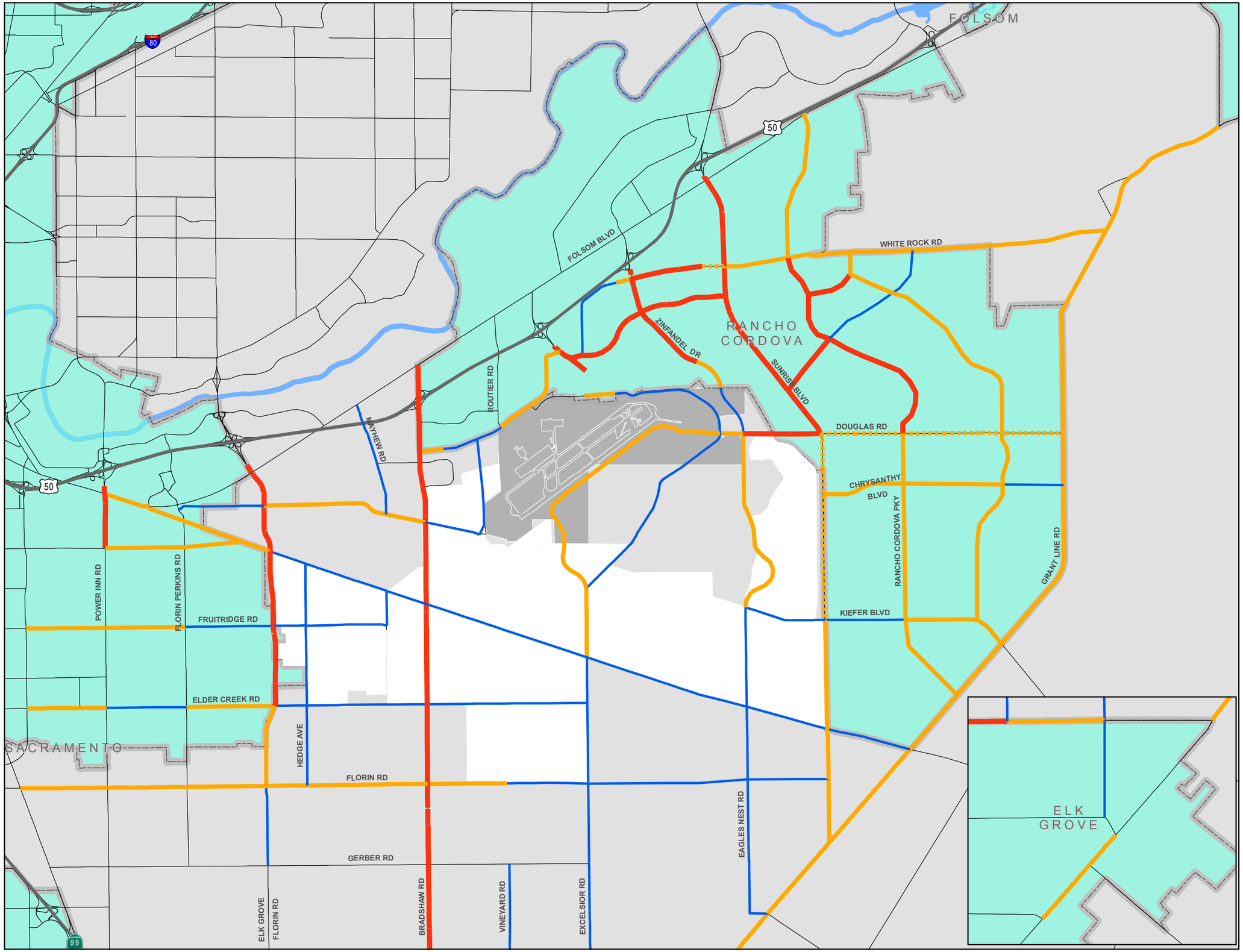
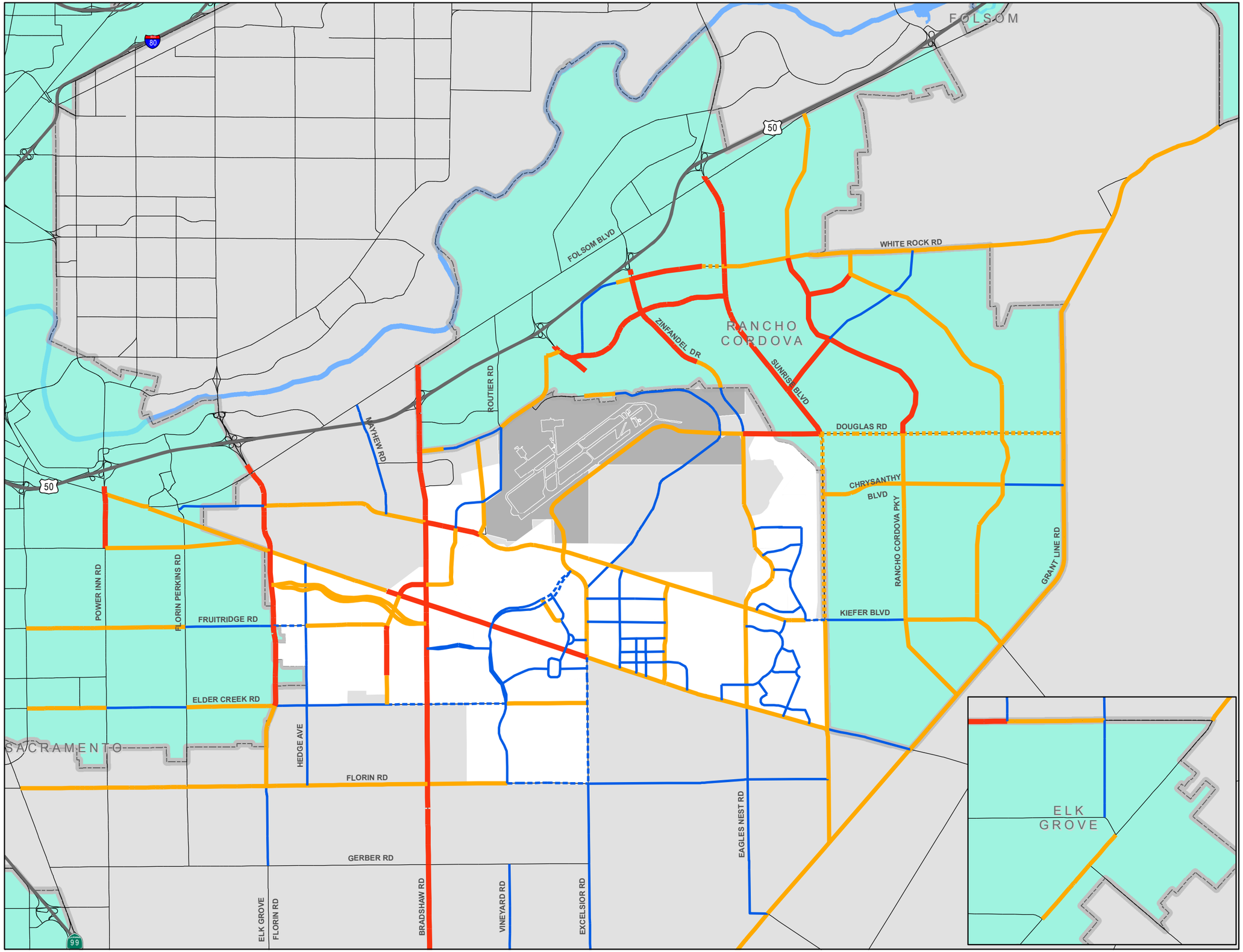


FIGURE 5.1
MTP CUMULATIVE NO PROJECT ROADWAY NETWORK

Legend

- 2 Lanes
- 3 Lanes
- 4 Lanes
- 5 Lanes
- 6 Lanes
- 7 Lanes
- Cities
- Mather Airport

FIGURE 5.2
MTP CUM PLUS FOUR PROJECTS
ROADWAY NETWORK



Legend

- 2 Lanes
- 3 Lanes
- 4 Lanes
- 5 Lanes
- 6 Lanes
- 7 Lanes
- Cities
- Mather Airport

DKS

5.2 TRIP GENERATION

The SACSIM model that has been utilized for the transportation forecasts in this analysis estimated trip generation of the FOUR PROJECTS. **Table 5.2** summarizes the person trip generation. The FOUR PROJECTS would generate over 84,500 daily work person trip ends, and over 688,000 daily person trip ends for all trip purposes.

Table 5.3 summarizes the estimated mode choice for the MTP plus FOUR PROJECTS scenario. Over 90 percent of all person trips are expected to be accommodated by automobile. Transit will serve about 2.2 percent of all trips, while walk and bike modes will accommodate about 7.3 percent of all trips. The mode choice assumes full implementation of the project's pedestrian and bicycle systems.

Table 5.4 summarizes the vehicular (auto) trip generation of the FOUR PROJECTS. The FOUR PROJECTS are estimated to generate over 464,500 daily vehicle trip ends. Over 96,000 of the daily vehicle trip ends will be associated with trips with both an origin and destination within the individual projects, representing over 20.5 percent of the trip ends. The internal trip ends represent over 48,000 daily vehicle trips (one-half the number of internal trip ends). The FOUR PROJECTS will generate over 363,500 external vehicle trips that have an origin or destination inside one of the FOUR PROJECTS but the other end of the trip is outside the project from which it originated. **Table 5.4** also shows the vehicle trips generated during the a.m. and p.m. peak hours.

Table 5.2: Estimated Daily Person Trip Generation (MTP Cumulative)

FOUR PROJECTS

Trip Purpose	Daily Person Trip Ends
Work Trips	84,574
Non-Work Trips	603,767
All Trip Purposes	688,341

Source: *DKS Associates, 2018.*

Table 5.3: Mode Split (MTP Cumulative)

FOUR PROJECTS

Mode	Percentage of Person Trips by Trip Purpose		
	Work Trips	Non-Work Trips	All Trip Purposes
Auto - SOV	82.8%	47.4%	51.7%
Auto - HOV	11.1%	42.7%	38.8%
Transit	4.8%	1.8%	2.2%
Walk	0.7%	7.2%	6.4%
Bike	0.6%	0.9%	0.9%

Source: *DKS Associates, 2018.*

Table 5.4: Estimated Daily Vehicle Trip Generation (MTP Cumulative)

FOUR PROJECTS

Trip Type		AM Peak Hour	PM Peak Hour	Daily
Total Vehicle Trip Ends		39,936	43,134	464,853
Percent Internal Trip Ends[1]		16.7%	21.4%	20.7%
Vehicle Trips	Internal to Projects	3,341	4,608	48,083
	External to Projects	33,254	33,917	368,687
	Total	36,595	38,525	416,770

[1.] Both trip ends within individual projects.

Source: *DKS Associates, 2018.*

5.3 OPERATIONS ANALYSIS

This analysis compares the traffic operating conditions associated with the FOUR PROJECTS with the traffic operating conditions associated with the MTP Cumulative (without FOUR PROJECTS) conditions. While the MTP Cumulative scenario is not used for purposes of impact determination, this analysis notes where thresholds of significance are exceeded.

5.3.1 MTP Cumulative Plus FOUR PROJECTS Roadway Segments

Table 5.5 summarizes the results of the operations analysis for the study area roadway segments. The table includes the number of lanes assumed with the implementation of the FOUR PROJECTS. The shaded table cells under the "Travel Lanes" and "Facility Type" headings illustrate new roadways or widened roadways. The last column of the table shows the project(s) responsible for the increase in the number of roadway lanes. The shaded table cells under the "Level of Service" heading indicate those locations with an LOS that has exceeded the threshold of significance.

Table 5.5
MTP Cumulative Roadway Segment Levels of Service

ID	Roadway	Segment		MTP Cumulative No Project					MTP Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
1	Bradshaw Rd	Folsom Blvd	US 50	6	Arterial M	25,820	0.48	A	6	Arterial M	23,520	0.44	A	
2	Bradshaw Rd	US 50	Lincoln Village Dr	6	Arterial M	63,890	1.18	**F**	6	Arterial M	81,320	1.51	**F**	
3	Bradshaw Rd	Lincoln Village Dr	Old Placerville Rd	6	Arterial M	49,520	0.92	**E**	6	Arterial M	73,450	1.36	**F**	
4	Bradshaw Rd	Old Placerville Rd	Goethe Rd	6	Arterial M	57,310	1.06	**F**	6	Arterial M	69,670	1.29	**F**	
5.1	Bradshaw Rd	Goethe Rd	Collector WJ-8	6	Arterial M	41,070	0.76	C	6	Arterial M	57,850	1.07	**F**	
5.2	Bradshaw Rd	Collector WJ-8	Kiefer Blvd	6	Arterial M	39,290	0.73	C	6	Arterial M	53,030	0.98	E	
6.1	Bradshaw Rd	Kiefer Blvd	Collector WJ-9	6	Arterial M	44,340	0.82	D	6	Arterial M	51,160	0.95	E	
6.2	Bradshaw Rd	Collector WJ-9	Mayhew Rd	6	Arterial M	45,100	0.84	D	6	Arterial M	49,820	0.92	E	
6.3	Bradshaw Rd	Mayhew Rd	Jackson Rd	6	Arterial M	45,040	0.83	D	6	Arterial M	54,530	1.01	**F**	
7.1	Bradshaw Rd	Jackson Rd	Rock Creek Pkwy	6	Arterial M	38,180	0.71	C	6	Arterial M	44,110	0.82	D	
7.2	Bradshaw Rd	Rock Creek Pkwy	Collector WJ-10	6	Arterial M	38,210	0.71	C	6	Arterial M	46,280	0.86	D	
7.3	Bradshaw Rd	Collector WJ-10	Collector WJ-11	6	Arterial M	38,380	0.71	C	6	Arterial M	39,710	0.74	C	
7.4	Bradshaw Rd	Collector WJ-11	Elder Creek Rd	6	Arterial M	38,180	0.71	C	6	Arterial M	34,100	0.63	B	
8	Bradshaw Rd	Elder Creek Rd	Florin Rd	6	Arterial M	38,550	0.71	C	6	Arterial M	43,150	0.80	C	
9	Bradshaw Rd	Florin Rd	Gerber Rd	6	Arterial M	36,170	0.67	B	6	Arterial M	43,350	0.80	D	
10	Bradshaw Rd	Gerber Rd	Calvine Rd	6	Arterial M	27,310	0.51	A	6	Arterial M	32,350	0.60	A	
11	Calvine Rd	Waterman Rd	Bradshaw Rd	6	Arterial M	14,350	0.27	A	6	Arterial M	14,120	0.26	A	
12	Calvine Rd	Bradshaw Rd	Vineyard Rd	6	Arterial M	11,570	0.21	A	6	Arterial M	11,570	0.21	A	
13	Calvine Rd	Vineyard Rd	Excelsior Rd	4	Arterial M	5,470	0.15	A	4	Arterial M	5,500	0.15	A	
14	Chrysanthy Blvd	Sunrise Blvd	Rancho Cordova Pkwy	4	Arterial M	6,190	0.17	A	4	Arterial M	9,680	0.27	A	
15	Douglas Rd	Mather Blvd	Zinfandel Dr	4	Arterial M	16,800	0.47	A	4	Arterial M	26,770	0.74	C	
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd	6	Arterial M	28,850	0.53	A	6	Arterial M	40,360	0.75	C	
17	Douglas Rd	Sunrise Blvd	Rancho Cordova Pkwy	5	Arterial M	35,190	0.98	**E**	5	Arterial M	29,070	0.81	D	
18.1	Douglas Rd	Rancho Cordova Pkwy	Americanos Blvd	5	Arterial M	30,030	0.83	D	5	Arterial M	23,400	0.65	B	
18.2	Douglas Rd	Americanos Blvd	Grant Line Rd	5	Arterial M	7,100	0.20	A	5	Arterial M	7,400	0.21	A	
19.1	Eagles Nest Rd	Kiefer Blvd	N Bridgewater Dr	2	Arterial M	6,090	0.34	A	4	Arterial M	10,950	0.30	A	NewBridge
19.2	Eagles Nest Rd	N Bridgewater Dr	S Bridgewater Dr	2	Arterial M	6,090	0.34	A	4	Arterial M	11,190	0.31	A	NewBridge
19.3	Eagles Nest Rd	S Bridgewater Dr	Jackson Rd	2	Arterial M	6,220	0.35	A	4	Arterial M	11,050	0.31	A	NewBridge
20	Eagles Nest Rd	Jackson Rd	Florin Rd	2	Arterial M	4540	0.25	A	2	Arterial M	7810	0.43	A	
21	Eagles Nest Rd	Florin Rd	Grant Line Rd	2	Arterial M	4020	0.22	A	2	Arterial M	4730	0.26	A	
22	Elder Creek Rd	65th St	Power Inn Rd	4	Arterial M	21,860	0.61	B	4	Arterial M	26,920	0.75	C	
23	Elder Creek Rd	Power Inn Rd	Florin-Perkins Rd	2	Arterial M	22,160	1.23	**F**	2	Arterial M	27,090	1.51	**F**	
24	Elder Creek Rd	Florin Perkins Rd	South Watt Ave	4	Arterial M	20,990	0.58	A	4	Arterial M	26,210	0.73	C	
25	Elder Creek Rd	South Watt Ave	Hedge Ave	2	Arterial M	17,360	0.96	E	2	Arterial M	40,370	2.24	**F**	

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 5.5
MTP Cumulative Roadway Segment Levels of Service

ID	Roadway	Segment		MTP Cumulative No Project					MTP Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
26	Elder Creek Rd	Hedge Ave	Mayhew Rd	2	Arterial M	20,040	1.11	**F**	2	Arterial M	41,550	2.31	**F**	
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd	2	Arterial M	3,460	0.19	A	3	Arterial M	18,490	1.03	**F**	West Jackson
28.1	Elder Creek Rd	Bradshaw Rd	Vineyard Rd	2	Arterial M	4,580	0.25	A	3	Arterial M	25,250	1.40	**F**	West Jackson
28.2	Elder Creek Rd	Vineyard Rd	Excelsior Rd	2	Arterial M	4,450	0.25	A	4	Arterial M	20,780	0.58	A	West Jackson
29	Elk Grove-Florin Rd	Florin Rd	Gerber Rd	2	Arterial M	27,430	1.52	**F**	2	Arterial M	26,590	1.48	**F**	
30.1	Excelsior Rd	Kiefer Blvd	Douglas Rd	2	Arterial M	4,420	0.25	A	2	Arterial M	5,210	0.29	A	
30.2	Excelsior Rd	Douglas Rd	Collector WJ-1/ Collector JT-1	4	Arterial M	6,380	0.18	A	4	Arterial M	25,650	0.71	C	
30.3	Excelsior Rd	Collector WJ-1/ Collector JT-1	Collector WJ-2/ Collector JT-2	4	Arterial M	6,830	0.19	A	4	Arterial M	22,760	0.63	B	
30.4	Excelsior Rd	Collector WJ-2/ Collector JT-2	Jackson Rd	4	Arterial M	6,830	0.19	A	4	Arterial M	21,410	0.59	A	
31.1	Excelsior Rd	Jackson Rd	Collector WJ-6	2	Arterial M	8,280	0.46	A	3	Arterial M	30,840	1.71	**F**	West Jackson
31.2	Excelsior Rd	Collector WJ-6	Elder Creek Rd	2	Arterial M	8,280	0.46	A	3	Arterial M	30,360	1.69	**F**	West Jackson
32	Excelsior Rd	Elder Creek Rd	Florin Rd	2	Arterial M	4,780	0.27	A	3	Arterial M	12,360	0.69	B	West Jackson
33	Excelsior Rd	Florin Rd	Gerber Rd	2	Arterial M	6,760	0.38	A	2	Arterial M	12,480	0.69	B	
34	Excelsior Rd	Gerber Rd	Calvine Rd	2	Arterial M	3,920	0.22	A	2	Arterial M	7,870	0.44	A	
35	Excelsior Rd	Calvine Rd	Sheldon Rd	2	Arterial M	4,720	0.26	A	2	Arterial M	8,270	0.46	A	
36	Florin Rd	Stockton Blvd	Power Inn Rd	4	Arterial M	33,820	0.94	E	4	Arterial M	37,580	1.04	**F**	
37	Florin Rd	Power Inn Rd	Florin-Perkins Rd	4	Arterial M	32,940	0.92	E	4	Arterial M	38,320	1.06	**F**	
38	Florin Rd	Florin-Perkins Rd	So Watt Ave/ Elk Grove Florin Rd	4	Arterial M	16,770	0.47	A	4	Arterial M	21,460	0.60	A	
39	Florin Rd	South Watt Ave	Hedge Ave	4	Arterial M	9,690	0.27	A	4	Arterial M	7,750	0.22	A	
40	Florin Rd	Hedge Ave	Mayhew Rd	4	Arterial M	11,120	0.31	A	4	Arterial M	7,540	0.21	A	
41	Florin Rd	Mayhew Rd	Bradshaw Rd	4	Arterial M	21,320	0.59	A	4	Arterial M	27,800	0.77	C	
42.1	Florin Rd	Bradshaw Rd	Vineyard Rd	4	Arterial M	4,900	0.14	A	4	Arterial M	13,870	0.39	A	
42.2	Florin Rd	Vineyard Rd	Excelsior Rd	2	Arterial M	4,940	0.27	A	3	Arterial M	11,050	0.61	B	West Jackson
43	Florin Rd	Excelsior Rd	Sunrise Blvd	2	Arterial M	6,840	0.38	A	2	Arterial M	10,280	0.57	A	
44	Folsom Blvd	Howe Ave	Jackson Rd	4	Arterial M	47,700	1.33	**F**	4	Arterial M	54,410	1.51	**F**	
45	Fruitridge Rd	65th St	Power Inn Rd	4	Arterial M	21,560	0.60	A	4	Arterial M	25,610	0.71	C	
46	Fruitridge Rd	Power Inn Rd	Florin Perkins Rd	4	Arterial M	18,680	0.52	A	4	Arterial M	27,950	0.78	C	

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 5.5
MTP Cumulative Roadway Segment Levels of Service

ID	Roadway	Segment		MTP Cumulative No Project					MTP Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
47	Fruitridge Rd	Florin Perkins Rd	South Watt Ave	2	Arterial M	12,750	0.71	C	2	Arterial M	24,750	1.38	**F**	
48	Fruitridge Rd	South Watt Ave	Hedge Ave	2	Arterial M	5,140	0.29	A	3	Arterial M	18,250	1.01	**F**	West Jackson
49.1	Fruitridge Rd	Hedge Ave	Collector WJ-12	2	Arterial M	1,230	0.07	A	4	Arterial M	19,210	0.53	A	West Jackson
49.2	Fruitridge Rd	Collector WJ-12	Mayhew Rd	2	Arterial M	1,200	0.07	A	4	Arterial M	16,840	0.47	A	West Jackson
50	Grant Line Rd	White Rock Rd	Douglas Rd	4	Arterial H	17,660	0.44	A	4	Arterial H	20,260	0.51	A	
51.1	Grant Line Rd	Douglas Rd	Chrysanthy Blvd	4	Arterial M	10,670	0.30	A	4	Arterial M	15,950	0.44	A	
51.2	Grant Line Rd	Chrysanthy Blvd	Kiefer Blvd	4	Arterial M	10,610	0.29	A	4	Arterial M	15,630	0.43	A	
52.1	Grant Line Rd	Kiefer Blvd	Rancho Cordova Pkwy	4	Arterial M	11,540	0.32	A	4	Arterial M	14,910	0.41	A	
52.2	Grant Line Rd	Rancho Cordova Pkwy	Jackson Rd	4	Arterial M	15,280	0.42	A	4	Arterial M	16,510	0.46	A	
53	Grant Line Rd	Jackson Rd	Sunrise Blvd	4	Arterial H	19,260	0.48	A	4	Arterial H	18,970	0.47	A	
54	Grant Line Rd	Sunrise Blvd	Calvine Rd	4	Arterial H	29,550	0.74	C	4	Arterial H	30,590	0.76	C	
55.1	Grant Line Rd	Calvine Rd	Elk Grove City Limit	4	Arterial M	27,060	0.75	C	4	Arterial M	27,900	0.78	C	
55.2	Grant Line Rd	Elk Grove City Limit	Sheldon Rd	4	Arterial M	27,110	0.75	C	4	Arterial M	28,020	0.78	C	
56	Grant Line Rd	Sheldon Rd	Wilton Rd	4	Arterial M	32,400	0.90	**E**	4	Arterial M	37,210	1.03	**F**	
57	Grant Line Rd	Wilton Rd	Bond Rd	4	Arterial M	27,860	0.77	C	4	Arterial M	32,640	0.91	**E**	
58.1	Happy Lane	Old Placerville Road	Routier Ext	2	Arterial M	3,890	0.22	A	2	Arterial M	15,650	0.87	D	West Jackson
58.2	Happy Lane	Routier Ext	Kiefer Boulevard	2	Arterial M	4,930	0.27	A	2	Arterial M	21,060	1.17	**F**	West Jackson
59.1	Hedge Ave	Jackson Rd	Rock Creek Pkwy	2	Arterial M	2,100	0.12	A	2	Arterial M	8,450	0.47	A	
59.2	Hedge Ave	Rock Creek Pkwy	Fruitridge Rd	2	Arterial M	2,210	0.12	A	2	Arterial M	3,090	0.17	A	
60	Hedge Ave	Fruitridge Rd	Elder Creek Rd	2	Arterial M	3,400	0.19	A	2	Arterial M	2,980	0.17	A	
61	Hedge Ave	Elder Creek Rd	Florin Rd	2	Arterial M	4,060	0.23	A	2	Arterial M	2,350	0.13	A	
62	Howe Ave	US 50	Folsom Blvd	6	Arterial M	65,240	1.21	**F**	6	Arterial M	70,390	1.30	**F**	
63	International Dr	Mather Field Rd	Zinfandel Dr	6	Arterial M	40,150	0.74	C	6	Arterial M	39,820	0.74	C	
64	International Dr	Zinfandel Dr	Sunrise Blvd	6	Arterial M	18,880	0.35	A	6	Arterial M	25,300	0.47	A	
65	Jackson Rd	Folsom Blvd	Florin Perkins Rd	4	Arterial M	27,560	0.77	C	4	Arterial M	35,200	0.98	E	
66.1	Jackson Rd	Florin Perkins Rd	14th Ave	4	Arterial M	23,560	0.65	B	4	Arterial M	40,500	1.13	**F**	
66.2	Jackson Rd	14th Ave	Rock Creek Pkwy	4	Arterial M	30,220	0.84	D	4	Arterial M	55,280	1.54	**F**	
66.3	Jackson Rd	Rock Creek Pkwy	Aspen 1 Dwy	4	Arterial M	23,660	0.66	B	4	Arterial M	56,280	1.56	**F**	

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 5.5
MTP Cumulative Roadway Segment Levels of Service

ID	Roadway	Segment		MTP Cumulative No Project					MTP Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
66.4	Jackson Rd	Aspen 1 Dwy	South Watt Ave	4	Arterial M	23,660	0.66	B	4	Arterial M	56,280	1.56	**F**	
67	Jackson Rd	South Watt Ave	Hedge Ave	2	Arterial M	20,730	1.15	**F**	4	Arterial M	62,720	1.74	**F**	West Jackson
68.1	Jackson Rd	Hedge Ave	Collector WJ-3	2	Arterial M	17,260	0.96	E	4	Arterial M	55,150	1.53	**F**	West Jackson
68.2	Jackson Rd	Collector WJ-3	Mayhew Rd	2	Arterial M	17,220	0.96	E	4	Arterial M	56,230	1.56	**F**	West Jackson
69	Jackson Rd	Mayhew Rd	Bradshaw Rd	2	Arterial M	19,150	1.06	**F**	6	Arterial M	51,740	0.96	E	West Jackson
70.1	Jackson Rd	Bradshaw Rd	Collector WJ-4	2	Rural Hwy	16,970	0.74	E	6	Arterial M	55,490	1.03	**F**	West Jackson
70.2	Jackson Rd	Collector WJ-4	Rock Creek Pkwy	2	Rural Hwy	17,050	0.74	E	6	Arterial M	54,270	1.01	**F**	West Jackson
70.3	Jackson Rd	Rock Creek Pkwy	Commercial Access	2	Rural Hwy	16,900	0.74	E	6	Arterial M	34,360	0.64	B	West Jackson
70.4	Jackson Rd	Commercial Access	Collector WJ-5	2	Rural Hwy	16,900	0.74	E	6	Arterial M	33,710	0.62	B	West Jackson
70.5	Jackson Rd	Collector WJ-5	Collector WJ-6	2	Rural Hwy	16,910	0.74	E	6	Arterial M	31,930	0.59	A	West Jackson
70.6	Jackson Rd	Collector WJ-6	Excelsior Rd	2	Rural Hwy	16,910	0.74	E	6	Arterial M	32,280	0.60	A	West Jackson
71.1	Jackson Rd	Excelsior Rd	Collector JT-3	2	Rural Hwy	13,810	0.60	E	4	Arterial M	48,840	1.36	**F**	Jackson Township
71.2	Jackson Rd	Collector JT-3	Tree View Ln	2	Rural Hwy	13,810	0.60	E	4	Arterial M	33,840	0.94	E	Jackson Township
71.3	Jackson Rd	Tree View Ln	Collector JT-4	2	Rural Hwy	13,790	0.60	E	4	Arterial M	27,320	0.76	C	Jackson Township
71.4	Jackson Rd	Collector JT-4	Eagles Nest Rd	2	Rural Hwy	13,820	0.60	E	4	Arterial M	23,920	0.66	B	Jackson Township
72.1	Jackson Rd	Eagles Nest Rd	Rockbridge Dr	2	Rural Hwy	14,460	0.63	E	4	Arterial M	22,840	0.63	B	NewBridge
72.2	Jackson Rd	Rockbridge Dr	Sunrise Blvd	2	Rural Hwy	14,940	0.65	E	4	Arterial M	22,150	0.62		NewBridge
73	Jackson Rd	Sunrise Blvd	Grant Line Rd	2	Rural Hwy	17,950	0.78	**E**	2	Rural Hwy	20,810	0.91	**E**	
74	Kiefer Blvd	Florin Perkins Rd	South Watt Ave	2	Arterial M	2,860	0.16	A	2	Arterial M	4,190	0.23	A	
75	Kiefer Blvd	South Watt Ave	Mayhew Rd	4	Arterial M	24,250	0.67	B	4	Arterial M	30,240	0.84	D	
76	Kiefer Blvd	Mayhew Rd	Bradshaw Rd	4	Arterial M	13,590	0.38	A	4	Arterial M	38,980	1.08	**F**	
77.1	Kiefer Boulevard	Bradshaw Road	Collector WJ-14	2	Arterial M	5,900	0.33	A	6	Arterial M	43,390	0.80	D	West Jackson
77.2	Kiefer Boulevard	Collector WJ-14	Routier Ext	2	Arterial M	6,060	0.34	A	6	Arterial M	39,400	0.73	C	West Jackson
77.3	Kiefer Boulevard	Routier Ext	Happy Lane	2	Arterial M	6,060	0.34	A	6	Arterial M	39,400	0.73	C	West Jackson
78.1	Kiefer Blvd	Eagles Nest Rd	W Collector MS-1	2	Arterial M	3420	0.19	A	4	Arterial M	20,980	0.58	A	NewBridge; Mather South
78.2	Kiefer Blvd	W Collector MS-1	Northbridge Dr	2	Arterial M	3420	0.19	A	4	Arterial M	18,390	0.51	A	NewBridge; Mather South
78.3	Kiefer Blvd	Northbridge Dr	E Collector MS-1	2	Arterial M	3420	0.19	A	4	Arterial M	19,480	0.54	A	NewBridge; Mather South
78.4	Kiefer Blvd	E Collector MS-1	Sunrise Blvd	2	Arterial M	3350	0.19	A	3	Arterial M	24,640	1.37	**F**	NewBridge
79	Kiefer Blvd	Sunrise Blvd	Rancho Cordova Pkwy	2	Arterial M	7,140	0.40	A	2	Arterial M	13,850	0.77	C	
80	Mather Blvd / Norden Ave	Von Karman St	Bleckely St	4	Arterial M	12,240	0.34	A	4	Arterial M	12,910	0.36	A	
81	Mather Blvd	Bleckely St	Femoyer St	4	Arterial M	12,240	0.34	A	4	Arterial M	12,910	0.36	A	

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Table 5.5
MTP Cumulative Roadway Segment Levels of Service

ID	Roadway	Segment		MTP Cumulative No Project					MTP Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
82	Mather Blvd	Femoyer St	Douglas Rd	2	Arterial M	12,280	0.68	B	2	Arterial M	12,940	0.72	C	
83	Mather Blvd-Excelsior Rd	Douglas Rd	Kiefer Blvd	2	Res Collector F	6,290	0.79	D	2	Res Collector F	6,290	0.79	D	
84	Mather Field Rd	US 50	Rockingham Dr	6	Arterial M	60,650	1.12	**F**	6	Arterial M	60,700	1.12	**F**	
85	Mather Field Rd	Rockingham Dr	International Dr	6	Arterial M	66,090	1.22	**F**	6	Arterial M	68,600	1.27	**F**	
86	Mather Field Rd	International Dr	Peter A McCuen Blvd	6	Arterial M	18,050	0.33	A	6	Arterial M	19,120	0.35	A	
87	Mayhew Rd	Folsom Blvd	Goethe Rd	2	Arterial M	6,240	0.35	A	2	Arterial M	13,020	0.72	C	
88	Mayhew Rd	Goethe Rd	Kiefer Blvd	2	Arterial M	10,000	0.56	A	2	Arterial M	12,830	0.71	C	
89.1	Mayhew Rd	Jackson Rd	Rock Creek Pkwy						4	Arterial M	39,500	1.10	**F**	West Jackson
89.2	Mayhew Rd	Rock Creek Pkwy	Fruitridge Rd						4	Arterial M	36,780	1.02	**F**	West Jackson
90	Old Placerville Rd	Bradshaw Rd	Granby Dr	4	Arterial M	28,420	0.79	C	4	Arterial M	22,730	0.63	B	
91	Old Placerville Rd	Granby Dr	Happy Ln	2	Arterial M	24,920	1.38	**F**	2	Arterial M	20,000	1.11	**F**	
92	Old Placerville Rd	Happy Ln	Routier Rd	2	Arterial M	21,080	1.17	**F**	2	Arterial M	18,780	1.04	**F**	
93	Old Placerville Rd	Routier Rd	Rockingham Dr	4	Arterial M	22,110	0.61	B	4	Arterial M	34,480	0.96	**E**	
94	Power Inn Rd	Folsom Blvd	14th Ave	6	Arterial M	41,910	0.78	C	6	Arterial M	45,960	0.85	D	
95	Rockingham Dr	Old Placerville Rd	Mather Field Rd	4	Arterial M	28,120	0.78	C	4	Arterial M	37,930	1.05	**F**	
96	South Watt Ave	Folsom Blvd	Kiefer Blvd	6	Arterial M	62,480	1.16	**F**	6	Arterial M	79,530	1.47	**F**	
97	South Watt Ave	Kiefer Blvd	Jackson Rd	6	Arterial M	61,930	1.15	**F**	6	Arterial M	71,890	1.33	**F**	
98.1	South Watt Ave	Jackson Rd	Rock Creek Pkwy	6	Arterial M	59,430	1.10	**F**	6	Arterial M	47,920	0.89	D	
98.2	South Watt Ave	Rock Creek Pkwy	Fruitridge Rd	6	Arterial M	58,210	1.08	**F**	6	Arterial M	50,380	0.93	**E**	
99	South Watt Ave	Fruitridge Rd	Elder Creek Rd	6	Arterial M	52,470	0.97	**E**	6	Arterial M	47,790	0.89	D	
100	South Watt Ave	Elder Creek Rd	Florin Rd	4	Arterial M	34,420	0.96	**E**	4	Arterial M	36,240	1.01	**F**	
101	Sunrise Blvd	US 50	Folsom Blvd	7	Arterial M	58,140	1.08	**F**	7	Arterial M	56,480	1.05	**F**	
102	Sunrise Blvd	Folsom Blvd	Trade Center Dr	6	Arterial M	54,340	1.01	**F**	6	Arterial M	53,000	0.98	**E**	
103	Sunrise Blvd	Trade Center Dr	White Rock Rd	6	Arterial M	31,660	0.59	A	6	Arterial M	34,240	0.63	B	
104.1	Sunrise Blvd	White Rock Rd	International Dr	6	Arterial M	37,910	0.70	C	6	Arterial M	41,100	0.76	C	
104.2	Sunrise Blvd	International Dr	Rio Del Oro Pkwy	6	Arterial M	43,690	0.81	D	6	Arterial M	52,620	0.97	**E**	
104.3	Sunrise Blvd	Rio Del Oro Pkwy	Douglas Rd	6	Arterial M	35,010	0.65	B	6	Arterial M	50,780	0.94	**E**	
105	Sunrise Blvd	Douglas Rd	Kiefer Blvd	5	Arterial M	21,430	0.60	A	5	Arterial M	37,070	1.03	**F**	
106	Sunrise Blvd	Kiefer Blvd	Jackson Rd	4	Arterial M	25,040	0.70	B	4	Arterial M	30,550	0.85	D	
107	Sunrise Blvd	Jackson Rd	Florin Rd	4	Arterial M	20,680	0.57	A	4	Arterial M	22,430	0.62	B	
108	Sunrise Blvd	Florin Rd	Grant Line Rd	4	Arterial M	14,480	0.40	A	4	Arterial M	15,560	0.43	A	
109	Vineyard Rd	Gerber Rd	Calvine Rd	2	Arterial M	9,080	0.50	A	2	Arterial M	9,210	0.51	A	

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Table 5.5
MTP Cumulative Roadway Segment Levels of Service

ID	Roadway	Segment		MTP Cumulative No Project					MTP Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
110	Watt Ave	US 50	Folsom Blvd	6	Arterial H	93,840	1.56	**F**	6	Arterial H	104,320	1.74	**F**	
111	White Rock Rd	International Rd	Quality Dr	2	Arterial M	4,670	0.26	A	2	Arterial M	4,690	0.26	A	
112	White Rock Rd	Quality Dr	Zinfandel Dr	4	Arterial M	19,310	0.54	A	4	Arterial M	17,450	0.48	A	
113	White Rock Rd	Zinfandel Dr	Kilgore Rd	6	Arterial M	29,180	0.54	A	6	Arterial M	27,210	0.50	A	
114	White Rock Rd	Kilgore Rd	Sunrise Blvd	5	Arterial M	33,540	0.93	**E**	5	Arterial M	30,970	0.86	D	
115	White Rock Rd	Sunrise Blvd	Fitzgerald Rd	4	Arterial M	33,750	0.94	**E**	4	Arterial M	31,660	0.88	D	
116.1	White Rock Rd	Fitzgerald Rd	Rancho Cordova Pkwy	4	Arterial M	45,470	1.26	**F**	4	Arterial M	39,330	1.09	**F**	
116.2	White Rock Rd	Rancho Cordova Pkwy	Americanos Blvd	4	Arterial M	10,970	0.30	A	4	Arterial M	6,160	0.17	A	
116.3	White Rock Rd	Americanos Blvd	Grant Line Rd	4	Arterial M	8,250	0.23	A	4	Arterial M	8,990	0.25	A	
117	White Rock Rd	Grant Line Rd	Prairie City Rd	4	Arterial H	26,710	0.67	B	4	Arterial H	30,060	0.75	C	
118	Zinfandel Dr	US 50	White Rock Rd	7	Arterial M	77,540	1.44	**F**	7	Arterial M	77,630	1.44	**F**	
119	Zinfandel Dr	White Rock Rd	International Rd	6	Arterial M	33,300	0.62	B	6	Arterial M	39,280	0.73	C	
120	Zinfandel Dr	International Rd	Baroque Dr	6	Arterial M	26,950	0.50	A	6	Arterial M	31,440	0.58	A	
121	Zinfandel Dr	Baroque Dr	City Limit	4	Arterial M	26,950	0.75	C	4	Arterial M	31,440	0.87	D	
122	Zinfandel Dr	City Limit	Douglas Rd	2	Arterial M	26,950	1.50	**F**	2	Arterial M	31,440	1.75	**F**	
123.1	Zinfandel Dr	Douglas Rd	Collector MS-2	4	Arterial M	10,000	0.28	A	4	Arterial M	22,420	0.62	B	
123.2	Zinfandel Dr	Collector MS-2	Collector MS-3	4	Arterial M	8,420	0.23	A	4	Arterial M	17,460	0.49	A	
123.3	Zinfandel Dr	Collector MS-3	Collector MS-4	4	Arterial M	0	0.00	A	4	Arterial M	17,200	0.48	A	
123.4	Zinfandel Dr	Collector MS-4	Kiefer Blvd	4	Arterial M	8,420	0.23	A	4	Arterial M	16,940	0.47	A	
124	14th Ave	Power Inn Rd	Florin Perkins Rd	4	Arterial M	13,060	0.36	A	4	Arterial M	25,160	0.70	B	
125	14th Ave	Florin Perkins Rd	Jackson Rd	4	Arterial M	7,070	0.20	A	4	Arterial M	14,860	0.41	A	
126	Chrysanthy Blvd	Rancho Cordova Pkwy	Americanos Blvd	4	Arterial M	8,010	0.22	A	4	Arterial M	16,980	0.47	A	
127	Chrysanthy Blvd	Americanos Blvd	Grant Line Rd	2	Arterial M	2,200	0.12	A	2	Arterial M	4,650	0.26	A	
128	Douglas Rd (Extension)	Mather Blvd	Kiefer Blvd	4	Arterial M	2,210	0.06	A	4	Arterial M	16,100	0.45	A	
130	International Dr	Rancho Cordova Pkwy	Americanos Blvd	6	Arterial M	2,340	0.04	A	6	Arterial M	1,620	0.03	A	
131	Kiefer Blvd	Rancho Cordova Pkwy	Americanos Blvd	4	Arterial M	520	0.01	A	4	Arterial M	2,330	0.06	A	
132	Kiefer Blvd	Americanos Blvd	Grant Line Rd	4	Arterial M	520	0.01	A	4	Arterial M	2,340	0.07	A	
133	Rancho Cordova Pkwy	US 50	Easton Valley Pkwy	4	Arterial M	34,920	0.97	E	4	Arterial M	36,140	1.00	**F**	
134	Rancho Cordova Pkwy	Easton Valley Pkwy	White Rock Rd	4	Arterial M	35,100	0.98	E	4	Arterial M	36,410	1.01	**F**	
135	Rancho Cordova Pkwy	White Rock Rd	International Dr	6	Arterial M	43,480	0.81	D	6	Arterial M	39,260	0.73	C	
136	Rancho Cordova Pkwy	International Dr	Rio Del Oro Pkwy	6	Arterial M	41,770	0.77	C	6	Arterial M	38,350	0.71	C	
137	Rancho Cordova Pkwy	Rio Del Oro Pkwy	Villagio Dr	6	Arterial M	27,820	0.52	A	6	Arterial M	22,260	0.41	A	
138	Rancho Cordova Pkwy	Villagio Dr	Douglas Rd	6	Arterial M	14,600	0.27	A	6	Arterial M	14,130	0.26	A	
139	Rancho Cordova Pkwy	Douglas Rd	Chrysanthy Blvd	4	Arterial M	15,040	0.42	A	4	Arterial M	17,790	0.49	A	

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Table 5.5
MTP Cumulative Roadway Segment Levels of Service

ID	Roadway	Segment		MTP Cumulative No Project					MTP Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
140	Rancho Cordova Pkwy	Chrysanthy Blvd	Kiefer Blvd	4	Arterial M	7,500	0.21	A	4	Arterial M	5,340	0.15	A	
141	Rancho Cordova Pkwy	Kiefer Blvd	Grant Line Rd	4	Arterial M	6,190	0.17	A	4	Arterial M	1,690	0.05	A	
142	Americanos Blvd	White Rock Rd	Douglas Rd	4	Arterial M	2,670	0.07	A	4	Arterial M	2,780	0.08	A	
143	Americanos Blvd	Douglas Rd	Chrysanthy Blvd	4	Arterial M	7,740	0.22	A	4	Arterial M	6,410	0.18	A	
144	Americanos Blvd	Chrysanthy Blvd	Kiefer Blvd	4	Arterial M	2,000	0.06	A	4	Arterial M	3,250	0.09	A	
146	Rio Del Oro Pkwy	Sunrise Blvd	Rancho Cordova Pkwy	6	Arterial M	19,290	0.36	A	6	Arterial M	37,670	0.70	B	
147	Rio Del Oro Pkwy	Rancho Cordova Pkwy	White Rock Rd	2	Arterial M	2,630	0.15	A	2	Arterial M	2,960	0.16	A	
200	Kiefer Blvd	Tree View Ln	Eagles Nest Rd						4	Arterial M	27,770	0.77	C	West Jackson; Jackson Township; NewBridge; Mather South
300	Douglas Rd	Excelsior Rd	Rock Creek Pkwy	4	Arterial M	2,210	0.06	A	4	Arterial M	25,530	0.71	C	
301	Douglas Rd	Rock Creek Pkwy	Kiefer Blvd	4	Arterial M	2,210	0.06	A	4	Arterial M	31,850	0.88	D	
302	Kiefer Blvd	Happy Ln	Douglas Rd						4	Arterial M	55,000	1.53	**F**	West Jackson
303	Kiefer Blvd	Douglas Rd	Excelsior Rd						4	Arterial M	26,330	0.73	C	West Jackson
304	Mayhew Rd	Routier Ext	Bradshaw Rd						4	Arterial M	34,870	0.97	E	West Jackson
305	Mayhew Rd	Bradshaw Rd	Jackson Rd						6	Arterial M	34,520	0.64	B	West Jackson
306	Mayhew Rd	Fruitridge Rd	Collector WJ-13						6	Arterial M	22,890	0.42	A	West Jackson
307	Mayhew Rd	Collector WJ-13	Elder Creek Rd						4	Arterial M	23,660	0.66	B	West Jackson
308	Rock Creek Pkwy	South Watt Ave	Hedge Ave						4	Arterial M	4,730	0.13	A	West Jackson
309	Rock Creek Pkwy	Hedge Ave	Mayhew Rd						4	Arterial M	8,200	0.23	A	West Jackson
310	Rock Creek Pkwy	Mayhew Rd	Bradshaw Rd						4	Arterial M	3,640	0.10	A	West Jackson
311	Rock Creek Pkwy East	Excelsior Road	Collector WJ-16						3	Arterial M	10,960	0.61	B	West Jackson
312	Rock Creek Pkwy East	Collector WJ-16	Jackson Road						2	Arterial M	#VALUE!	#VALUE!	#VALUE!	West Jackson
313	Vineyard Rd	Jackson Road	New Collector						2	Arterial M	24,890	1.38	**F**	West Jackson
314	Vineyard Rd	New Collector	Collector WJ-18						2	Arterial M	21,750	1.21	**F**	West Jackson
315	Vineyard Rd	Collector WJ-18	Elder Creek Road						2	Arterial M	19,030	1.06	**F**	West Jackson
316	Vineyard Rd	Elder Creek Road	Florin Road						2	Arterial M	8,300	0.46	A	West Jackson
317	Routier Ext	Old Placerville Road	Happy Lane						2	Arterial M	#VALUE!	#VALUE!	#VALUE!	West Jackson
318	Routier Ext	Happy Lane	Kiefer Boulevard						2	Arterial M	#VALUE!	#VALUE!	#VALUE!	West Jackson
319	Routier Ext	Kiefer Boulevard	Mayhew Road						4	Arterial M	#VALUE!	#VALUE!	#VALUE!	West Jackson
320	Collector WJ-16	Rock Creek Pkwy	Collector WJ-6						4	Arterial M	900	0.03	A	West Jackson

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Table 5.5
MTP Cumulative Roadway Segment Levels of Service

ID	Roadway	Segment		MTP Cumulative No Project					MTP Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
321	Collector WJ-17	Rock Creek Pkwy	Collector WJ-6						2	Res Collector F	800	0.10	A	West Jackson
322	Collector WJ-6	Collector WJ-16/WJ-17	Jackson Road						2	Res Collector F	2,390	0.30	B	West Jackson
323	Collector WJ-6	Jackson Road	Collector WJ-18						2	Res Collector F	2,800	0.35	B	West Jackson
324	Collector WJ-2	Excelsior Road	Collector WJ-6						2	Res Collector F	2,470	0.31	B	West Jackson
325	Collector WJ-18	Vineyard Rd	Collector WJ-6						2	Arterial M	2,810	0.16	A	West Jackson
326	Collector WJ-18	Collector WJ-6	Excelsior Road						2	Arterial M	#VALUE!	#VALUE!	#VALUE!	West Jackson
327	Collector WJ-19	Bradshaw Road	Vineyard Road						2	Arterial M	5,540	0.31	A	West Jackson
400	Collector JT-1	Excelsior Rd	Collector JT-3						2	Res Collector F	3,590	0.45	C	Jackson Township
401	Collector JT-1	Collector JT-3	Tree View Ln						2	Res Collector F	1,030	0.13	A	Jackson Township
402	Collector JT-3	Kiefer Blvd	Collector JT-1						2	Res Collector F	2,020	0.25	B	Jackson Township
403	Collector JT-3	Collector JT-1	Collector JT-6						2	Res Collector F	1,270	0.16	A	Jackson Township
404	Collector JT-3	Collector JT-6	Collector JT-5						2	Res Collector F	2,470	0.31	B	Jackson Township
405	Collector JT-3	Collector JT-5	Jackson Rd						2	Arterial M	17,850	0.99	E	Jackson Township
406	Collector JT-4	Jackson Rd	Bridgewater Dr						2	Arterial M	3,870	0.22	A	Jackson Township
407	Collector JT-5	Collector JT-3	Tree View Ln						2	Arterial M	9,260	0.51	A	Jackson Township
408	Collector JT-6	Excelsior Rd	Collector JT-3						2	Res Collector F	3,630	0.45	C	Jackson Township
409	Collector JT-6	Collector JT-3	Tree View Ln						2	Res Collector F	630	0.08	A	Jackson Township
410	Kiefer Blvd	Excelsior Rd	Tree View Ln						4	Arterial M	22,760	0.63	B	Jackson Township
411	Tree View Ln	Kiefer Blvd	Collector JT-1						4	Arterial M	10,840	0.30	A	Jackson Township
412	Tree View Ln	Collector JT-1	Collector JT-6						2	Arterial M	10,470	0.58	A	Jackson Township

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Table 5.5
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ID	Roadway	Segment		MTP Cumulative No Project					MTP Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
413	Tree View Ln	Collector JT-6	Collector JT-5						4	Arterial M	#VALUE!	#VALUE!	#VALUE!	Jackson Township
414	Tree View Ln	Collector JT-5	Jackson Rd						4	Arterial M	5,840	0.16	A	Jackson Township
415	Collector JT-7	Collector JT-3	Tree View Ln						2	Arterial M	1,520	0.08	A	Jackson Township
416	Collector JT-8	Collector JT-3	Tree View Ln						2	Arterial M	1,930	0.11	A	Jackson Township
417	Collector JT-9	Jackson Rd	Collector JT-8						2	Arterial M	4,290	0.24	A	Jackson Township
418	Collector JT-10	Jackson Rd	Collector JT-8						2	Arterial M	1,610	0.09	A	Jackson Township
419	Collector JT-6	Tree View Ln	Jackson Rd						2	Res Collector F	1,420	0.18	A	Jackson Township
500	S Bridgewater Dr	Collector JT-4	Eagles Nest Rd						2	Res Collector F	4,700	0.59	C	NewBridge
501	S Bridgewater Dr	Eagles Nest Rd	Northbridge Dr						2	Res Collector F	3,880	0.49	C	NewBridge
502	N Bridgewater Dr	Northbridge Dr	Eagles Nest Rd						2	Res Collector F	1,040	0.13	A	NewBridge
503	Northbridge Dr	Kiefer Blvd	Bridgewater Dr						2	Arterial M	3,640	0.20	A	NewBridge
504	Street A	S Bridgewater Dr	Street B						2	Res Collector F	1,630	0.20	B	NewBridge
505	Street B	S Bridgewater Dr	Street A						2	Res Collector F	1,280	0.16	A	NewBridge
506	Rockbridge Dr	Street B	Stonebridge Dr						2	Res Collector F	1,480	0.19	A	NewBridge
507	Rockbridge Dr	Stonebridge Dr	Jackson Rd						2	Arterial M	5,870	0.33	A	NewBridge
508	Stonebridge Dr	S Bridgewater Dr	Rockbridge Dr						2	Arterial M	2,520	0.14	A	NewBridge
509	Stonebridge Dr	Rockbridge Dr	Jackson Rd						2	Res Collector F	3,640	0.46	C	NewBridge
600	Collector MS-1	Kiefer Boulevard	Collector MS-5						2	Arterial M	#VALUE!	#VALUE!	#VALUE!	Mather South
601	Collector MS-1	Collector MS-5	Collector MS-4						2	Arterial M	#REF!	#REF!	#REF!	Mather South
602	Collector MS-1	Collector MS-4	Collector MS-3						2	Res Collector F	#VALUE!	#VALUE!	#VALUE!	Mather South
603	Collector MS-1	Collector MS-3	Collector MS-2						2	Arterial M	#VALUE!	#VALUE!	#VALUE!	Mather South
604	Collector MS-2	Eagles Nest Road	Collector MS-5						2	Arterial M	#VALUE!	#VALUE!	#VALUE!	Mather South
605	Collector MS-3	Eagles Nest Road	Collector MS-5						2	Arterial M	3,640	0.20	A	Mather South
606	Collector MS-4	Eagles Nest Road	Collector MS-5						2	Arterial M	12,790	0.71	C	Mather South
607	Collector MS-5	Kiefer Boulevard	Collector MS-1						2	Arterial M	#VALUE!	#VALUE!	#VALUE!	Mather South
608	Collector MS-3	Collector MS-5	Sunrise Boulevard						2	Arterial M	5,770	0.32	A	Mather South

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 5.5
MTP Cumulative Roadway Segment Levels of Service

ID	Roadway	Segment		MTP Cumulative No Project					MTP Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	

Note: Gray shading indicates changes in travel lanes or facility type that the project is responsible to provide.

[1] The following classifications are used to determine daily roadway capacity:
Arterial L - Arterial, Low Access Control
Arterial M - Arterial, Moderate Access Control
Arterial H - Arterial, High Access Control
Rural Hwy - Rural 2-lane Highway
Rural S - Rural 2-lane Road, 24'-36' of pavement, Paved Shoulders
Rural NS - Rural 2-lane Road, 24'-36' of pavement, No Shoulders
Res Collector F - Residential Collector with Frontage
Res Collector NF - Residential Collector with No Frontage

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

5.3.2 MTP Cumulative Plus FOUR PROJECTS Functionality Exceeding the Threshold

Table 5.6 summarizes the results of the rural roadway segment functionality analysis. The table includes the number of lanes assumed with the implementation of the FOUR PROJECTS, which in many cases is greater than the number of lanes in the existing condition. The shaded table cells under the "Travel Lanes" heading illustrates new roadways and widened roadways that are assumed part of the FOUR PROJECTS. The "Substandard?" heading indicates whether or not a roadway meets the County standards of 12-foot lanes and 6-foot shoulders. If the FOUR PROJECTS make improvements to a roadway segment such as widening, they would be required to reconstruct the entire substandard roadway segment to County standards. The shaded table cells under the "Exceed Functionality Threshold?" heading indicate those locations with a functionality that exceeds the threshold of significance.

As stated above, the traffic analysis assumed that the FOUR PROJECTS would construct a number of travel lanes on roadway segments that are internal to or on the boundary of the FOUR PROJECTS, and the entire roadway segment would be reconstructed to County standards at that time. The timing of implementation of such additional traffic lanes on these internal or boundary roadway segments will affect whether or not volumes would exceed the threshold of significance at some time prior to full build out of the FOUR PROJECTS.

Table 5.6
MTP Cumulative Plus FOUR PROJECTS Roadway Segment Functionality

ID	Roadway	Segment		Jurisdiction	Existing Substandard Roadways				MTP Cumulative + FOUR PROJECTS			
		From	To		Travel Lanes	Pavement (ft)	Substandard? [1]	Existing Volume	Travel Lanes	Substandard? [1]	Forecasted Volume	Exceeed Functionality Threshold? [2]
15	Douglas Rd	Mather Blvd	Zinfandel Dr	County	2	23	Yes	6,635	4	No	26,770	Yes[3]
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd	Rancho Cordova/County	2	23	Yes	8,369	6	No	40,360	Yes[3]
19	Eagles Nest Rd	Kiefer Blvd	Jackson Rd	County	2	20	Yes	740	4	No	11,050	Yes[3]
20	Eagles Nest Rd	Jackson Rd	Florin Rd	County	2	<21	Yes	517	2	Yes	7,810	Yes
21	Eagles Nest Rd	Florin Rd	Grant Line Rd	County	2	<21	Yes	189	2	Yes	4,730	No
25	Elder Creek Rd	South Watt Ave	Hedge Ave	County	2	23	Yes	5,576	2	Yes	40,370	Yes
26	Elder Creek Rd	Hedge Ave	Mayhew Rd	County	2	23	Yes	5,797	2	Yes	41,550	Yes
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd	County	2	23	Yes	5,355	3	No	18,490	Yes[3]
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd	County	2	23	Yes	2,158	3	No	25,250	Yes[3]
30	Excelsior Rd	Kiefer Blvd	Jackson Rd	County	2	22	Yes	3,716	2	Yes	25,650	Yes
31	Excelsior Rd	Jackson Rd	Elder Creek Rd	County	2	<21	Yes	5,075	3	No	30,360	Yes[3]
32	Excelsior Rd	Elder Creek Rd	Florin Rd	County	2	<21	Yes	4,203	3	No	12,360	Yes[3]
33	Excelsior Rd	Florin Rd	Gerber Rd	County	2	<21	Yes	5,423	2	Yes	12,480	Yes
34	Excelsior Rd	Gerber Rd	Calvine Rd	County	2	<21	Yes	4,229	2	Yes	7,870	Yes
39	Florin Rd	South Watt Ave	Hedge Ave	County	2	22	Yes	7,718	4	No	7,750	No
40	Florin Rd	Hedge Ave	Mayhew Rd	County	2	22	Yes	6,312	4	No	7,540	Yes[3]
41	Florin Rd	Mayhew Rd	Bradshaw Rd	County	2	22	Yes	6,317	4	No	27,800	Yes[3]
42	Florin Rd	Bradshaw Rd	Excelsior Rd	County	2	22	Yes	3,478	4	No	13,870	Yes[3]
43	Florin Rd	Excelsior Rd	Sunrise Blvd	County	2	22	Yes	3,835	2	Yes	10,280	Yes
48	Fruitridge Rd	South Watt Ave	Hedge Ave	City of Sacramento/ County	2	22	Yes	2,890	3	No	18,250	Yes[3]
49	Fruitridge Rd	Hedge Ave	Mayhew Rd	County	2	22	Yes	1,790	4	No	16,840	Yes[3]
50	Grant Line Rd	White Rock Rd	Douglas Rd	Rancho Cordova/County	2	22	Yes	7,189	4	No	20,260	Yes[3]
58	Happy Ln	Old Placerville Rd	Kiefer Blvd	County	2	22	Yes	4,635	2	Yes	15,650	Yes
59	Hedge Ave	Jackson Rd	Fruitridge Rd	County	2	22	Yes	3,061	2	Yes	8,450	Yes

Red text with light gray shading indicates threshold exceeded.

Table 5.6
MTP Cumulative Plus FOUR PROJECTS Roadway Segment Functionality

ID	Roadway	Segment		Jurisdiction	Existing Substandard Roadways				MTP Cumulative + FOUR PROJECTS			
		From	To		Travel Lanes	Pavement (ft)	Substandard? [1]	Existing Volume	Travel Lanes	Substandard? [1]	Forecasted Volume	Exceeed Functionality Threshold? [2]
60	Hedge Ave	Fruitridge Rd	Elder Creek Rd	City of Sacramento/County	2	22	Yes	3,737	2	Yes	2,980	No
61	Hedge Ave	Elder Creek Rd	Florin Rd	County	2	22	Yes	2,722	2	Yes	2,350	No
70	Jackson Rd	Bradshaw Rd	Excelsior Rd	County	2	26	Yes	13,030	6	No	55,490	**Yes[3]**
71	Jackson Rd	Excelsior Rd	Eagles Nest Rd	County	2	26	Yes	10,478	4	No	48,840	**Yes[3]**
74	Kiefer Blvd	Florin Perkins Rd	South Watt Ave	City of Sacramento/County	2	22	Yes	4,616	2	Yes	4,190	No
77	Kiefer Blvd	Bradshaw Rd	Happy Ln	County	2	22	Yes	4,618	6	No	43,390	**Yes[3]**
78	Kiefer Blvd	Zinfandel Dr	Sunrise Blvd	County	2	22	Yes	656	3	No	24,640	**Yes[3]**
83	Mather Blvd-Excelsior Rd[4]	Douglas Rd	Kiefer Blvd	County	2	22	Yes	6,751	2	Yes	6,290	No
89	Mayhew Rd	Jackson Rd	Fruitridge Rd	County	2	22	Yes	1,616	4	No	39,500	**Yes[3]**
116	White Rock Rd	Fitzgerald Rd	Grant Line Rd	Rancho Cordova/County	2	20	Yes	2,490	4	No	39,330	**Yes[3]**
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd	County	2	<21	Yes	2,848	4	No	22,420	**Yes[3]**

Note: Gray shading indicates changes in travel lanes or facility type that the project is responsible to provide. For all roadway segments to be widened, the project is responsible to build the entire roadway to County standards.

[1] Substandard rural roads are defined as rural, 2-lane roadway segments with travel lanes narrower than 12 feet and/or roadside shoulders narrower than 6 feet.
[2] Functionality impacts are triggered when a substandard rural road increases over a threshold of 6,000 ADT, or for a roadway already above 6,000 ADT, increases by more than 600 ADT.
[3] The potential for an impact exists should the project generate traffic volumes on the roadway exceeding 6,000 ADT, or increasing more than 600 ADT on a roadway already above 6,000 ADT, prior to the construction of roadway improvements.
[4] Excluding the roadway segment that is within the developed community of Independence at Mather.
[5] The functionality impact is mitigated by improving the roadway to County standards, including widening travel lanes to 12 feet and/or widening or providing paved shoulders to 6 feet.

Red text with light gray shading indicates threshold exceeded.

5.4 MTP Cumulative Plus FOUR PROJECTS Mitigation Summary

Tables 5.7 and 5.8 summarize all roadway segments that would exceed the thresholds of significance for level of service and functionality.

Table 5.7
MTP Cumulative Plus FOUR PROJECTS Roadway Segment Summary

ID	Roadway	Segment	
		From	To
Roadway Segments Exceeding the Threshold of Significance			
2	Bradshaw Rd	US 50	Lincoln Village Dr
3	Bradshaw Rd	Lincoln Village Dr	Old Placerville Rd
4	Bradshaw Rd	Old Placerville Rd	Goethe Rd
5.1	Bradshaw Rd	Goethe Rd	Collector WJ-8
6.3	Bradshaw Rd	Mayhew Rd	Jackson Rd
23	Elder Creek Rd	Power Inn Rd	Florin-Perkins Rd
25	Elder Creek Rd	South Watt Ave	Hedge Ave
26	Elder Creek Rd	Hedge Ave	Mayhew Rd
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd
28.1	Elder Creek Rd	Bradshaw Rd	Vineyard Rd
31.1	Excelsior Rd	Jackson Rd	Collector WJ-6
31.2	Excelsior Rd	Collector WJ-6	Elder Creek Rd
36	Florin Rd	Stockton Blvd	Power Inn Rd
37	Florin Rd	Power Inn Rd	Florin-Perkins Rd
44	Folsom Blvd	Howe Ave	Jackson Rd
47	Fruitridge Rd	Florin Perkins Rd	South Watt Ave
48	Fruitridge Rd	South Watt Ave	Hedge Ave
56	Grant Line Rd	Sheldon Rd	Wilton Rd
57	Grant Line Rd	Wilton Rd	Bond Rd
62	Howe Ave	US 50	Folsom Blvd
66.1	Jackson Rd	Florin Perkins Rd	14th Ave
66.2	Jackson Rd	14th Ave	Rock Creek Pkwy
66.3	Jackson Rd	Rock Creek Pkwy	Aspen 1 Dwy
66.4	Jackson Rd	Aspen 1 Dwy	South Watt Ave
67	Jackson Rd	South Watt Ave	Hedge Ave
68.1	Jackson Rd	Hedge Ave	Collector WJ-3
68.2	Jackson Rd	Collector WJ-3	Mayhew Rd
70.1	Jackson Rd	Bradshaw Rd	Collector WJ-4
70.2	Jackson Rd	Collector WJ-4	Rock Creek Pkwy
71.1	Jackson Rd	Excelsior Rd	Collector JT-3
73	Jackson Rd	Sunrise Blvd	Grant Line Rd
76	Kiefer Blvd	Mayhew Rd	Bradshaw Rd
78.4	Kiefer Blvd	E Collector MS-1	Sunrise Blvd
89.1	Mayhew Rd	Jackson Rd	Rock Creek Pkwy
89.2	Mayhew Rd	Rock Creek Pkwy	Fruitridge Rd
93	Old Placerville Rd	Routier Rd	Rockingham Dr

Table 5.7
MTP Cumulative Plus FOUR PROJECTS Roadway Segment Summary

ID	Roadway	Segment	
		From	To
95	Rockingham Dr	Old Placerville Rd	Mather Field Rd
96	South Watt Ave	Folsom Blvd	Kiefer Blvd
97	South Watt Ave	Kiefer Blvd	Jackson Rd
100	South Watt Ave	Elder Creek Rd	Florin Rd
104.2	Sunrise Blvd	International Dr	Rio Del Oro Pkwy
104.3	Sunrise Blvd	Rio Del Oro Pkwy	Douglas Rd
105	Sunrise Blvd	Douglas Rd	Kiefer Blvd
110	Watt Ave	US 50	Folsom Blvd
122	Zinfandel Dr	City Limit	Douglas Rd
133	Rancho Cordova Pkwy	US 50	Easton Valley Pkwy
134	Rancho Cordova Pkwy	Easton Valley Pkwy	White Rock Rd
302	Kiefer Blvd	Happy Ln	Douglas Rd
313	Vineyard Rd	Jackson Road	New Collector
314	Vineyard Rd	New Collector	Collector WJ-18
315	Vineyard Rd	Collector WJ-18	Elder Creek Road

Table 5.8
MTP Cumulative Plus FOUR PROJECTS Functionality Summary

ID	Roadway	Segment	
		From	To
Roadway Segments Exceeding the Functionality Threshold			
15	Douglas Rd	Mather Blvd	Zinfandel Dr
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd
19	Eagles Nest Rd	Kiefer Blvd	Jackson Rd
20	Eagles Nest Rd	Jackson Rd	Florin Rd
25	Elder Creek Rd	South Watt Ave	Hedge Ave
26	Elder Creek Rd	Hedge Ave	Mayhew Rd
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd
30	Excelsior Rd	Kiefer Blvd	Jackson Rd
31	Excelsior Rd	Jackson Rd	Elder Creek Rd
32	Excelsior Rd	Elder Creek Rd	Florin Rd
33	Excelsior Rd	Florin Rd	Gerber Rd
34	Excelsior Rd	Gerber Rd	Calvine Rd
40	Florin Rd	Hedge Ave	Mayhew Rd
41	Florin Rd	Mayhew Rd	Bradshaw Rd
42	Florin Rd	Bradshaw Rd	Excelsior Rd
43	Florin Rd	Excelsior Rd	Sunrise Blvd
48	Fruitridge Rd	South Watt Ave	Hedge Ave
49	Fruitridge Rd	Hedge Ave	Mayhew Rd
50	Grant Line Rd	White Rock Rd	Douglas Rd
58	Happy Ln	Old Placerville Rd	Kiefer Blvd
59	Hedge Ave	Jackson Rd	Fruitridge Rd
70	Jackson Rd	Bradshaw Rd	Excelsior Rd
71	Jackson Rd	Excelsior Rd	Eagles Nest Rd

Table 5.8
MTP Cumulative Plus FOUR PROJECTS Functionality Summary

ID	Roadway	Segment	
		From	To
77	Kiefer Blvd	Bradshaw Rd	Happy Ln
78	Kiefer Blvd	Zinfandel Dr	Sunrise Blvd
89	Mayhew Rd	Jackson Rd	Fruitridge Rd
116	White Rock Rd	Fitzgerald Rd	Grant Line Rd
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd

6. CEQA CUMULATIVE PLUS FOUR PROJECTS SCENARIO (JACKSON TOWNSHIP ALTERNATIVE 2)

6.1 FOUR PROJECTS DESCRIPTION

The CEQA Cumulative plus FOUR PROJECTS scenario evaluates the effects of the traffic of four developments added to CEQA Cumulative conditions. Figure 4.1 illustrates the location of the FOUR PROJECTS:

- West Jackson Highway Master Plan (West Jackson)
- Jackson Township Specific Plan (Jackson Township)
- NewBridge Specific Plan (NewBridge)
- Mather South Specific Plan Amendment (Mather South)

6.1.1 CEQA Cumulative Land Use

Outside the FOUR PROJECTS area (see Figure 4.1), SACOG's 2035 development forecasts (the amount and location of housing and employment) for the adopted 2012 Metropolitan Transportation Plan (MTP) were used to prepare travel demand forecasts for this scenario. In addition, full build out of all reasonably foreseeable development projects was assumed within the study area, including the following major developments:

- Unincorporated Sacramento County
  - Vineyard Springs Comprehensive Plan
  - North Vineyard Station Specific Plan
  - Florin Vineyard Gap Community Plan
  - Mather Airport Specific Plan
  - Cordova Hills
  - Easton
  - Glenborough
  - East County Quarries

- City of Ranch Cordova
  - Arboretum
  - Suncreek
  - Sunridge Ranch
  - Rio del Oro
  - Westborough

- City of Folsom
  - Folsom South of 50 Specific Plan

- City of Sacramento

– Aspen 1

6.1.2 Transportation Network

Figure 6.1 illustrates the transportation network associated with the CEQA Cumulative without FOUR PROJECTS scenario. Outside the FOUR PROJECTS area (see Figure 4.1), it consists of the improvements through 2035 in the adopted 2012 Metropolitan Transportation Plan (MTP). Within the FOUR PROJECTS area, it includes roadway improvements beyond those in the MTP, which would be fully funded by the developments assumed in this scenario or by other committed funding sources. Sacramento County staff helped define such improvements and the number of roadway lanes for this scenario.

Figure 6.2 illustrates the transportation network associated with the CEQA Cumulative with FOUR PROJECTS scenario. The FOUR PROJECTS would construct new roadways within their sites, and widen many existing roadways within or on the borders of their sites. Details of this expansion of the roadway system is included in Section 6.2.1.

6.1.2.3 Pedestrian and Bicycle Facilities

The roadways within the FOUR PROJECTS would meet County standards, which would provide sidewalks and on-street (Class II) bike lanes on all collector, arterial and thoroughfare roadways. The FOUR PROJECTS also provide several off-street (Class I) multi-purpose trails.

6.1.2.4 Transit System

The FOUR PROJECTS are designed with significant amounts of higher density and mixed uses to help support transit use but transit service within walking distances of those uses is required to achieve a significant transit ridership. An accurate estimation of transit use requires the definition of specific transit routes and frequency of service on those routes. A separate planning effort, involving staff from Sacramento County and Sacramento Regional Transit (RT), was conducted to define an appropriate transit system for the transportation analysis. That effort is described in Section 3.1.2.3.

The planning effort resulted in four transit lines that would serve the FOUR PROJECTS at a frequency of 15 minutes during the peak commute hours (approximately 6-9 AM and 3-6 PM) and 30 minutes during off-peak service hours (approximately 9AM-3PM and 6PM-8PM) on weekdays. Another key characteristic of the proposed transit system built into the modeling assumptions is the targeted use of queue jumps on portions of key corridors (Bradshaw Road from Kiefer Boulevard to Rock Creek Parkway, and Jackson Road from Watt Avenue to Excelsior Road). Queue jumps ensure that buses are not excessively delayed at signals along congested corridors, and therefore not too heavily penalized from a travel time perspective. This is necessary to achieve the adequate ridership levels that were forecast and ensure reliable operations. **Figure 6.3** shows the assumed transit routes for this scenario.

The assumed transit routes, service frequency, and supporting infrastructure (i.e. queue jumps) would be required at full development of the FOUR PROJECTS. The full level of transit service

would not achieve adequate transit ridership during the early stages of development. Thus the ultimate transit service, like the roadway system serving the FOUR PROJECTS, must be phased with development of the FOUR PROJECTS.

FIGURE 6.1
CEQA CUMULATIVE NO PROJECT
ROADWAY NETWORK

Legend

- 2 Lanes
- 3 Lanes
- 4 Lanes
- 5 Lanes
- 6 Lanes
- 7 Lanes
- Cities
- Mather Airport

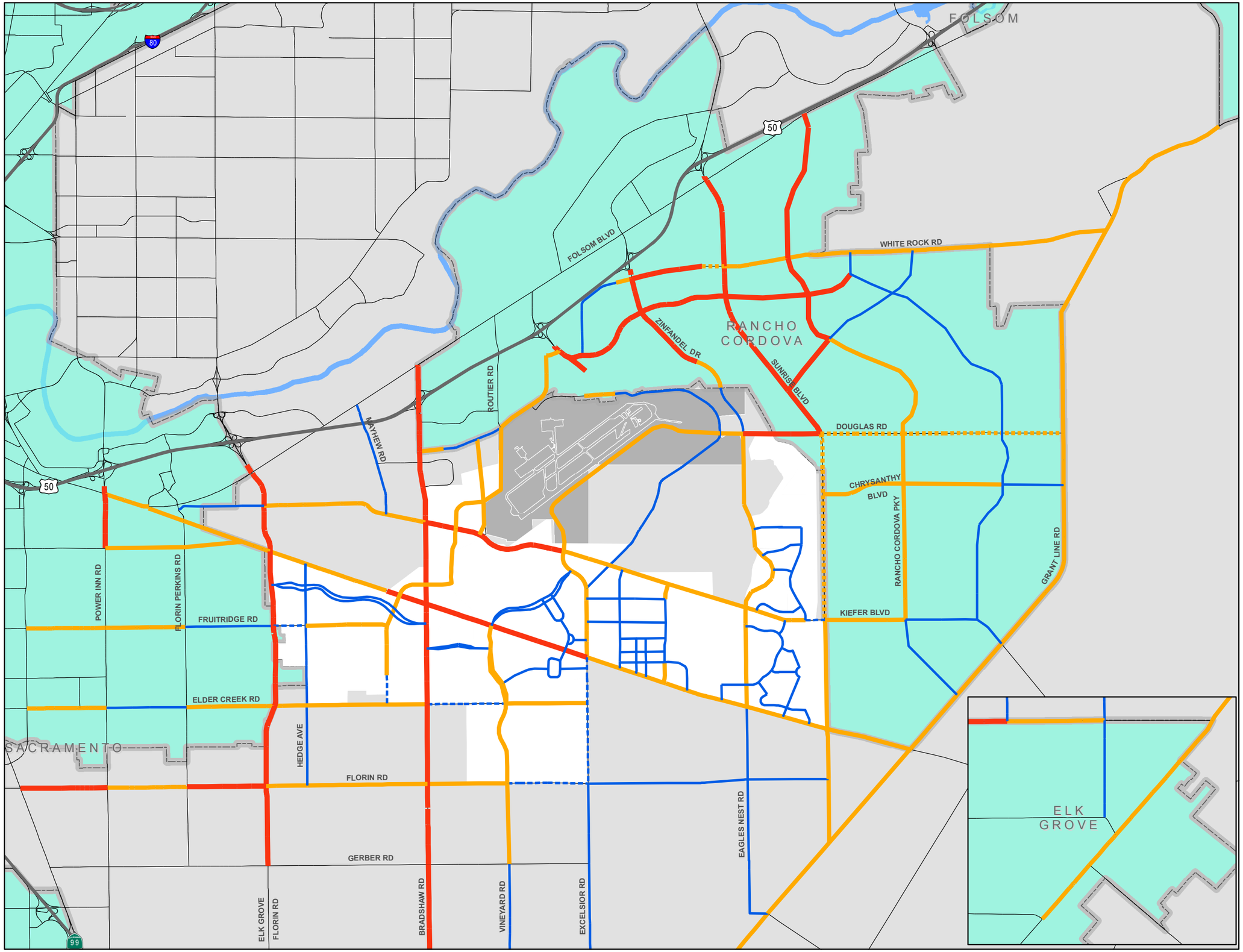


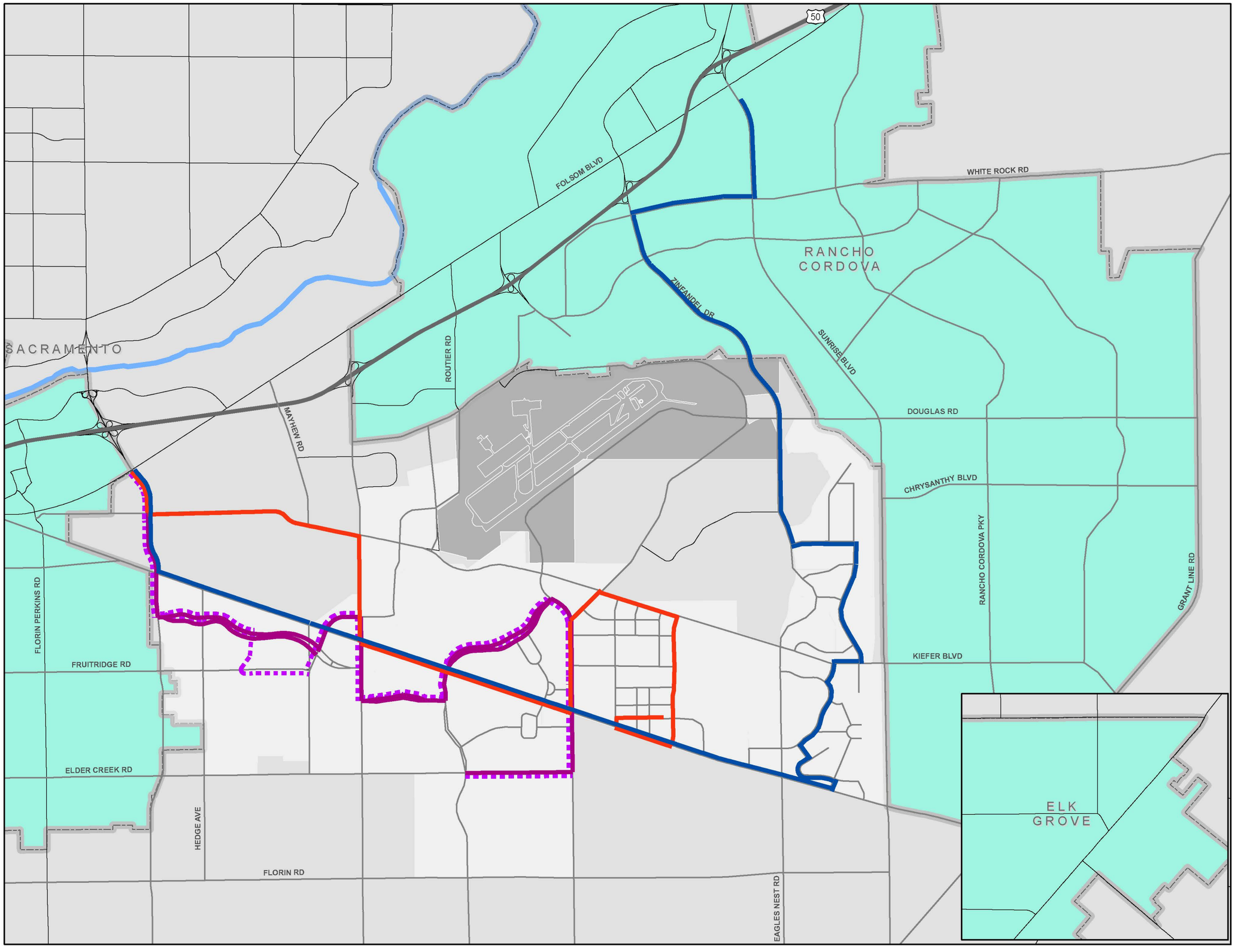
FIGURE 6.2
CEQA CUM PLUS FOUR PROJECTS (JACKSON TOWNSHIP ALT 2) ROADWAY NETWORK

Legend

- 2 Lanes
- 3 Lanes
- 4 Lanes
- 5 Lanes
- 6 Lanes
- 7 Lanes
- Cities
- Mather Airport

DKS

FIGURE 6.3
PROJECT TRANSIT NETWORK
CEQA CUM PLUS FOUR PROJECTS



Legend

- Jackson Express Route
- Kiefer Jackson Local Route
- West Jackson Local Route A
- West Jackson Local Route B
- Cities
- Mather Airport

DKS

6.2 TRIP GENERATION

The SACSIM model that has been utilized for the transportation forecasts in this analysis estimated trip generation of the FOUR PROJECTS. **Table 6.1** summarizes the person trip generation. The FOUR PROJECTS would generate over 86,000 daily work person trip ends, and over 730,000 daily person trip ends for all trip purposes.

Table 6.2 summarizes the estimated mode choice for the CEQA cumulative with FOUR PROJECTS scenario. Over 90 percent of all person trips are expected to be accommodated by automobile. Transit will serve about 1.9 percent of all trips, while walk and bike modes will accommodate about 6.9 percent of all trips. The mode choice assumes full implementation of the project's pedestrian and bicycle systems.

Table 6.3 summarizes the vehicular (auto) trip generation of the FOUR PROJECTS. The FOUR PROJECTS are estimated to generate nearly 498,000 daily vehicle trip ends. Over 62,700 of the daily vehicle trip ends will be associated with trips with both an origin and destination within the individual projects, about 12.6 percent of the trip ends. The internal trip ends represent over 31,000 daily vehicle trips (one-half the number of internal trip ends). The FOUR PROJECTS will generate about 435,000 external vehicle trips that have an origin or destination inside one of the FOUR PROJECTS but the other end of the trip is outside the project from which it originated. Table 6.3 also shows the vehicle trips generated during the a.m. and p.m. peak hours.

6.3 TRIP DISTRIBUTION

The distribution of trips associated with development of the FOUR PROJECTS was derived utilizing SACSIM, incorporating the proposed land use and access locations associated with the FOUR PROJECTS. Trip distribution varies by land use and time period. **Figure 6.4** illustrates the overall trip distribution of daily FOUR PROJECTS trips with the CEQA Plus FOUR PROJECTS scenario. The highest percentages of FOUR PROJECTS traffic are accommodated on Jackson Road, Bradshaw Road, Kiefer Boulevard, and Vineyard Road.

Table 6.1: Estimated Daily Person Trip Generation
(CEQA Cumulative Plus FOUR PROJECTS Alternative 2 Scenario)

Trip Purpose	Daily Person Trip Ends
Work Trips	86,484
Non-Work Trips	643,573
All Trip Purposes	730,057

Source: *DKS Associates, 2018.*

Table 6.2: Mode Split
(CEQA Cumulative Plus FOUR PROJECTS Alternative 2 Scenario)

Mode	Percentage of Person Trips by Trip Purpose		
	Work Trips	Non-Work Trips	All Trip Purposes
Auto - SOV	83.4%	48.2%	52.4%
Auto - HOV	10.3%	42.6%	38.8%
Transit	4.1%	1.6%	1.9%
Walk	1.2%	6.7%	6.0%
Bike	0.9%	0.9%	0.9%

Source: *DKS Associates, 2018.*

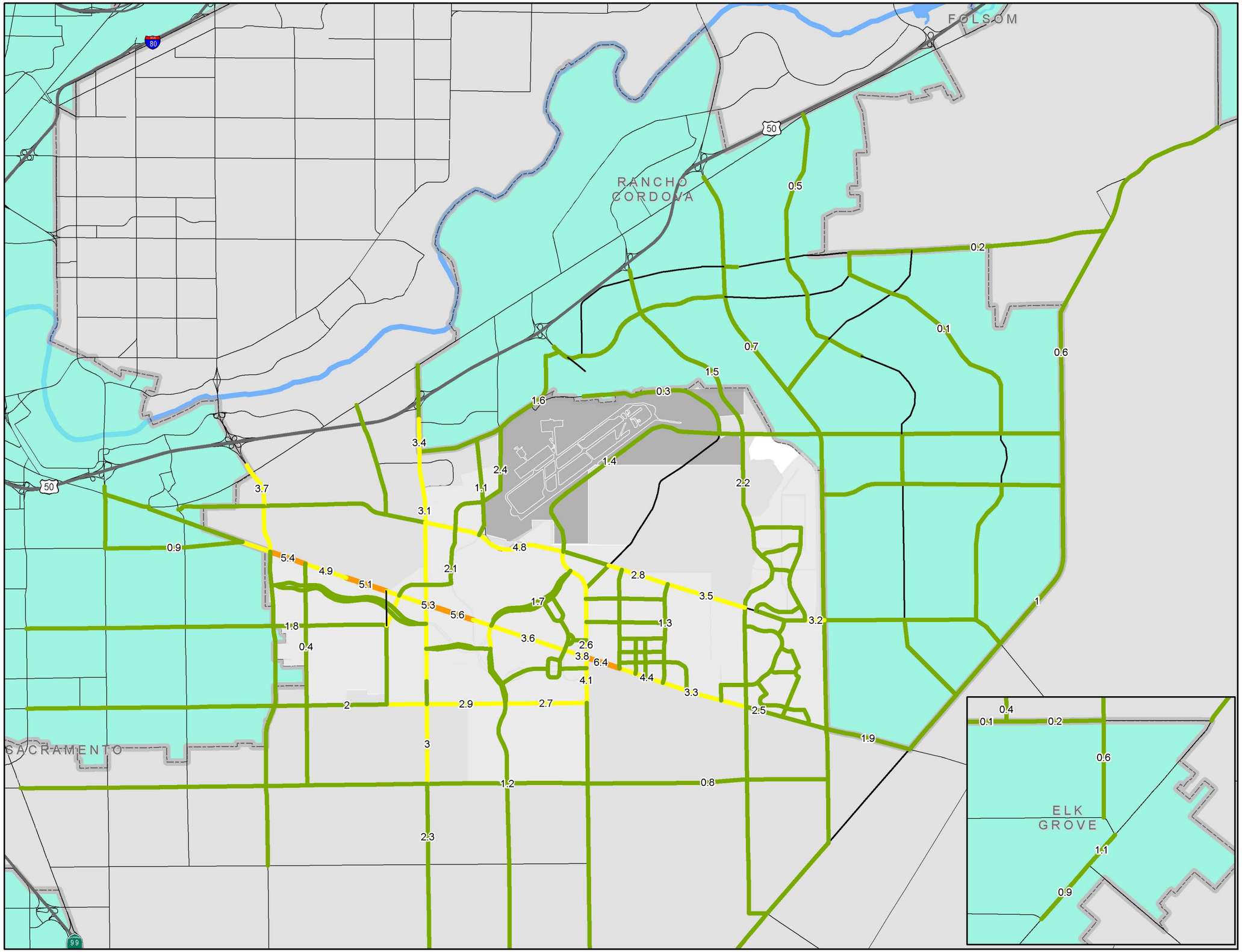
Table 6.3: Estimated Daily Vehicle Trip Generation
(CEQA Cumulative Plus FOUR PROJECTS Alternative 2 Scenario)

Trip Type		AM Peak Hour	PM Peak Hour	Daily
Total Vehicle Trip Ends		42,469	68,316	497,930
Percent Internal Trip Ends[1]		15.9%	22.5%	19.2%
Vehicle Trips	Internal to Projects	3,384	7,673	47,725
	External to Projects	35,700	52,970	402,480
	Total	39,084	60,643	450,205

[1.] Both trip ends within individual projects.

Source: *DKS Associates, 2018.*

FIGURE 6.4
CEQA CUM PLUS FOUR PROJECTS
FOUR PROJECTS TRIP DISTRIBUTION
(JACKSON TOWNSHIP ALT 2)



6.4 OPERATIONS ANALYSIS AND IMPACTS

Cumulative scenario impacts are determined by comparing the traffic operating conditions associated with the FOUR PROJECTS with the traffic operating conditions associated with the cumulative (without FOUR PROJECTS) conditions, and comparing the change to the thresholds of significance. **Figure 6.5** illustrates the resultant traffic operating conditions associated with the CEQA Cumulative (without FOUR PROJECTS) scenario. **Figure 6.6** illustrates the resultant traffic operating conditions associated with the CEQA Cumulative Plus FOUR PROJECTS scenario.

6.4.1 CEQA Cumulative Plus FOUR PROJECTS Roadway Segment Impacts

Table 6.4 summarizes the results of the operations analysis for the study area roadway segments. The table includes the number of lanes assumed with the implementation of the FOUR PROJECTS. The shaded table cells under the "Travel Lanes" and "Facility Type" headings illustrate new roadways or widened roadways. The last column of the table shows the project(s) responsible for the increase in the number of roadway lanes. The shaded table cells under the "Level of Service" heading indicate those locations with an LOS impact.

6.4.2 CEQA Cumulative Plus FOUR PROJECTS Intersection Impacts

Table 6.5 and 6.6 summarize the results of the operations analysis for the study area intersections. The tables include the implementation of intersection changes associated with the FOUR PROJECTS. Table 6.6 illustrates the type of traffic control and number of lanes by type on each study area intersection approach. Shaded table cells indicate those locations where changes in traffic control and / or number of approach lanes by type would be fully funded by the project(s) shown in the last column. Shaded table cells in Table 6.5 illustrate those locations with an LOS impact. Detailed analysis information is included in the technical appendix.

Signal warrant analysis was conducted for all unsignalized intersections along Jackson Road, and other unsignalized intersections in close proximity to the project. The project is considered to have a significant impact at an unsignalized location if both the impact criteria in Table 1.6 are met, and one or more of the signal warrants specified in the California Manual on Uniform Traffic Control Devices (CAMUTCD) are met. The following unsignalized intersections exhibit significant impacts and meet one or more traffic signal warrants:

- Happy Lane and Old Placerville Road
- Eagles Nest Road and Florin Road

6.4.3 CEQA Cumulative Plus FOUR PROJECTS U.S. 50 Freeway Impacts

6.4.3.1 Freeway Basic Segments

Table 6.7 summarizes a.m. and p.m. peak hour US 50 freeway mainline operations. Details of the analysis are included in the technical appendix. The following locations exhibit significant impacts:

- Eastbound
    - Stockton Boulevard to 59th Street - a.m. peak hour

6.4.3.2 Freeway Merge/Diverge/Weave Segments

Table 6.8 summarizes a.m. and p.m. peak hour freeway operations at ramp junctions and weaving areas. Details of the analysis are included in the technical appendix. The following locations exhibit significant impacts:

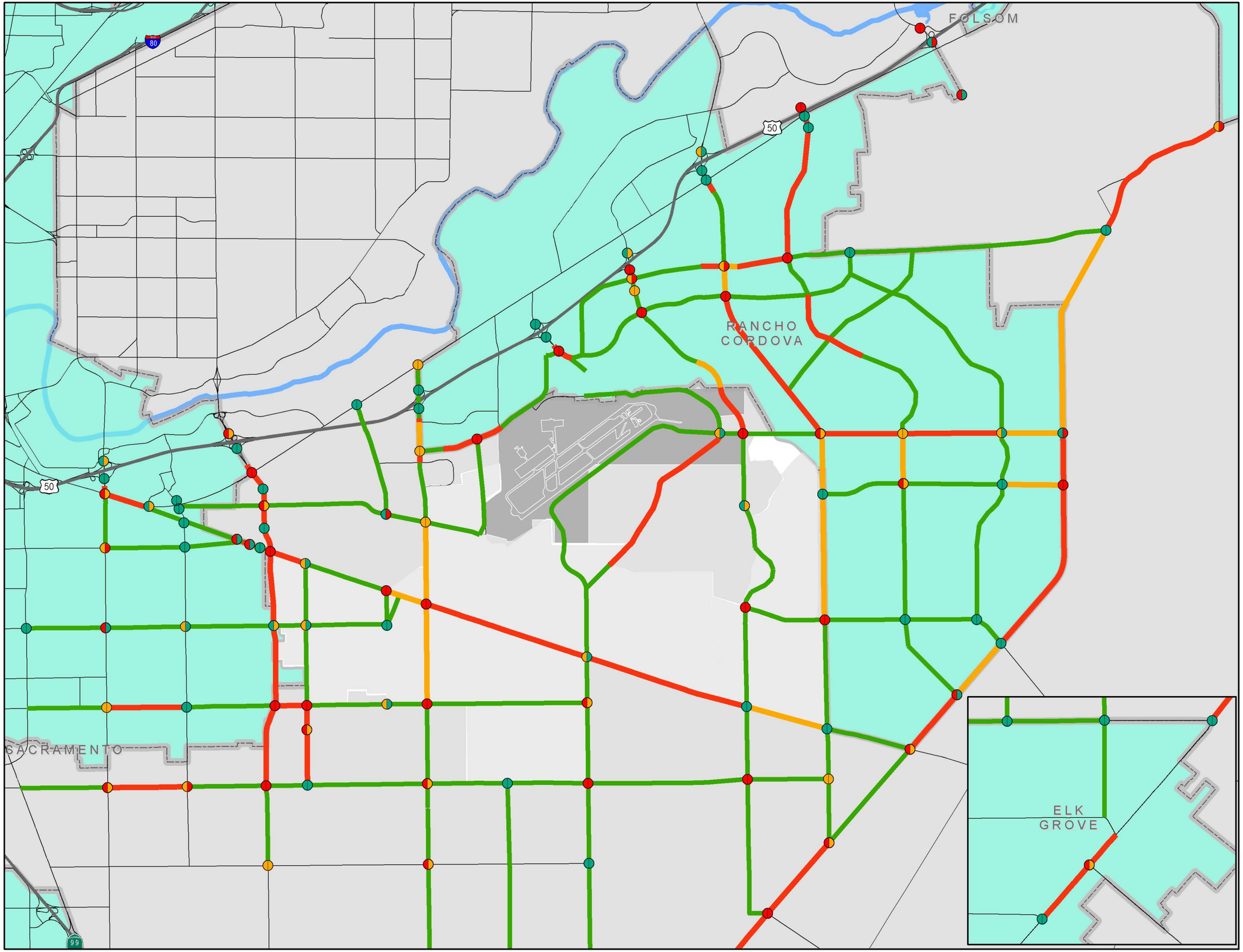
- Westbound
    - Hazel Avenue to Rancho Cordova Parkway weave - a.m. peak hour

6.4.3.3 Freeway Ramp Intersection Queuing

Tables 6.9 and 6.10 summarize a.m. and p.m. peak hour freeway ramp intersection queuing. The following locations exhibit a significant impact:

- Eastbound
    - Exit ramp to Howe Avenue - right turn queue length exceeds available storage – a.m. peak hour
    - Exit ramp to Zinfandel Drive-right turn and through queue length exceeds available storage – a.m. peak hour
- Westbound
    - Exit ramp to Rancho Cordova Parkway - left turn queue length exceeds available storage – a.m. and p.m. peak hours

FIGURE 6.5
CEQA CUMULATIVE NO PROJECT ROADWAY SEGMENT AND INTERSECTION LOS



Legend

Intersections (AM Peak Hour)
- LOS A-D
- LOS E
- LOS F

Intersections (PM Peak Hour)
- LOS A-D
- LOS E
- LOS F

Roadway Segments
- LOS A-D
- LOS E
- LOS F
- Cities
- Mather Airport

DKS

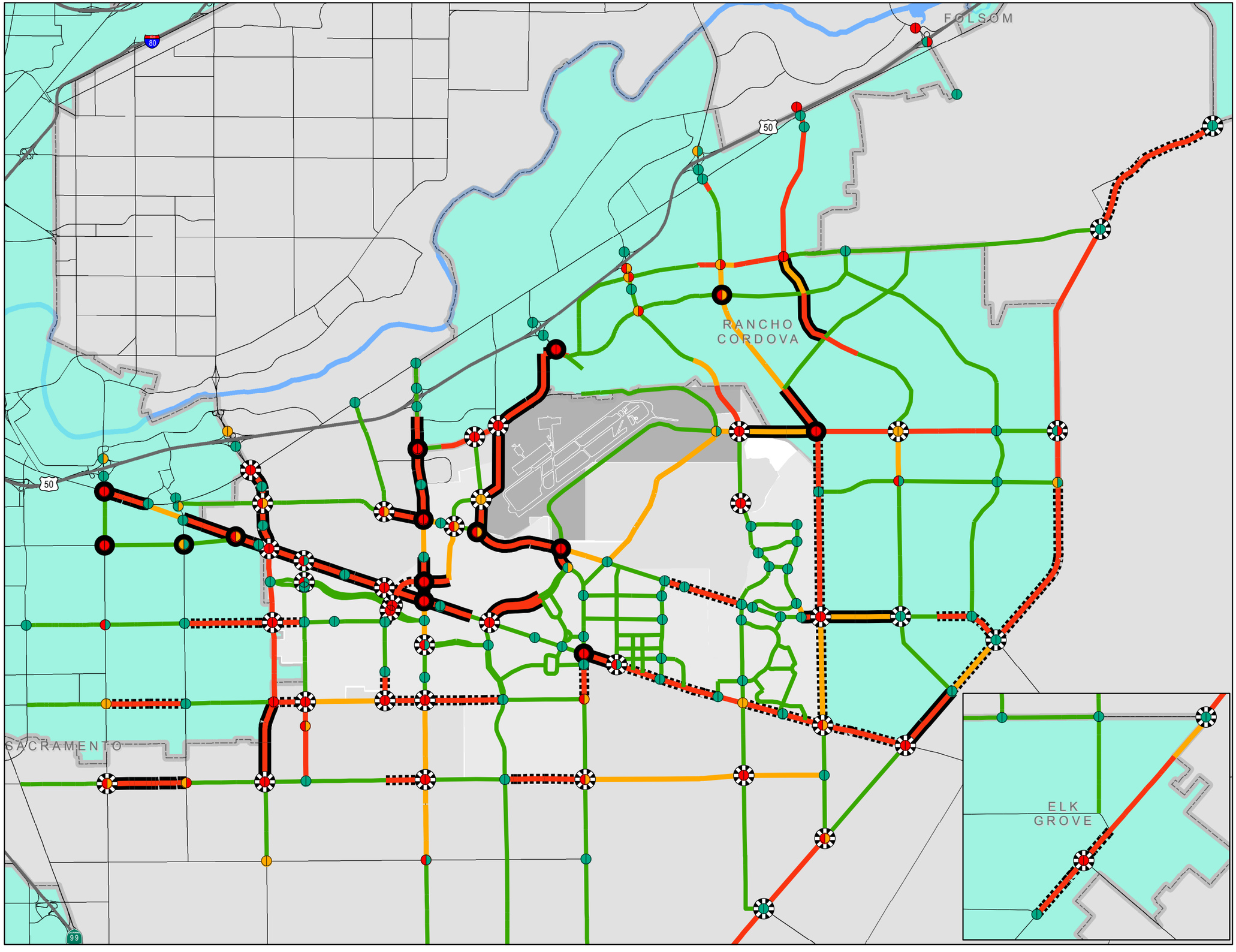


FIGURE 6.6
CEQA CUM PLUS FOUR PROJECTS (JACKSON TOWNSHIP ALT 2) ROADWAY SEGMENT AND INTERSECTION LOS AND IMPACTS

Legend

Intersections (AM Peak Hour)
- LOS A-D
- LOS E
- LOS F

Intersections (PM Peak Hour)
- LOS A-D
- LOS E
- LOS F
- Mitigable Intersection Impact
- Unavoidable Intersection Impact

Roadway Segments
- LOS A-D
- LOS E
- LOS F

Impacts
- Unavoidable Segment Impact
- Mitigable Segment Impact
- Cities
- Mather Airport

DKS

FOLSOM

RANCHO CORDOVA

SACRAMENTO

ELK GROVE

80

50

99

FIGURE 10.6
CEQA CUM PLUS FOUR PROJECTS (JT PROPOSED PROJECT) ROADWAY SEGMENT AND INTERSECTION LOS AND IMPACTS

Legend

Intersections (AM Peak Hour)

- LOS A-D (84)
- LOS E (18)
- LOS F (52)

Intersections (PM Peak Hour)

- LOS A-D
- LOS E
- LOS F
- Mitigable Intersection Impact
- Unavoidable Intersection impact

Study_Area_Segments

- LOS A-D
- LOS E
- LOS F
- Cities
- Mather Airport

DKS

Table 6.4
CEQA Cumulative Roadway Segment Levels of Service

ID	Roadway	Segment		CEQA Cumulative No Project					CEQA Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
1	Bradshaw Rd	Folsom Blvd	US 50	6	Arterial M	27,240	0.50	A	6	Arterial M	24,460	0.45	A	
2	Bradshaw Rd	US 50	Lincoln Village Dr	6	Arterial M	66,770	1.24	**F**	6	Arterial M	84,620	1.57	**F**	
3	Bradshaw Rd	Lincoln Village Dr	Old Placerville Rd	6	Arterial M	52,940	0.98	**E**	6	Arterial M	76,770	1.42	**F**	
4	Bradshaw Rd	Old Placerville Rd	Goethe Rd	6	Arterial M	62,600	1.16	**F**	6	Arterial M	73,340	1.36	**F**	
5.1	Bradshaw Rd	Goethe Rd	Collector WJ-8	6	Arterial M	47,100	0.87	D	6	Arterial M	62,160	1.15	**F**	
5.2	Bradshaw Rd	Collector WJ-8	Kiefer Blvd	6	Arterial M	45,320	0.84	D	6	Arterial M	58,600	1.09	**F**	
6.1	Bradshaw Rd	Kiefer Blvd	Collector WJ-9	6	Arterial M	51,270	0.95	E	6	Arterial M	53,770	1.00	E	
6.2	Bradshaw Rd	Collector WJ-9	Mayhew Rd	6	Arterial M	52,070	0.96	E	6	Arterial M	54,090	1.00	**F**	
6.3	Bradshaw Rd	Mayhew Rd	Jackson Rd	6	Arterial M	52,020	0.96	E	6	Arterial M	57,490	1.06	**F**	
7.1	Bradshaw Rd	Jackson Rd	Rock Creek Pkwy	6	Arterial M	52,190	0.97	E	6	Arterial M	49,210	0.91	E	
7.2	Bradshaw Rd	Rock Creek Pkwy	Collector WJ-10	6	Arterial M	52,220	0.97	E	6	Arterial M	51,610	0.96	E	
7.3	Bradshaw Rd	Collector WJ-10	Collector WJ-11	6	Arterial M	52,390	0.97	E	6	Arterial M	47,250	0.88	D	
7.4	Bradshaw Rd	Collector WJ-11	Elder Creek Rd	6	Arterial M	52,410	0.97	E	6	Arterial M	43,190	0.80	C	
8	Bradshaw Rd	Elder Creek Rd	Florin Rd	6	Arterial M	44,990	0.83	D	6	Arterial M	51,950	0.96	E	
9	Bradshaw Rd	Florin Rd	Gerber Rd	6	Arterial M	42,300	0.78	C	6	Arterial M	51,660	0.96	E	
10	Bradshaw Rd	Gerber Rd	Calvine Rd	6	Arterial M	29,810	0.55	A	6	Arterial M	36,900	0.68	B	
11	Calvine Rd	Waterman Rd	Bradshaw Rd	6	Arterial M	16,370	0.30	A	6	Arterial M	18,310	0.34	A	
12	Calvine Rd	Bradshaw Rd	Vineyard Rd	6	Arterial M	14,540	0.27	A	6	Arterial M	14,680	0.27	A	
13	Calvine Rd	Vineyard Rd	Excelsior Rd	4	Arterial M	8,500	0.24	A	4	Arterial M	9,620	0.27	A	
14	Chrysanthy Blvd	Sunrise Blvd	Rancho Cordova Pkwy	4	Arterial M	8,010	0.22	A	4	Arterial M	9,590	0.27	A	
15	Douglas Rd	Mather Blvd	Zinfandel Dr	4	Arterial M	21,870	0.61	B	4	Arterial M	33,390	0.93	E	
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd	6	Arterial M	37,550	0.70	B	6	Arterial M	50,360	0.93	**E**	
17	Douglas Rd	Sunrise Blvd	Rancho Cordova Pkwy	5	Arterial M	42,770	1.19	**F**	5	Arterial M	43,250	1.20	**F**	
18.1	Douglas Rd	Rancho Cordova Pkwy	Americanos Blvd	5	Arterial M	42,630	1.18	**F**	5	Arterial M	42,870	1.19	**F**	
18.2	Douglas Rd	Americanos Blvd	Grant Line Rd	5	Arterial M	33,520	0.93	**E**	5	Arterial M	31,900	0.89	D	
19.1	Eagles Nest Rd	Kiefer Blvd	N Bridgewater Dr	2	Arterial M	4,620	0.26	A	4	Arterial M	11,220	0.31	A	NewBridge
19.2	Eagles Nest Rd	N Bridgewater Dr	S Bridgewater Dr	2	Arterial M	4,620	0.26	A	4	Arterial M	11,620	0.32	A	NewBridge
19.3	Eagles Nest Rd	S Bridgewater Dr	Jackson Rd	2	Arterial M	4,710	0.26	A	4	Arterial M	13,130	0.36	A	NewBridge
20	Eagles Nest Rd	Jackson Rd	Florin Rd	2	Arterial M	3,670	0.20	A	2	Arterial M	9110	0.51	A	
21	Eagles Nest Rd	Florin Rd	Grant Line Rd	2	Arterial M	3,300	0.18	A	2	Arterial M	4530	0.25	A	
22	Elder Creek Rd	65th St	Power Inn Rd	4	Arterial M	24,130	0.67	B	4	Arterial M	27,900	0.78	C	
23	Elder Creek Rd	Power Inn Rd	Florin-Perkins Rd	2	Arterial M	25,170	1.40	**F**	2	Arterial M	28,360	1.58	**F**	
24	Elder Creek Rd	Florin Perkins Rd	South Watt Ave	4	Arterial M	27,840	0.77	C	4	Arterial M	30,940	0.86	D	
25	Elder Creek Rd	South Watt Ave	Hedge Ave	4	Arterial M	40,860	1.14	**F**	4	Arterial M	52,900	1.47	**F**	

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 6.4
CEQA Cumulative Roadway Segment Levels of Service

ID	Roadway	Segment		CEQA Cumulative No Project					CEQA Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
26	Elder Creek Rd	Hedge Ave	Mayhew Rd	4	Arterial M	29,970	0.83	D	4	Arterial M	33,660	0.94	E	
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd	4	Arterial M	17,980	0.50	A	4	Arterial M	40,490	1.12	**F**	
28.1	Elder Creek Rd	Bradshaw Rd	Vineyard Rd	2	Arterial M	9,230	0.51	A	3	Arterial M	30,740	1.71	**F**	West Jackson
28.2	Elder Creek Rd	Vineyard Rd	Excelsior Rd	2	Arterial M	9,430	0.52	A	4	Arterial M	25,360	0.70	C	West Jackson
29	Elk Grove-Florin Rd	Florin Rd	Gerber Rd	6	Arterial M	48,390	0.90	D	6	Arterial M	47,190	0.87	D	
30.1	Excelsior Rd	Kiefer Blvd	Douglas Rd	2	Arterial M	4,150	0.23	A	2	Arterial M	5,600	0.31	A	
30.2	Excelsior Rd	Douglas Rd	Collector WJ-1/ Collector JT-1	4	Arterial M	11,290	0.31	A	4	Arterial M	26,970	0.75	C	
30.3	Excelsior Rd	Collector WJ-1/ Collector JT-1	Collector WJ-2/ Collector JT-2	4	Arterial M	11,840	0.33	A	4	Arterial M	25,900	0.72	C	
30.4	Excelsior Rd	Collector WJ-2/ Collector JT-2	Jackson Rd	4	Arterial M	11,840	0.33	A	4	Arterial M	25,400	0.71	C	
31.1	Excelsior Rd	Jackson Rd	Collector WJ-6	2	Arterial M	11,960	0.66	B	3	Arterial M	36,910	2.05	**F**	West Jackson
31.2	Excelsior Rd	Collector WJ-6	Elder Creek Rd	2	Arterial M	11,960	0.66	B	3	Arterial M	36,220	2.01	**F**	West Jackson
32	Excelsior Rd	Elder Creek Rd	Florin Rd	2	Arterial M	4,670	0.26	A	3	Arterial M	12,520	0.70	B	West Jackson
33	Excelsior Rd	Florin Rd	Gerber Rd	2	Arterial M	5,970	0.33	A	2	Arterial M	13,080	0.73	C	
34	Excelsior Rd	Gerber Rd	Calvine Rd	2	Arterial M	2,520	0.14	A	2	Arterial M	8,360	0.46	A	
35	Excelsior Rd	Calvine Rd	Sheldon Rd	2	Arterial M	2,960	0.16	A	2	Arterial M	9,180	0.51	A	
36	Florin Rd	Stockton Blvd	Power Inn Rd	6	Arterial M	42,720	0.79	C	6	Arterial M	47,560	0.88	D	
37	Florin Rd	Power Inn Rd	Florin-Perkins Rd	4	Arterial M	37,240	1.03	**F**	4	Arterial M	43,690	1.21	**F**	
38	Florin Rd	Florin-Perkins Rd	So Watt Ave/ Elk Grove Florin Rd	6	Arterial M	29,890	0.55	A	6	Arterial M	36,490	0.68	B	
39	Florin Rd	South Watt Ave	Hedge Ave	4	Arterial M	9,760	0.27	A	4	Arterial M	12,010	0.33	A	
40	Florin Rd	Hedge Ave	Mayhew Rd	4	Arterial M	10,420	0.29	A	4	Arterial M	13,280	0.37	A	
41	Florin Rd	Mayhew Rd	Bradshaw Rd	4	Arterial M	30,290	0.84	D	4	Arterial M	40,200	1.12	**F**	
42.1	Florin Rd	Bradshaw Rd	Vineyard Rd	4	Arterial M	19,680	0.55	A	4	Arterial M	26,070	0.72	C	
42.2	Florin Rd	Vineyard Rd	Excelsior Rd	2	Arterial M	11,650	0.65	B	3	Arterial M	19,920	1.11	**F**	West Jackson
43	Florin Rd	Excelsior Rd	Sunrise Blvd	2	Arterial M	14,020	0.78	C	2	Arterial M	17,090	0.95	E	
44	Folsom Blvd	Howe Ave	Jackson Rd	4	Arterial M	50,520	1.40	**F**	4	Arterial M	56,000	1.56	**F**	
45	Fruitridge Rd	65th St	Power Inn Rd	4	Arterial M	23,040	0.64	B	4	Arterial M	27,610	0.77	C	
46	Fruitridge Rd	Power Inn Rd	Florin Perkins Rd	4	Arterial M	20,400	0.57	A	4	Arterial M	31,090	0.86	D	
47	Fruitridge Rd	Florin Perkins Rd	South Watt Ave	2	Arterial M	13,770	0.77	C	2	Arterial M	27,770	1.54	**F**	
48	Fruitridge Rd	South Watt Ave	Hedge Ave	2	Arterial M	5,770	0.32	A	3	Arterial M	24,240	1.35	**F**	West Jackson

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 6.4
CEQA Cumulative Roadway Segment Levels of Service

ID	Roadway	Segment		CEQA Cumulative No Project					CEQA Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
49.1	Fruitridge Rd	Hedge Ave	Collector WJ-12	2	Arterial M	2,140	0.12	A	4	Arterial M	24,260	0.67	B	West Jackson
49.2	Fruitridge Rd	Collector WJ-12	Mayhew Rd	2	Arterial M	2,110	0.12	A	4	Arterial M	21,800	0.61	B	West Jackson
50	Grant Line Rd	White Rock Rd	Douglas Rd	4	Arterial H	39,480	0.99	**E**	4	Arterial H	41,130	1.03	**F**	
51.1	Grant Line Rd	Douglas Rd	Chrysanthy Blvd	4	Arterial H	58,610	1.47	**F**	4	Arterial H	57,810	1.45	**F**	
51.2	Grant Line Rd	Chrysanthy Blvd	Kiefer Blvd	4	Arterial H	44,930	1.12	**F**	4	Arterial H	47,640	1.19	**F**	
52.1	Grant Line Rd	Kiefer Blvd	Rancho Cordova Pkwy	4	Arterial H	34,170	0.85	D	4	Arterial H	37,030	0.93	**E**	
52.2	Grant Line Rd	Rancho Cordova Pkwy	Jackson Rd	4	Arterial H	43,400	1.09	**F**	4	Arterial H	41,700	1.04	**F**	
53	Grant Line Rd	Jackson Rd	Sunrise Blvd	4	Arterial H	33,180	0.83	D	4	Arterial H	30,160	0.75	C	
54	Grant Line Rd	Sunrise Blvd	Calvine Rd	4	Arterial H	42,840	1.07	**F**	4	Arterial H	43,760	1.09	**F**	
55.1	Grant Line Rd	Calvine Rd	Elk Grove City Limit	4	Arterial H	36,290	0.91	E	4	Arterial H	36,840	0.92	E	
55.2	Grant Line Rd	Elk Grove City Limit	Sheldon Rd	4	Arterial M	36,380	1.01	**F**	4	Arterial M	36,890	1.02	**F**	
56	Grant Line Rd	Sheldon Rd	Wilton Rd	4	Arterial M	40,570	1.13	**F**	4	Arterial M	45,430	1.26	**F**	
57	Grant Line Rd	Wilton Rd	Bond Rd	4	Arterial M	36,110	1.00	**F**	4	Arterial M	40,370	1.12	**F**	
58.1	Happy Lane	Old Placerville Road	Routier Ext	2	Arterial M	3,980	0.22	A	2	Arterial M	13,820	0.77	C	West Jackson
58.2	Happy Lane	Routier Ext	Kiefer Boulevard	2	Arterial M	4,970	0.28	A	2	Arterial M	20,580	1.14	**F**	West Jackson
59.1	Hedge Ave	Jackson Rd	Rock Creek Pkwy	2	Arterial M	7,060	0.39	A	2	Arterial M	11,760	0.65	B	
59.2	Hedge Ave	Rock Creek Pkwy	Fruitridge Rd	2	Arterial M	7,180	0.40	A	2	Arterial M	7,720	0.43	A	
60	Hedge Ave	Fruitridge Rd	Elder Creek Rd	2	Arterial M	8,460	0.47	A	2	Arterial M	10,010	0.56	A	
61	Hedge Ave	Elder Creek Rd	Florin Rd	2	Arterial M	22,520	1.25	**F**	2	Arterial M	22,460	1.25	**F**	
62	Howe Ave	US 50	Folsom Blvd	6	Arterial M	67,180	1.24	**F**	6	Arterial M	71,420	1.32	**F**	
63	International Dr	Mather Field Rd	Zinfandel Dr	6	Arterial M	48,380	0.90	D	6	Arterial M	47,100	0.87	D	
64	International Dr	Zinfandel Dr	Sunrise Blvd	6	Arterial M	35,840	0.66	B	6	Arterial M	39,710	0.74	C	
65	Jackson Rd	Folsom Blvd	Florin Perkins Rd	4	Arterial M	30,450	0.85	D	4	Arterial M	35,860	1.00	E	
66.1	Jackson Rd	Florin Perkins Rd	14th Ave	4	Arterial M	30,980	0.86	D	4	Arterial M	44,100	1.23	**F**	
66.2	Jackson Rd	14th Ave	Rock Creek Pkwy	4	Arterial M	40,320	1.12	**F**	4	Arterial M	61,980	1.72	**F**	
66.3	Jackson Rd	Rock Creek Pkwy	Aspen 1 Dwy	4	Arterial M	34,630	0.96	E	4	Arterial M	57,690	1.60	**F**	
66.4	Jackson Rd	Aspen 1 Dwy	South Watt Ave	4	Arterial M	32,480	0.90	E	4	Arterial M	55,370	1.54	**F**	
67	Jackson Rd	South Watt Ave	Hedge Ave	4	Arterial M	38,240	1.06	**F**	4	Arterial M	66,380	1.84	**F**	
68.1	Jackson Rd	Hedge Ave	Collector WJ-3	4	Arterial M	31,080	0.86	D	4	Arterial M	56,540	1.57	**F**	
68.2	Jackson Rd	Collector WJ-3	Mayhew Rd	4	Arterial M	31,040	0.86	D	4	Arterial M	57,880	1.61	**F**	
69	Jackson Rd	Mayhew Rd	Bradshaw Rd	4	Arterial M	33,920	0.94	E	6	Arterial M	56,220	1.04	**F**	West Jackson

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 6.4
CEQA Cumulative Roadway Segment Levels of Service

ID	Roadway	Segment		CEQA Cumulative No Project					CEQA Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
70.1	Jackson Rd	Bradshaw Rd	Collector WJ-4	2	Rural Hwy	23,120	1.01	**F**	6	Arterial M	59,380	1.10	**F**	West Jackson
70.2	Jackson Rd	Collector WJ-4	Rock Creek Pkwy	2	Rural Hwy	23,190	1.01	**F**	6	Arterial M	59,660	1.10	**F**	West Jackson
70.3	Jackson Rd	Rock Creek Pkwy	Commercial Access	2	Rural Hwy	23,000	1.00	**F**	6	Arterial M	41,550	0.77	C	West Jackson
70.4	Jackson Rd	Commercial Access	Collector WJ-5	2	Rural Hwy	23,000	1.00	**F**	6	Arterial M	41,200	0.76	C	West Jackson
70.5	Jackson Rd	Collector WJ-5	Collector WJ-6	2	Rural Hwy	23,010	1.00	**F**	6	Arterial M	38,910	0.72	C	West Jackson
70.6	Jackson Rd	Collector WJ-6	Excelsior Rd	2	Rural Hwy	23,010	1.00	**F**	6	Arterial M	39,330	0.73	C	West Jackson
71.1	Jackson Rd	Excelsior Rd	Collector JT-3	2	Rural Hwy	23,020	1.01	**F**	4	Arterial M	62,220	1.73	**F**	Jackson Township
71.2	Jackson Rd	Collector JT-3	Tree View Ln	2	Rural Hwy	23,020	1.01	**F**	4	Arterial M	46,480	1.29	**F**	Jackson Township
71.3	Jackson Rd	Tree View Ln	Collector JT-4	2	Rural Hwy	22,990	1.00	**F**	4	Arterial M	41,360	1.15	**F**	Jackson Township
71.4	Jackson Rd	Collector JT-4	Eagles Nest Rd	2	Rural Hwy	23,020	1.01	**F**	4	Arterial M	37,600	1.04	**F**	Jackson Township
72.1	Jackson Rd	Eagles Nest Rd	Rockbridge Dr	2	Rural Hwy	21,910	0.96	E	4	Arterial M	37,120	1.03	**F**	NewBridge
72.2	Jackson Rd	Rockbridge Dr	Sunrise Blvd	2	Rural Hwy	22,630	0.99	E	4	Arterial M	37,910	1.05	**F**	NewBridge
73	Jackson Rd	Sunrise Blvd	Grant Line Rd	4	Arterial M	31,730	0.88	D	4	Arterial M	45,290	1.26	**F**	
74	Kiefer Blvd	Florin Perkins Rd	South Watt Ave	2	Arterial M	3,290	0.18	A	2	Arterial M	4,830	0.27	A	
75	Kiefer Blvd	South Watt Ave	Mayhew Rd	4	Arterial M	21,620	0.60	B	4	Arterial M	32,130	0.89	D	
76	Kiefer Blvd	Mayhew Rd	Bradshaw Rd	4	Arterial M	13,290	0.37	A	4	Arterial M	42,310	1.18	**F**	
77.1	Kiefer Boulevard	Bradshaw Road	Collector WJ-14	2	Arterial M	5,940	0.33	A	6	Arterial M	50,960	0.94	E	West Jackson
77.2	Kiefer Boulevard	Collector WJ-14	Routier Ext	2	Arterial M	6,100	0.34	A	6	Arterial M	47,140	0.87	D	West Jackson
77.3	Kiefer Boulevard	Routier Ext	Happy Lane	2	Arterial M	6,100	0.34	A	6	Arterial M	49,820	0.92	E	West Jackson
78.1	Kiefer Blvd	Eagles Nest Rd	W Collector MS-1	2	Arterial M	10,210	0.57	A	4	Arterial M	31,900	0.89	D	NewBridge; Mather South
78.2	Kiefer Blvd	W Collector MS-1	Northbridge Dr	2	Arterial M	10,210	0.57	A	4	Arterial M	29,740	0.83	D	NewBridge; Mather South
78.3	Kiefer Blvd	Northbridge Dr	E Collector MS-1	2	Arterial M	10,210	0.57	A	4	Arterial M	31,570	0.88	D	NewBridge; Mather South
78.4	Kiefer Blvd	E Collector MS-1	Sunrise Blvd	2	Arterial M	10,150	0.56	A	3	Arterial M	39,820	2.21	**F**	NewBridge
79	Kiefer Blvd	Sunrise Blvd	Rancho Cordova Pkwy	4	Arterial M	20,760	0.58	A	4	Arterial M	33,580	0.93	**E**	
80	Mather Blvd / Norden Ave	Von Karman St	Bleckely St	4	Arterial M	14,470	0.40	A	4	Arterial M	14,820	0.41	A	
81	Mather Blvd	Bleckely St	Femoyer St	4	Arterial M	14,470	0.40	A	4	Arterial M	14,820	0.41	A	
82	Mather Blvd	Femoyer St	Douglas Rd	2	Arterial M	14,510	0.81	D	2	Arterial M	14,850	0.83	D	
83	Mather Blvd-Excelsior Rd	Douglas Rd	Kiefer Blvd	2	Res Collector F	8,260	1.03	**F**	2	Res Collector F	6,410	0.80	E	
84	Mather Field Rd	US 50	Rockingham Dr	6	Arterial M	65,530	1.21	**F**	6	Arterial M	63,760	1.18	**F**	

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Table 6.4
CEQA Cumulative Roadway Segment Levels of Service

ID	Roadway	Segment		CEQA Cumulative No Project					CEQA Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
85	Mather Field Rd	Rockingham Dr	International Dr	6	Arterial M	71,740	1.33	**F**	6	Arterial M	73,260	1.36	**F**	
86	Mather Field Rd	International Dr	Peter A McCuen Blvd	6	Arterial M	15,810	0.29	A	6	Arterial M	16,910	0.31	A	
87	Mayhew Rd	Folsom Blvd	Goethe Rd	2	Arterial M	7,280	0.40	A	2	Arterial M	14,330	0.80	C	
88	Mayhew Rd	Goethe Rd	Kiefer Blvd	2	Arterial M	10,630	0.59	A	2	Arterial M	13,680	0.76	C	
89.1	Mayhew Rd	Jackson Rd	Rock Creek Pkwy	2	Arterial L	1,930	0.13	A	4	Arterial M	47,790	1.33	**F**	West Jackson
89.2	Mayhew Rd	Rock Creek Pkwy	Fruitridge Rd	2	Arterial L	1,930	0.13	A	4	Arterial M	46,860	1.30	**F**	West Jackson
90	Old Placerville Rd	Bradshaw Rd	Granby Dr	4	Arterial M	30,190	0.84	D	4	Arterial M	22,760	0.63	B	
91	Old Placerville Rd	Granby Dr	Happy Ln	2	Arterial M	26,590	1.48	**F**	2	Arterial M	20,690	1.15	**F**	
92	Old Placerville Rd	Happy Ln	Routier Rd	2	Arterial M	22,820	1.27	**F**	2	Arterial M	18,090	1.01	**F**	
93	Old Placerville Rd	Routier Rd	Rockingham Dr	4	Arterial M	24,070	0.67	B	4	Arterial M	36,350	1.01	**F**	
94	Power Inn Rd	Folsom Blvd	14th Ave	6	Arterial M	43,320	0.80	D	6	Arterial M	47,170	0.87	D	
95	Rockingham Dr	Old Placerville Rd	Mather Field Rd	4	Arterial M	31,970	0.89	D	4	Arterial M	40,280	1.12	**F**	
96	South Watt Ave	Folsom Blvd	Kiefer Blvd	6	Arterial M	68,980	1.28	**F**	6	Arterial M	81,880	1.52	**F**	
97	South Watt Ave	Kiefer Blvd	Jackson Rd	6	Arterial M	67,470	1.25	**F**	6	Arterial M	70,930	1.31	**F**	
98.1	South Watt Ave	Jackson Rd	Rock Creek Pkwy	6	Arterial M	61,290	1.14	**F**	6	Arterial M	59,970	1.11	**F**	
98.2	South Watt Ave	Rock Creek Pkwy	Fruitridge Rd	6	Arterial M	64,380	1.19	**F**	6	Arterial M	60,090	1.11	**F**	
99	South Watt Ave	Fruitridge Rd	Elder Creek Rd	6	Arterial M	61,240	1.13	**F**	6	Arterial M	59,400	1.10	**F**	
100	South Watt Ave	Elder Creek Rd	Florin Rd	6	Arterial M	55,580	1.03	**F**	6	Arterial M	59,670	1.11	**F**	
101	Sunrise Blvd	US 50	Folsom Blvd	7	Arterial M	64,250	1.19	**F**	7	Arterial M	63,100	1.17	**F**	
102	Sunrise Blvd	Folsom Blvd	Trade Center Dr	6	Arterial M	61,340	1.14	**F**	6	Arterial M	60,460	1.12	**F**	
103	Sunrise Blvd	Trade Center Dr	White Rock Rd	6	Arterial M	38,330	0.71	C	6	Arterial M	37,470	0.69	B	
104.1	Sunrise Blvd	White Rock Rd	International Dr	6	Arterial M	49,020	0.91	**E**	6	Arterial M	49,770	0.92	**E**	
104.2	Sunrise Blvd	International Dr	Rio Del Oro Pkwy	6	Arterial M	54,190	1.00	**F**	6	Arterial M	53,890	1.00	**E**	
104.3	Sunrise Blvd	Rio Del Oro Pkwy	Douglas Rd	6	Arterial M	54,110	1.00	**F**	6	Arterial M	63,690	1.18	**F**	
105	Sunrise Blvd	Douglas Rd	Kiefer Blvd	5	Arterial M	34,760	0.97	**E**	5	Arterial M	43,880	1.22	**F**	
106	Sunrise Blvd	Kiefer Blvd	Jackson Rd	4	Arterial M	30,000	0.83	D	4	Arterial M	33,930	0.94	**E**	
107	Sunrise Blvd	Jackson Rd	Florin Rd	4	Arterial M	28,280	0.79	C	4	Arterial M	30,370	0.84	D	
108	Sunrise Blvd	Florin Rd	Grant Line Rd	4	Arterial M	15,030	0.42	A	4	Arterial M	18,270	0.51	A	
109	Vineyard Rd	Gerber Rd	Calvine Rd	2	Arterial M	7,900	0.44	A	2	Arterial M	10,620	0.59	A	
110	Watt Ave	US 50	Folsom Blvd	6	Arterial H	98,040	1.63	**F**	6	Arterial H	106,480	1.77	**F**	
111	White Rock Rd	International Rd	Quality Dr	2	Arterial M	5,420	0.30	A	2	Arterial M	5,490	0.31	A	
112	White Rock Rd	Quality Dr	Zinfandel Dr	4	Arterial M	18,300	0.51	A	4	Arterial M	18,020	0.50	A	
113	White Rock Rd	Zinfandel Dr	Kilgore Rd	6	Arterial M	31,760	0.59	A	6	Arterial M	31,090	0.58	A	

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Table 6.4
CEQA Cumulative Roadway Segment Levels of Service

ID	Roadway	Segment		CEQA Cumulative No Project					CEQA Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
114	White Rock Rd	Kilgore Rd	Sunrise Blvd	5	Arterial M	40,310	1.12	**F**	5	Arterial M	39,540	1.10	**F**	
115	White Rock Rd	Sunrise Blvd	Fitzgerald Rd	4	Arterial M	34,470	0.96	**E**	4	Arterial M	35,570	0.99	**E**	
116.1	White Rock Rd	Fitzgerald Rd	Rancho Cordova Pkwy	4	Arterial M	56,320	1.56	**F**	4	Arterial M	55,810	1.55	**F**	
116.2	White Rock Rd	Rancho Cordova Pkwy	Americanos Blvd	4	Arterial M	22,050	0.61	B	4	Arterial M	21,040	0.58	A	
116.3	White Rock Rd	Americanos Blvd	Grant Line Rd	4	Arterial M	15,870	0.44	A	4	Arterial M	16,530	0.46	A	
117	White Rock Rd	Grant Line Rd	Prairie City Rd	4	Arterial H	53,780	1.34	**F**	4	Arterial H	56,000	1.40	**F**	
118	Zinfandel Dr	US 50	White Rock Rd	7	Arterial M	82,790	1.53	**F**	7	Arterial M	81,540	1.51	**F**	
119	Zinfandel Dr	White Rock Rd	International Rd	6	Arterial M	40,800	0.76	C	6	Arterial M	42,520	0.79	C	
120	Zinfandel Dr	International Rd	Baroque Dr	6	Arterial M	32,660	0.60	B	6	Arterial M	33,450	0.62	B	
121	Zinfandel Dr	Baroque Dr	City Limit	4	Arterial M	32,660	0.91	**E**	4	Arterial M	33,450	0.93	**E**	
122	Zinfandel Dr	City Limit	Douglas Rd	2	Arterial M	32,660	1.81	**F**	2	Arterial M	33,450	1.86	**F**	
123.1	Zinfandel Dr	Douglas Rd	Collector MS-2	4	Arterial M	14,770	0.41	A	4	Arterial M	22,250	0.62	B	
123.2	Zinfandel Dr	Collector MS-2	Collector MS-3	4	Arterial M	12,590	0.35	A	4	Arterial M	16,860	0.47	A	
123.3	Zinfandel Dr	Collector MS-3	Collector MS-4	4	Arterial M	0	0.00	A	4	Arterial M	17,200	0.48	A	
123.4	Zinfandel Dr	Collector MS-4	Kiefer Blvd	4	Arterial M	12,590	0.35	A	4	Arterial M	16,970	0.47	A	
124	14th Ave	Power Inn Rd	Florin Perkins Rd	4	Arterial M	15,910	0.44	A	4	Arterial M	27,820	0.77	C	
125	14th Ave	Florin Perkins Rd	Jackson Rd	4	Arterial M	9,360	0.26	A	4	Arterial M	17,910	0.50	A	
126	Chrysanthy Blvd	Rancho Cordova Pkwy	Americanos Blvd	4	Arterial M	22,200	0.62	B	4	Arterial M	21,510	0.60	A	
127	Chrysanthy Blvd	Americanos Blvd	Grant Line Rd	2	Arterial M	16,570	0.92	**E**	2	Arterial M	15,790	0.88	D	
128	Douglas Rd (Extension)	Mather Blvd	Kiefer Blvd	4	Arterial M	7,380	0.21	A	4	Arterial M	20,970	0.58	A	
129	International Dr	Sunrise Blvd	Rancho Cordova Pkwy	6	Arterial M	31,010	0.57	A	6	Arterial M	31,560	0.58	A	
130	International Dr	Rancho Cordova Pkwy	Americanos Blvd	6	Arterial M	19,350	0.36	A	6	Arterial M	18,670	0.35	A	
131	Kiefer Blvd	Rancho Cordova Pkwy	Americanos Blvd	2	Arterial M	3,870	0.22	A	2	Arterial M	9,730	0.54	A	
132	Kiefer Blvd	Americanos Blvd	Grant Line Rd	2	Arterial M	10,250	0.57	A	2	Arterial M	19,200	1.07	**F**	
133	Rancho Cordova Pkwy	US 50	Easton Valley Pkwy	6	Arterial M	70,390	1.30	**F**	6	Arterial M	69,710	1.29	**F**	
134	Rancho Cordova Pkwy	Easton Valley Pkwy	White Rock Rd	6	Arterial M	72,220	1.34	**F**	6	Arterial M	72,320	1.34	**F**	
135	Rancho Cordova Pkwy	White Rock Rd	International Dr	6	Arterial M	46,590	0.86	D	6	Arterial M	49,960	0.93	**E**	
136	Rancho Cordova Pkwy	International Dr	Rio Del Oro Pkwy	6	Arterial M	55,520	1.03	**F**	6	Arterial M	59,540	1.10	**F**	
137	Rancho Cordova Pkwy	Rio Del Oro Pkwy	Villagio Dr	4	Arterial M	37,890	1.05	**F**	4	Arterial M	37,840	1.05	**F**	
138	Rancho Cordova Pkwy	Villagio Dr	Douglas Rd	4	Arterial M	32,060	0.89	D	4	Arterial M	32,000	0.89	D	
139	Rancho Cordova Pkwy	Douglas Rd	Chrysanthy Blvd	4	Arterial M	34,220	0.95	**E**	4	Arterial M	33,340	0.93	**E**	
140	Rancho Cordova Pkwy	Chrysanthy Blvd	Kiefer Blvd	4	Arterial M	20,780	0.58	A	4	Arterial M	19,280	0.54	A	
141	Rancho Cordova Pkwy	Kiefer Blvd	Grant Line Rd	2	Arterial M	15,510	0.86	D	2	Arterial M	14,180	0.79	C	
142	Americanos Blvd	White Rock Rd	Douglas Rd	2	Arterial M	5,630	0.31	A	2	Arterial M	6,150	0.34	A	
143	Americanos Blvd	Douglas Rd	Chrysanthy Blvd	2	Arterial M	9,560	0.53	A	2	Arterial M	9,060	0.50	A	

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Table 6.4
CEQA Cumulative Roadway Segment Levels of Service

ID	Roadway	Segment		CEQA Cumulative No Project					CEQA Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
144	Americanos Blvd	Chrysanthy Blvd	Kiefer Blvd	2	Arterial M	9,030	0.50	A	2	Arterial M	8,210	0.46	A	
145	Vineyard Rd	Florin Rd	Gerber Rd	4	Arterial M	1,500	0.04	A	4	Arterial M	10,060	0.28	A	
146	Rio Del Oro Pkwy	Sunrise Blvd	Rancho Cordova Pkwy	6	Arterial M	24,000	0.44	A	6	Arterial M	31,920	0.59	A	
147	Rio Del Oro Pkwy	Rancho Cordova Pkwy	White Rock Rd	2	Arterial M	8,220	0.46	A	2	Arterial M	8,590	0.48	A	
200	Kiefer Blvd	Tree View Ln	Eagles Nest Rd						4	Arterial M	37,180	1.03	**F**	West Jackson; Jackson Township; NewBridge; Mather South
300	Douglas Rd	Excelsior Rd	Rock Creek Pkwy	4	Arterial M	7,380	0.21	A	4	Arterial M	27,160	0.75	C	West Jackson
301	Douglas Rd	Rock Creek Pkwy	Kiefer Blvd	4	Arterial M	7,380	0.21	A	4	Arterial M	36,990	1.03	**F**	West Jackson
302	Kiefer Blvd	Happy Ln	Douglas Rd						6	Arterial M	63,170	1.17	**F**	West Jackson
303	Kiefer Blvd	Douglas Rd	Excelsior Rd						4	Arterial M	33,150	0.92	E	West Jackson
304	Mayhew Rd	Routier Ext	Bradshaw Rd						4	Arterial M	39,470	1.10	**F**	West Jackson
305	Mayhew Rd	Bradshaw Rd	Jackson Rd						4	Arterial M	40,970	1.14	**F**	West Jackson
306	Mayhew Rd	Fruitridge Rd	Collector WJ-13						4	Arterial M	30,030	0.83	D	West Jackson
307	Mayhew Rd	Collector WJ-13	Elder Creek Rd						3	Arterial M	32,580	1.81	**F**	West Jackson
308	Rock Creek Pkwy	South Watt Ave	Hedge Ave						2	Arterial M	7,450	0.41	A	West Jackson
309	Rock Creek Pkwy	Hedge Ave	Mayhew Rd						2	Arterial M	10,940	0.61	B	West Jackson
310	Rock Creek Pkwy	Mayhew Rd	Bradshaw Rd						2	Arterial M	4,730	0.26	A	West Jackson
311	Rock Creek Pkwy East	Excelsior Road	Collector WJ-16						2	Arterial M	13,510	0.75	C	West Jackson
312	Rock Creek Pkwy East	Collector WJ-16	Jackson Road						2	Arterial M	19,230	1.07	**F**	West Jackson
313	Vineyard Rd	Jackson Road	New Collector						4	Arterial M	31,060	0.86	D	West Jackson
314	Vineyard Rd	New Collector	Collector WJ-18						4	Arterial M	26,270	0.73	C	West Jackson
315	Vineyard Rd	Collector WJ-18	Elder Creek Road						4	Arterial M	25,590	0.71	C	West Jackson
316	Vineyard Rd	Elder Creek Road	Florin Road						4	Arterial M	14,340	0.40	A	West Jackson
317	Routier Ext	Old Placerville Road	Happy Lane						4	Arterial H	41,410	1.04	**F**	West Jackson
318	Routier Ext	Happy Lane	Kiefer Boulevard						4	Arterial H	34,670	0.87	D	West Jackson
319	Routier Ext	Kiefer Boulevard	Mayhew Road						4	Arterial H	39,110	0.98	E	West Jackson
320	Collector WJ-16	Rock Creek Pkwy	Collector WJ-6						2	Res Collector F	950	0.12	A	West Jackson
321	Collector WJ-17	Rock Creek Pkwy	Collector WJ-6						2	Res Collector F	850	0.11	A	West Jackson
322	Collector WJ-6	Collector WJ-16/WJ-17	Jackson Road						2	Res Collector F	2,730	0.34	B	West Jackson

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Table 6.4
CEQA Cumulative Roadway Segment Levels of Service

ID	Roadway	Segment		CEQA Cumulative No Project					CEQA Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
323	Collector WJ-6	Jackson Road	Collector WJ-18						2	Res Collector F	3,640	0.46	C	West Jackson
324	Collector WJ-2	Excelsior Road	Collector WJ-6						2	Res Collector F	2,860	0.36	B	West Jackson
325	Collector WJ-18	Vineyard Rd	Collector WJ-6						2	Res Collector F	3,360	0.42	C	West Jackson
326	Collector WJ-18	Collector WJ-6	Excelsior Road						2	Res Collector F	3,270	0.41	C	West Jackson
327	Collector WJ-19	Bradshaw Road	Vineyard Road						2	Arterial M	7,820	0.43	A	West Jackson
400	Collector JT-1	Excelsior Rd	Collector JT-3						2	Res Collector F	4,570	0.57	C	Jackson Township
401	Collector JT-1	Collector JT-3	Tree View Ln						2	Res Collector F	1,550	0.19	A	Jackson Township
402	Collector JT-3	Kiefer Blvd	Collector JT-1						2	Res Collector F	1,840	0.23	B	Jackson Township
403	Collector JT-3	Collector JT-1	Collector JT-6						2	Res Collector F	1,290	0.16	A	Jackson Township
404	Collector JT-3	Collector JT-6	Collector JT-5						2	Res Collector F	2,630	0.33	B	Jackson Township
405	Collector JT-3	Collector JT-5	Jackson Rd						2	Arterial M	20,070	1.12	**F**	Jackson Township
406	Collector JT-4	Jackson Rd	Bridgewater Dr						2	Arterial M	4,440	0.25	A	Jackson Township
407	Collector JT-5	Collector JT-3	Tree View Ln						2	Arterial M	10,100	0.56	A	Jackson Township
408	Collector JT-6	Excelsior Rd	Collector JT-3						2	Res Collector F	4,370	0.55	C	Jackson Township
409	Collector JT-6	Collector JT-3	Tree View Ln						2	Res Collector F	850	0.11	A	Jackson Township
410	Kiefer Blvd	Excelsior Rd	Tree View Ln						4	Arterial M	31,510	0.88	D	Jackson Township
411	Tree View Ln	Kiefer Blvd	Collector JT-1						4	Arterial M	10,660	0.30	A	Jackson Township
412	Tree View Ln	Collector JT-1	Collector JT-6						2	Arterial M	10,340	0.57	A	Jackson Township
413	Tree View Ln	Collector JT-6	Collector JT-5						2	Arterial M	10,250	0.57	A	Jackson Township
414	Tree View Ln	Collector JT-5	Jackson Rd						4	Arterial M	7,370	0.20	A	Jackson Township
415	Collector JT-7	Collector JT-3	Tree View Ln						2	Arterial M	1,590	0.09	A	Jackson Township
416	Collector JT-8	Collector JT-3	Tree View Ln						2	Arterial M	1,740	0.10	A	Jackson Township

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Table 6.4
CEQA Cumulative Roadway Segment Levels of Service

ID	Roadway	Segment		CEQA Cumulative No Project					CEQA Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
417	Collector JT-9	Jackson Rd	Collector JT-8						2	Arterial M	3,600	0.20	A	Jackson Township
418	Collector JT-10	Jackson Rd	Collector JT-8						2	Arterial M	1,570	0.09	A	Jackson Township
419	Collector JT-6	Tree View Ln	Jackson Rd						2	Res Collector F	1,770	0.22	B	Jackson Township
500	S Bridgewater Dr	Collector JT-4	Eagles Nest Rd						2	Res Collector F	5,220	0.65	D	NewBridge
501	S Bridgewater Dr	Eagles Nest Rd	Northbridge Dr						2	Res Collector F	4,620	0.58	C	NewBridge
502	N Bridgewater Dr	Northbridge Dr	Eagles Nest Rd						2	Res Collector F	1,240	0.16	A	NewBridge
503	Northbridge Dr	Kiefer Blvd	Bridgewater Dr						2	Arterial M	4,320	0.24	A	NewBridge
504	Street A	S Bridgewater Dr	Street B						2	Res Collector F	1,800	0.23	B	NewBridge
505	Street B	S Bridgewater Dr	Street A						2	Res Collector F	1,440	0.18	A	NewBridge
506	Rockbridge Dr	Street B	Stonebridge Dr						2	Res Collector F	1,850	0.23	B	NewBridge
507	Rockbridge Dr	Stonebridge Dr	Jackson Rd						2	Arterial M	7,640	0.42	A	NewBridge
508	Stonebridge Dr	S Bridgewater Dr	Rockbridge Dr						2	Arterial M	2,480	0.14	A	NewBridge
509	Stonebridge Dr	Rockbridge Dr	Jackson Rd						2	Res Collector F	4,440	0.56	C	NewBridge
600	Collector MS-1	Kiefer Boulevard	Collector MS-5						2	Arterial M	16,870	0.94	E	Mather South
601	Collector MS-1	Collector MS-5	Collector MS-4						2	Arterial M	7,670	0.43	A	Mather South
602	Collector MS-1	Collector MS-4	Collector MS-3						2	Res Collector F	6,350	0.79	D	Mather South
603	Collector MS-1	Collector MS-3	Collector MS-2						2	Arterial M	3,140	0.17	A	Mather South
604	Collector MS-2	Eagles Nest Road	Collector MS-5						2	Arterial M	8,910	0.50	A	Mather South
605	Collector MS-3	Eagles Nest Road	Collector MS-5						2	Arterial M	6,860	0.38	A	Mather South
606	Collector MS-4	Eagles Nest Road	Collector MS-5						2	Arterial M	7,130	0.40	A	Mather South
607	Collector MS-5	Kiefer Boulevard	Collector MS-1						2	Arterial M	8,770	0.49	A	Mather South

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Table 6.4
CEQA Cumulative Roadway Segment Levels of Service

ID	Roadway	Segment		CEQA Cumulative No Project					CEQA Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	

Note: Gray shading indicates changes in travel lanes or facility type that the project is responsible to provide.

[1] The following classifications are used to determine daily roadway capacity:
Arterial L - Arterial, Low Access Control
Arterial M - Arterial, Moderate Access Control
Arterial H - Arterial, High Access Control
Rural Hwy - Rural 2-lane Highway
Rural S - Rural 2-lane Road, 24'-36' of pavement, Paved Shoulders
Rural NS - Rural 2-lane Road, 24'-36' of pavement, No Shoulders
Res Collector F - Residential Collector with Frontage
Res Collector NF - Residential Collector with No Frontage

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Table 6.5

CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS			LOS Impact	CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
1	Howe Avenue & College Town Drive/US 50 WB Ramps	Signal	D	45.6	Signal	D	34.3	No	Signal	E	77.0	Signal	E	73.6	No
2	Howe Avenue & US 50 EB Ramps	Signal	C	34.6	Signal	D	50.5	No	Signal	B	16.5	Signal	C	23.6	No
3	Power Inn Road/Howe Avenue & Folsom Blvd	Signal	**F**	**88.0**	Signal	**F**	**108.2**	Yes	Signal	E	66.5	Signal	**F**	**88.4**	Yes
4	Power Inn Road & 14th Avenue	Signal	**E**	**61.0**	Signal	**F**	**166.0**	Yes	Signal	**E**	**72.6**	Signal	**F**	**123.7**	Yes
5	Power Inn Road & Fruitridge Road	Signal	**F**	**114.5**	Signal	**F**	**112.7**	No	Signal	D	47.4	Signal	D	48.7	No
6	Jackson Road/Notre Dame Dr. & Folsom Blvd.	Signal	C	27.7	Signal	C	27.8	No	Signal	C	24.1	Signal	D	38.6	No
7	Florin Perkins Road/Julliard Dr. & Folsom Boulevard	Signal	C	20.8	Signal	C	29.6	No	Signal	D	41.2	Signal	C	31.2	No
8	Florin Perkins Road & Kiefer Blvd.	Two-way stop			Two-way stop			No	Two-way stop			Two-way stop			No
	Westbound Left Turn		*C*	*16.4*		*C*	*21.3*			*C*	*20.7*		*E*	*35.1*	
	Westbound Right Turn		*C*	*10.9*		*B*	*12.2*			*B*	*11.2*		*B*	*13.6*	
	Southbound Left Turn		*A*	*9.3*		*B*	*10.1*			*B*	*10.4*		*B*	*13.4*	
9	Florin Perkins Road & Jackson Road	Signal	C	25.1	Signal	D	46.3	No	Signal	D	38.5	Signal	D	49.0	No
10	Florin Perkins Road & Fruitridge Road	Signal	C	26.7	Signal	D	40.4	No	Signal	D	50.3	Signal	D	41.7	No
11	Florin Perkins Road & Elder Creek Road	Signal	C	31.7	Signal	C	29.4	No	Signal	C	30.0	Signal	C	33.4	No
12	Watt Avenue & Folsom Blvd.	Signal	**F**	**169.1**	Signal	**F**	**182.3**	Yes	Signal	**F**	**140.0**	Signal	**F**	**199.9**	Yes
13	S. Watt Ave. & Reith Ct/Manlove Road	Signal	B	15.7	Signal	B	13.5	No	Signal	A	9.8	Signal	B	10.9	No
14	S. Watt Avenue & Kiefer Blvd.	Signal	E	62.2	Signal	**F**	**91.8**	Yes	Signal	D	41.7	Signal	E	73.3	No

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Table 6.5

CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS			LOS Impact	CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
15	S. Watt Avenue & Canberra Dr.	Signal	B	13.4	Signal	B	13.6	No	Signal	A	9.1	Signal	A	9.2	No
16	S. Watt Avenue & Jackson Road	Signal	**F**	**135.9**	Signal	**F**	**237.3**	Yes	Signal	**F**	**98.2**	Signal	**F**	**185.0**	Yes
17	S. Watt Avenue & Fruitridge Road	Signal	D	44.4	Signal	**F**	**93.1**	Yes	Signal	**E**	**79.3**	Signal	**F**	**114.3**	Yes
18	S. Watt Avenue & Elder Creek Road	Signal	**F**	**222.9**	Signal	**F**	**160.8**	No	Signal	**F**	**177.7**	Signal	**F**	**116.5**	No
20	Elk Grove Florin Road/S. Watt Ave. & Florin Road	Signal	**F**	**199.7**	Signal	**F**	**>300**	Yes	Signal	**F**	**137.1**	Signal	**F**	**238.2**	Yes
21	Elk Grove Florin Road & Gerber Road	Signal	E	56.7	Signal	E	59.3	No	Signal	E	74.9	Signal	E	78.2	No
23	Hedge Avenue & Jackson Road	Signal	C	34.7	Signal	**F**	**123.1**	Yes	Signal	B	16.3	Signal	D	41.8	No
24	Hedge Avenue & Fruitridge Road	All-way stop	E	44.2	All-way stop	C	34.3	No	All-way stop	D	30.7	All-way stop	D	36.5	No
25	Hedge Avenue & Elder Creek Road	Signal	**F**	**103.7**	Signal	**F**	**138.8**	Yes	Signal	**F**	**103.2**	Signal	**F**	**135.0**	Yes
26	Hedge Avenue & Tokay Lane	Two-way stop			Two-way stop			No	Two-way stop			Two-way stop			No
	Northbound Left Turn		*A*	*0.0*		*A*	*0.0*			*A*	*0.0*		*A*	*0.0*	
	Southbound Left Turn		*B*	*10.9*		*B*	*10.9*			*A*	*9.3*		*A*	*9.3*	
	Eastbound		***F***	***99.5***		***F***	***102.1***			*E*	*47.3*		*E*	*49.9*	
	Westbound		***F***	***52.9***		***F***	***52.9***			*E*	*38.3*		*E*	*38.0*	
27	Hedge Avenue & Florin Road	All-way stop	B	15.8	Signal	A	9.9	No	All-way stop	B	12.6	Signal	A	6.1	No
28	Mayhew Road & Kiefer Boulevard	Signal	C	27.7	Signal	**F**	**91.2**	Yes	Signal	D	44.9	Signal	E	74.2	No

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Table 6.5

CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS			LOS Impact	CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
29	Mayhew Road & Jackson Road	Two-way stop			Signal	F	117.9	Yes	Two-way stop			Signal	F	107.2	Yes
	Northbound Through - Left Turn		***F***	***114.1***						***F***	***>300***				
	Northbound Right Turn		*C*	*16.1*						*C*	*18.5*				
	Southbound		***F***	***99.2***						***F***	***>300***				
	Eastbound Left Turn		*B*	*13.5*						*B*	*11.0*				
	Westbound Left Turn		*B*	*11.2*						*C*	*17.6*				
30	Mayhew Road & Fruitridge Road	Two-way stop			Signal	B	18.5	No	Two-way stop			Signal	B	18.8	No
	Northbound Left Turn		*A*	*0.0*						*A*	*7.5*				
	Eastbound		*A*	*9.8*						*A*	*9.3*				
31	Mayhew Road & Elder Creek Road	Signal	A	7.0	Signal	F	>300	Yes	Signal	A	6.0	Signal	F	<300	Yes
32	Woodring Drive & Zinfandel Drive	Two-way stop			Two-way stop			Yes	Two-way stop			Two-way stop			Yes
	Eastbound		*C*	*20.1*		***F***	***85.0***			*A*	*9.0*		***F***	***223.4***	
	Northbound Left Turn		*A*	*8.0*		*B*	*10.6*			*A*	*0.0*		*B*	*12.4*	
33	Bradshaw Road & Folsom Blvd.	Signal	C	31.9	Signal	C	25.5	No	Signal	C	25.3	Signal	C	22.4	No
34	Bradshaw Road & US 50 WB Ramps	Signal	A	7.8	Signal	B	11.1	No	Signal	A	8.9	Signal	B	12.2	No
35	Bradshaw Road & US 50 EB Ramps	Signal	C	24.5	Signal	D	54.7	No	Signal	B	15.1	Signal	D	39.5	No
36	Bradshaw Road & Old Placerville Road	Signal	**F**	**81.9**	Signal	F	101.6	Yes	Signal	**E**	**68.1**	Signal	F	82.4	Yes
37	Bradshaw Road & Kiefer Boulevard	Signal	C	27.6	Signal	F	144.2	Yes	Signal	D	54.1	Signal	F	137.6	Yes
38	Bradshaw Road & Jackson Road	Signal	**F**	**186.0**	Signal	**F**	**172.2**	No	Signal	**F**	**118.2**	Signal	F	161.0	Yes
39	Bradshaw Road & Elder Creek Road	Signal	**F**	**122.6**	Signal	F	173.1	Yes	Signal	**F**	**98.8**	Signal	F	201.7	Yes

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Table 6.5

CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS			LOS Impact	CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
40	Bradshaw Road & Florin Road	Signal	**F**	**129.5**	Signal	**F**	**125.3**	No	Signal	E	59.7	Signal	**F**	**89.9**	Yes
41	Bradshaw Road & Gerber Road	Signal	**F**	**83.1**	Signal	**F**	**80.6**	No	Signal	D	43.0	Signal	D	49.7	No
42	Happy Lane & Old Placerville Road	Two-way stop			Two-way stop			Yes	Two-way stop			Two-way stop			Yes
	Northbound Left Turn		***F***	***>300***		***F***	***>300***			*F*	*294.1*		***F***	***>300***	
	Northbound Right Turn		***E***	***40.9***		***F***	***236.0***			*C*	*16.9*		*C*	*19.2*	
	Westbound Left Turn		*C*	*16.0*		*C*	*23.4*			*C*	*15.3*		***F***	***53.3***	
43	Happy Lane & Kiefer Boulevard	Free Turn			Signal	**F**	**139.2**	Yes	Free Turn			Signal	E	67.8	No
44	Excelsior Road & Kiefer Boulevard	Two-way stop	A	0.0	Signal	A	9.9	No	Two-way stop	A	0.0	Signal	B	14.0	No
45	Excelsior Road & Jackson Road	Signal	E	59.9	Signal	**F**	**330.8**	Yes	Signal	D	39.0	Signal	**F**	**269.1**	Yes
46	Excelsior Road & Elder Creek Road	Two-way stop			Signal	**F**	**81.2**	No	Two-way stop			Signal	E	58.8	No
	Northbound Left Turn		*A*	*7.9*						*A*	*7.9*				
	Eastbound		***F***	***>300***						*D*	*30.0*				
47	Excelsior Road & Florin Road	All-way stop	**F**	**62.4**	Signal	**F**	**111.2**	Yes	All-way stop	**F**	**67.3**	Signal	E	74.2	No
48	Excelsior Road & Gerber Road/Birch Ranch Drive	Signal	B	13.6	Signal	B	11.7	No	Signal	B	14.3	Signal	B	11.7	No
49	Mather Field Road & US 50 WB Ramps	Signal	B	14.4	Signal	B	18.1	No	Signal	A	8.6	Signal	B	10.1	No
50	Mather Field Road & US 50 EB Ramps	Signal	B	19.2	Signal	B	17.9	No	Signal	C	21.1	Signal	B	14.6	No
51	Mather Field Road & Rockingham Drive	Signal	**F**	**156.5**	Signal	**F**	**>300**	Yes	Signal	**F**	**119.4**	Signal	**F**	**170.3**	Yes
52	Mather Boulevard & Douglas Road	Signal	E	55.6	Signal	E	62.1	Yes	Signal	C	27.2	Signal	E	66.9	Yes

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Table 6.5

CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS			LOS Impact	CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
53	Zinfandel Drive & US 50 WB Ramps	Signal	C	20.9	Signal	B	10.6	No	Signal	**E**	**65.0**	Signal	D	49.1	No
54	Zinfandel Drive & US 50 EB Ramps/Gold Center Drive	Signal	**F**	**120.8**	Signal	**F**	**116.8**	No	Signal	**F**	**95.0**	Signal	**E**	**79.3**	No
55	Zinfandel Drive & White Rock Road	Signal	**E**	**76.3**	Signal	**E**	**68.2**	No	Signal	**F**	**117.3**	Signal	**F**	**111.6**	No
56	Zinfandel Drive & Data Drive	Signal	B	18.9	Signal	B	19.1	No	Signal	C	25.6	Signal	C	26.7	No
57	Zinfandel Drive & International Dr	Signal	**E**	**77.2**	Signal	**E**	**77.5**	No	Signal	**F**	**97.3**	Signal	**F**	**81.8**	No
58	Zinfandel Drive & Douglas Road	Signal	**F**	**156.8**	Signal	**F**	**216.8**	Yes	Signal	E	73.1	Signal	**F**	**220.1**	Yes
59	Eagles Nest Road/Zinfandel Drive & Kiefer Boulevard	Two-way stop			Signal	D	42.5	No	Two-way stop			Signal	D	39.2	No
	Southbound Left Turn		*A*	*8.1*						*A*	*9.2*				
	Westbound		***F***	***85.8***						***F***	***208.0***				
60	Eagles Nest Road & Jackson Road	Signal	C	23.0	Signal	E	69.6	No	Signal	C	23.3	Signal	E	63.7	No
61	Eagles Nest Road & Florin Road	Two-way stop			Two-way stop			Yes	Two-way stop			Two-way stop			Yes
	Northbound		***F***	***>300***		***F***	***>300***			***F***	***>300***		***F***	***>300***	
	Southbound		***F***	***>300***		***F***	***>300***			***F***	***>300***		***F***	***>300***	
	Eastbound Left Turn		*B*	*10.2*		*B*	*11.3*			*A*	*8.5*		*A*	*9.3*	
	Westbound Left Turn		*A*	*0.0*		*A*	*0.0*			*A*	*9.4*		*A*	*8.7*	
62	Sunrise Boulevard & US 50 WB Ramps	Signal	**E**	**68.1**	Signal	**E**	**71.2**	No	Signal	C	22.7	Signal	C	21.5	No
63	Sunrise Boulevard & US 50 EB Ramps	Signal	B	10.2	Signal	B	10.1	No	Signal	B	12.7	Signal	B	13.2	No
64	Sunrise Boulevard & Folsom Boulevard	Signal	D	43.5	Signal	D	47.3	No	Signal	D	40.5	Signal	D	43.1	No

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Table 6.5

CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS			LOS Impact	CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
65	Sunrise Boulevard & White Rock Road	Signal	**E**	**69.3**	Signal	**E**	**69.5**	No	Signal	**F**	**127.3**	Signal	**F**	**126.9**	No
66	Sunrise Boulevard & International Drive/Monier Circle	Signal	**F**	**109.1**	Signal	**F**	**118.6**	Yes	Signal	**F**	**81.3**	Signal	**E**	**76.7**	No
67	Sunrise Boulevard & Douglas Road	Signal	**F**	**140.5**	Signal	**F**	**190.0**	Yes	Signal	**E**	**73.5**	Signal	**F**	**105.4**	Yes
68	Sunrise Boulevard & Chrysanthy Boulevard	Signal	C	21.4	Signal	B	18.8	No	Signal	A	9.4	Signal	B	10.2	No
69	Sunrise Boulevard & Kiefer Boulevard	Signal	**F**	**151.0**	Signal	**F**	**>300**	Yes	Signal	**F**	**138.0**	Signal	**F**	**261.4**	Yes
70	Sunrise Boulevard & Jackson Road	Signal	D	39.6	Signal	**F**	**90.0**	Yes	Signal	D	45.4	Signal	**E**	**79.3**	Yes
71	Sunrise Boulevard & Florin Road	Signal	D	50.3	Signal	C	22.9	No	Signal	E	57.4	Signal	D	45.9	No
72	Sheldon Lake Drive/Sunrise Boulevard & Grant Line Road	Signal	**F**	**91.2**	Signal	**F**	**120.4**	Yes	Signal	C	33.1	Signal	**E**	**71.0**	Yes
73	Hazel Avenue & Tributary Point Drive/US 50 WB Off-ramp	Signal	**F**	**148.3**	Signal	**F**	**149.4**	No	Signal	**F**	**103.3**	Signal	**F**	**105.3**	No
74	Hazel Avenue & US 50 EB Ramps	Signal	B	16.4	Signal	B	17.6	No	Signal	**F**	**83.6**	Signal	**F**	**81.4**	No
76	Prairie City Road & White Rock Road	Signal	C	32.8	Signal	**D**	**37.6**	No	Signal	**D**	**35.2**	Signal	**D**	**36.1**	No
77	Grant Line Road & White Rock Road	Signal	C	26.1	Signal	B	16.2	No	Signal	C	29.8	Signal	C	33.4	No
78	Grant Line Road & Douglas Road	Signal	**D**	**44.8**	Signal	**D**	**39.0**	No	Signal	**F**	**107.9**	Signal	**F**	**92.2**	No
79	Grant Line Road & Kiefer Boulevard	Signal	B	12.5	Signal	B	14.7	No	Signal	B	10.6	Signal	B	16.8	No
80	Grant Line Road & Jackson Road	Signal	**F**	**88.9**	Signal	**F**	**119.0**	Yes	Signal	**E**	**67.4**	Signal	**F**	**101.1**	Yes

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CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS			LOS Impact	CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
81	Watt Avenue & US-50 EB Ramps	Signal	C	23.3	Signal	C	33.1	No	Signal	B	15.6	Signal	B	18.8	No
82	Watt Avenue & US-50 WB Ramps	Signal	**F**	**82.8**	Signal	**E**	**67.2**	No	Signal	**E**	**57.1**	Signal	**E**	**61.2**	No
83	Mayhew Rd & Folsom Blvd.	Signal	B	12.8	Signal	B	19.8	No	Signal	B	15.8	Signal	C	20.4	No
84	65th Street Expy & Fruitridge Road	Signal	D	44.3	Signal	D	46.0	No	Signal	D	41.1	Signal	D	46.2	No
85	Power Inn Road & Elder Creek Road	Signal	E	67.3	Signal	E	79.0	No	Signal	D	45.0	Signal	E	61.6	No
86	Power Inn Road & Florin Rd	Signal	**F**	**97.4**	Signal	**F**	**119.3**	Yes	Signal	E	65.8	Signal	E	73.9	No
87	Florin Perkins Road & Florin Rd	Signal	D	44.2	Signal	E	60.6	No	Signal	**F**	**107.4**	Signal	**F**	**111.6**	No
88	Bradshaw Rd & Calvine Rd	Signal	C	26.4	Signal	D	37.0	No	Signal	C	20.9	Signal	C	25.0	No
89	Vineyard Rd & Calvine Rd	Signal	B	18.5	Signal	B	18.6	No	Signal	B	17.6	Signal	B	19.5	No
90	Excelsior Road & Calvine Rd	Signal	B	12.8	Signal	C	29.0	No	Signal	B	12.9	Signal	B	17.9	No
91	Grant Line Rd & Eagles Nest Rd/Sloughhouse Rd	Signal	C	34.4	Signal	**D**	**43.2**	Yes	Signal	**D**	**44.8**	Signal	**D**	**52.0**	Yes
92	Grant Line Rd & Calvine Rd	Signal	C	32.4	Signal	**D**	**36.5**	Yes	Signal	C	33.3	Signal	C	30.9	No
93	Grant Line Rd & Dwy/Wilton Rd	Signal	**E**	**78.8**	Signal	**F**	**83.4**	Yes	Signal	**E**	**69.8**	Signal	**F**	**95.2**	Yes
94	Grant Line Rd & Bond Rd/Wrangler Dr	Signal	B	14.8	Signal	B	17.6	No	Signal	B	15.5	Signal	B	17.3	No
95	Florin Perkins Road & 14th Avenue	Signal	D	44.1	Signal	**E**	**67.8**	Yes	Signal	C	30.9	Signal	D	46.9	No

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CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS			LOS Impact	CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
96	Jackson Road & 14th Avenue	Signal	**F**	**91.0**	Signal	**F**	**119.3**	Yes	Signal	B	15.3	Signal	**E**	**57.0**	Yes
98	Aspen 1 Access Road & Jackson Road	Signal	A	0.0	Signal	A	0.0	No	Signal	A	6.6	Signal	A	0.0	No
99	Rancho Cordova Pkwy & US-50 WB Ramps	Signal	**F**	**147.0**	Signal	**F**	**147.6**	No	Signal	**F**	**117.9**	Signal	**F**	**104.1**	No
100	Rancho Cordova Pkwy & US-50 EB Ramps	Signal	C	24.0	Signal	B	16.9	No	Signal	C	28.3	Signal	C	30.1	No
101	Rancho Cordova Pkwy & Easton Valley Pkwy	Signal	C	24.2	Signal	C	24.7	No	Signal	B	11.2	Signal	B	14.5	No
102	Rancho Cordova Pkwy & White Rock Road	Signal	**F**	**221.3**	Signal	**F**	**200.8**	No	Signal	**F**	**135.5**	Signal	**F**	**128.0**	No
103	Rancho Cordova Pkwy & Douglas Road	Signal	**E**	**67.2**	Signal	**E**	**57.2**	No	Signal	**E**	**58.0**	Signal	**E**	**76.1**	Yes
104	Rancho Cordova Pkwy & Chrysanthy Boulevard/Chrysanthy Blvd	Signal	**F**	**105.7**	Signal	**F**	**93.5**	No	Signal	D	54.9	Signal	D	54.9	No
105	Rancho Cordova Pkwy & Kiefer Blvd	Signal	B	17.9	Signal	C	20.9	No	Signal	B	16.1	Signal	B	19.4	No
106	Rancho Cordova Pkwy & Grant Line Road	Signal	**E**	**78.8**	Signal	**D**	**38.4**	No	Signal	C	28.8	Signal	B	14.8	No
107	Americanos Blvd & White Rock Road	Signal	A	9.5	Signal	A	8.9	No	Signal	A	9.5	Signal	A	8.4	No
108	Americanos Blvd & Douglas Road	Signal	C	34.9	Signal	D	47.0	No	Signal	C	22.4	Signal	C	23.5	No
109	Americanos Blvd & Chrysanthy Blvd	Signal	C	24.7	Signal	C	22.2	No	Signal	C	22.2	Signal	C	25.4	No
110	Americanos Blvd & Kiefer Blvd	Signal	A	7.6	Signal	A	8.7	No	Signal	A	7.3	Signal	A	9.8	No
111	Grant Line Road & Chrysanthy Blvd	Signal	**E**	**72.0**	Signal	**E**	**71.1**	No	Signal	**E**	**57.5**	Signal	D	54.9	No

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 6.5

CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Intersection Levels of Service

Intersection		AM Peak Hour							PM Peak Hour						
		CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS			LOS Impact	CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
112	Hazel Avenue & Easton Valley Pkwy	Signal	B	10.3	Signal	B	10.2	No	Signal	A	6.0	Signal	A	6.1	No
200	Excelsior Road & Collector WJ-1/Collector JT-1	West Jackson/Jackson Township Project Int.			Signal	C	22.4	No	West Jackson/Jackson Township Project Int.			Signal	B	19.6	No
201	Excelsior Road & Collector WJ-2/Collector JT-2	West Jackson/Jackson Township Project Int.			Signal	B	15.2	No	West Jackson/Jackson Township Project Int.			Signal	B	19.8	No
202	W Collector MS-1 & Kiefer Boulevard	Mather South Project Int.			Signal	B	17.3	No	Mather South Project Int.			Signal	B	12.6	No
203	Northbridge Dr & Kiefer Boulevard	NewBridge Project Int.			Signal	A	7.3	No	NewBridge Project Int.			Signal	A	6.8	No
204	E Collector MS-5 & Kiefer Boulevard	Mather South Project Int.			Signal	B	19.1	No	Mather South Project Int.			Signal	C	29.9	No
300	Collector WJ-3 & Jackson Road	West Jackson Project Int.			Signal	B	13.7	No	West Jackson Project Int.			Signal	A	9.2	No
301	Collector WJ-4 & Jackson Road	West Jackson Project Int.			Signal	C	23.3	No	West Jackson Project Int.			Signal	C	22.5	No
303	Rock Creek Pkwy & Jackson Road	West Jackson Project Int.			Signal	**F**	**128.3**	Yes	West Jackson Project Int.			Signal	**F**	**96.4**	Yes
304	Collector WJ-5 & Jackson Road	West Jackson Project Int.			Signal	B	13.6	No	West Jackson Project Int.			Signal	B	14.7	No
305	Collector WJ-6 & Jackson Road	West Jackson Project Int.			Signal	B	17.7	No	West Jackson Project Int.			Signal	B	15.7	No
306	Excelsior Road & Collector WJ-6	West Jackson Project Int.			Signal	D	38.3	No	West Jackson Project Int.			Signal	B	14.5	No
307	S. Watt Avenue & Rock Creek Pkwy	West Jackson Project Int.			Signal	B	18.2	No	West Jackson Project Int.			Signal	B	18.4	No
308	Hedge Avenue & Rock Creek Pkwy Westbound	West Jackson Project Int.			Round	**F**	**60.5**	Yes	West Jackson Project Int.			Round	B	11.2	No
309	Hedge Avenue & Rock Creek Pkwy Eastbound	West Jackson Project Int.			Round	C	24.0	No	West Jackson Project Int.			Round	B	11.2	No

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 6.5

CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS			LOS Impact	CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
310	Mayhew Road & Rock Creek Pkwy Westbound	West Jackson Project Int.			Round	**F**	**181.2**	Yes	West Jackson Project Int.			Round	**F**	**106.4**	Yes
311	Mayhew Road & Rock Creek Pkwy Eastbound	West Jackson Project Int.			Round	**F**	**171.2**	Yes	West Jackson Project Int.			Round	**F**	**215.2**	Yes
312	Bradshaw Road & Rock Creek Pkwy	West Jackson Project Int.			Signal	B	11.0	No	West Jackson Project Int.			Signal	D	47.7	No
314	Vineyard Road & Rock Creek Pkwy	West Jackson Project Int.			Signal	B	10.7	No	West Jackson Project Int.			Signal	C	21.9	No
315	Douglas Road & Rock Creek Pkwy	West Jackson Project Int.			Signal	C	32.1	No	West Jackson Project Int.			Signal	E	61.9	No
316	Bradshaw Road & Collector WJ-8	West Jackson Project Int.			Signal	B	12.2	No	West Jackson Project Int.			Signal	A	6.6	No
317	Bradshaw Road & Collector WJ-9	West Jackson Project Int.			Signal	A	9.3	No	West Jackson Project Int.			Signal	A	5.8	No
318	Bradshaw Road & Mayhew Road	West Jackson Project Int.			Signal	**F**	**142.3**	Yes	West Jackson Project Int.			Signal	**F**	**118.1**	Yes
319	Bradshaw Road & Collector WJ-10	West Jackson Project Int.			Signal	**F**	**182.7**	Yes	West Jackson Project Int.			Signal	C	26.9	No
320	Bradshaw Road & Collector WJ-11	West Jackson Project Int.			Signal	A	7.6	No	West Jackson Project Int.			Signal	B	15.0	No
321	Collector WJ-12 & Fruitridge Road	West Jackson Project Int.			Signal	B	17.9	No	West Jackson Project Int.			Signal	B	15.6	No
322	Mayhew Road & Collector WJ-13	West Jackson Project Int.			Signal	C	22.3	No	West Jackson Project Int.			Signal	C	20.9	No
323	Collector WJ-14 & Kiefer Boulevard	West Jackson Project Int.			Signal	C	30.0	No	West Jackson Project Int.			Signal	C	24.7	No
325	Douglas Road & Kiefer Boulevard	West Jackson Project Int.			Signal	**F**	**237.5**	Yes	West Jackson Project Int.			Signal	**F**	**191.3**	Yes
327	Vineyard Road & Elder Creek Road	West Jackson Project Int.			Signal	C	34.6	No	West Jackson Project Int.			Signal	C	28.1	No

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Table 6.5

CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Intersection Levels of Service

Intersection		AM Peak Hour							PM Peak Hour						
		CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS			LOS Impact	CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
328	Vineyard Road & Florin Road	West Jackson Project Int.			Signal	C	29.1	No	West Jackson Project Int.			Signal	C	29.6	No
329	Routier Ext & Kiefer Boulevard	West Jackson Project Int.			Signal	**F**	**87.8**	Yes	West Jackson Project Int.			Signal	E	71.6	No
330	Happy Ln/Happy Lane & Routier Ext	West Jackson Project Int.			Signal	E	79.6	No	West Jackson Project Int.			Signal	E	79.3	No
331	Routier Ext/Routier Rd & Old Placerville Road	West Jackson Project Int.			Signal	**F**	**164.0**	Yes	West Jackson Project Int.			Signal	**F**	**117.3**	Yes
400	Collector JT-3 & Jackson Road	Jackson Township Project Int.			Signal	**F**	**81.2**	Yes	Jackson Township Project Int.			Signal	D	47.0	No
401	Tree View Lane & Jackson Road	Jackson Township Project Int.			Signal	D	37.7	No	Jackson Township Project Int.			Signal	B	12.5	No
402	Collector JT-4 & Jackson Road	Jackson Township Project Int.			Signal	C	23.5	No	Jackson Township Project Int.			Signal	B	10.2	No
403	Tree View Lane & Collector JT-5	Jackson Township Project Int.			Signal	B	12.7	No	Jackson Township Project Int.			Signal	B	13.1	No
404	Tree View Lane & Collector JT-6	Jackson Township Project Int.			Signal	A	7.9	No	Jackson Township Project Int.			Signal	A	7.0	No
405	Tree View Lane & Collector JT-1	Jackson Township Project Int.			Signal	B	14.4	No	Jackson Township Project Int.			Signal	B	14.4	No
406	Tree View Lane & Kiefer Boulevard	Jackson Township Project Int.			Signal	B	10.8	No	Jackson Township Project Int.			Signal	B	13.2	No
407	HS/MS Dwy & Kiefer Boulevard	Jackson Township Project Int.			Signal	A	5.3	No	Jackson Township Project Int.			Signal	A	7.7	No
500	Rockbridge Dr & Jackson Road	NewBridge Project Int.			Signal	C	34.2	No	NewBridge Project Int.			Signal	B	19.7	No
501	Eagles Nest Road & N Bridgewater Dr	NewBridge Project Int.			Signal	A	3.4	No	NewBridge Project Int.			Signal	A	3.1	No
502	Eagles Nest Road & S Bridgewater Dr	NewBridge Project Int.			Signal	B	15.7	No	NewBridge Project Int.			Signal	B	13.6	No

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Table 6.5

CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS			LOS Impact	CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
600	Zinfandel Drive & Collector MS-2	Mather South Project Int.			Round	B	10.9	No	Mather South Project Int.			Round	B	11.6	No
601	Zinfandel Drive & Collector MS-3	Mather South Project Int.			Round	A	8.3	No	Mather South Project Int.			Round	A	9.1	No
602	Zinfandel Drive & Collector MS-4	Mather South Project Int.			Round	A	9.1	No	Mather South Project Int.			Round	A	9.1	No
603	Collector MS-5 & Collector MS-2	Mather South Project Int.			Two-way stop			No	Mather South Project Int.			Two-way stop			No
	Northbound Left Turn					*A*	*7.8*						*A*	*7.5*	
	Eastbound Left Turn					*B*	*10.2*						*B*	*10.8*	
604	Collector MS-5 & Collector MS-3	Mather South Project Int.			Two-way stop			No	Mather South Project Int.			Two-way stop			No
	Northbound Left Turn					A	7.8						*A*	*7.5*	
	Eastbound					A	9.9						*A*	*9.7*	
605	Collector MS-5 & Collector MS-4	Mather South Project Int.			Two-way stop			No	Mather South Project Int.			Two-way stop			No
	Northbound Left Turn					*A*	*8.4*						*A*	*8.2*	
	Eastbound					*C*	*17.7*						*D*	*33.0*	
606	Collector MS-5 & W Collector MS-1/E Collector MS-1	Mather South Project Int.			Two-way stop			No	Mather South Project Int.			Two-way stop			No
	Northbound Left Turn					*A*	*7.6*						*A*	*7.7*	
	Eastbound Left Turn					*B*	*11.7*						*B*	*12.3*	
	Eastbound					*A*	*9.3*						*A*	*9.3*	

Note: Gray shading represents changes in traffic control that the project is responsible to provide.

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 6.6

CEQA Cumulative and CEQA Cumulative Plus FOUR PROJECTS Intersection Geometrics

	Intersection	Traffic Control		CEQA Cumulative No Project Lane Geometrics				CEQA Cumulative Plus FOUR PROJECTS Lane Geometrics				Project(s) Responsible for Change
		CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
1	Howe Avenue & College Town Drive/US 50 Westbound Ramps	Signal	Signal	1! 1! 1! r	l! 1! 1! 1!	l! r r	l! l! r r	1! 1! 1! r	l! 1! 1! 1!	l! r r	l! l! r r	
2	Howe Avenue & US 50 Eastbound Ramps/US 50 Eastbound Entrance	Signal	Signal	1! 1! 1! r	l! 1! 1!	l! l! r r		1! 1! 1! r	l! 1! 1!	l! l! r r		
3	Power Inn Road/Howe Avenue & Folsom Blvd.	Signal	Signal	l! l! 1! 1! 1! r	l! 1! 1! 1! l! l!	l! l! 1! r	l! l! 1! 1! r r	l! l! 1! 1! 1! r	l! 1! 1! 1! l! l!	l! l! 1! r	l! l! 1! 1! r r	
4	Power Inn Road & 14th Avenue	Signal	Signal	l! 1! 1! r	l! 1! 1! 1! l!	l! 1! r	l! 1! r	l! 1! 1! r	l! 1! 1! 1! l!	l! 1! r	l! 1! r	
5	Power Inn Road & Fruitridge Road	Signal	Signal	l! l! 1! r	l! 1! 1! l! l!	l! 1! r	l! 1! 1! r	l! l! 1! r	l! 1! 1! l! l!	l! 1! r	l! 1! 1! r	
6	Jackson Road/Notre Dame Dr. & Folsom Blvd.	Signal	Signal	l! l! r	l! r	l! 1! 1! r	l! 1! 1! r	l! l! r	l! r	l! 1! 1! r	l! 1! 1! r	
7	Florin Perkins Road/Julliard Dr. & Folsom Boulevard	Signal	Signal	l! l! r	l! r	l! 1! 1! r	l! 1! r	l! l! r	l! r	l! 1! 1! r	l! 1! r	
8	Florin Perkins Road & Kiefer Blvd.	Two-way stop	Two-way stop	1! r	1! 1! l!		l! r	1! r	1! 1! l!		l! r	
9	Florin Perkins Road & Jackson Road	Signal	Signal	l! 1! 1! r	l! 1! l!	l! 1! 1! r	l! 1! r	l! 1! 1! r	l! 1! l!	l! 1! 1! r	l! 1! r	
10	Florin Perkins Road & Fruitridge Road	Signal	Signal	l! 1! 1! r	l! 1! 1! l!	l! 1! 1! r	l! 1! r	l! 1! 1! r	l! 1! 1! l!	l! 1! 1! r	l! 1! r	
11	Florin Perkins Road & Elder Creek Road	Signal	Signal	l! 1! 1! r	l! 1! 1! l!	l! 1! 1! r	l! 1! 1! r	l! 1! 1! r	l! 1! 1! l!	l! 1! 1! r	l! 1! 1! r	
12	S. Watt Ave./Watt Avenue & Folsom Blvd.	Signal	Signal	l! l! 1! 1! 1! r	l! 1! 1! 1! l! l!	l! l! 1! 1! r	l! l! 1! 1! r	l! l! 1! 1! 1! r	l! 1! 1! 1! l! l!	l! l! 1! 1! r	l! l! 1! 1! r	
13	S. Watt Ave. & Reith Ct/Manlove Road	Signal	Signal	l! 1! 1! 1! r	l! 1! 1! l!	Y	l! 1! r r	l! 1! 1! 1! r	l! 1! 1! l!	Y	l! 1! r r	
14	S. Watt Avenue & Kiefer Blvd.	Signal	Signal	l! l! 1! 1! r	l! 1! 1! l! l!	l! l! 1! 1! r	l! l! 1! 1! r	l! l! 1! 1! r	l! 1! 1! l! l!	l! l! 1! 1! r	l! l! 1! 1! r	
15	S. Watt Avenue & Canberra Dr.	Signal	Signal	1! 1! r	l! 1! l!		l! r r	1! 1! r	l! 1! l!		l! r r	
16	S. Watt Avenue & Jackson Road	Signal	Signal	l! l! 1! 1! 1! r	l! 1! 1! 1! l! l!	l! l! 1! 1! r	l! l! 1! 1! r	l! l! 1! 1! 1! r	l! 1! 1! 1! l! l!	l! l! 1! 1! r	l! l! 1! 1! r	West Jackson
17	S. Watt Avenue & Fruitridge Road	Signal	Signal	l! 1! 1! 1! r	l! 1! 1! 1! l!	l! 1! r	l! r r	l! 1! 1! 1! r	l! 1! 1! 1! l!	l! 1! r	l! l! 1! 1! r	West Jackson
18	S. Watt Avenue & Elder Creek Road	Signal	Signal	l! l! 1! 1! 1! r	l! 1! 1! 1! l! l!	l! l! 1! r	l! 1! 1! r	l! l! 1! 1! 1! r	l! 1! 1! 1! l! l!	l! l! 1! r	l! 1! 1! r	
20	Elk Grove Florin Road/S. Watt Ave. & Florin Road	Signal	Signal	l! l! 1! 1! 1! r	l! 1! 1! 1! l! l!	l! 1! 1! r	l! 1! 1! r	l! l! 1! 1! 1! r	l! 1! 1! 1! l! l!	l! 1! 1! r	l! 1! 1! r	
21	Elk Grove Florin Road & Gerber Rd./Gerber Road	Signal	Signal	l! l! 1! 1! 1! r	l! 1! 1! 1! l! l!	l! l! 1! 1! r	l! l! 1! 1! r	l! l! 1! 1! 1! r	l! 1! 1! 1! l! l!	l! l! 1! 1! r	l! l! 1! 1! r	
23	Hedge Avenue & Jackson Road	Signal	Signal	l! r r	l! l!	l! 1! 1! r	l! 1! 1! r	l! 1! r	l! l!	l! 1! 1! r	l! 1! 1! r	West Jackson
24	Hedge Avenue & Fruitridge Road	All-way stop	Signal	Y	+	Y	Y	l! 1! r	1! 1! l!	l! 1! r	l! 1! r	West Jackson
25	Hedge Avenue & Elder Creek Road	All-way stop	Signal	l! 1! r	1! 1! l!	l! 1! r	l! 1! r	l! 1! r	1! 1! l!	l! 1! r	l! 1! r	West Jackson
26	Hedge Avenue & Tokay Lane	Two-way stop	Two-way stop	Y	+	Y	Y	Y	+	Y	Y	
27	Hedge Avenue & Florin Road	All-way stop	All-way stop	Y	+	l! 1! r	l! 1! r	Y	+	l! 1! r	l! 1! r	

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 6.6

CEQA Cumulative and CEQA Cumulative Plus FOUR PROJECTS Intersection Geometrics

	Intersection	Traffic Control		CEQA Cumulative No Project Lane Geometrics				CEQA Cumulative Plus FOUR PROJECTS Lane Geometrics				Project(s) Responsible for Change
		CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
28	Mayhew Road & Kiefer Boulevard	Signal	Signal									
29	Mayhew Road & Jackson Road	Two-way stop	Signal									West Jackson
30	Mayhew Road & Fruitridge Road	Two-way stop	Signal									West Jackson
31	Mayhew Road & Elder Creek Road	Two-way stop	Signal									West Jackson
32	Zinfandel Drive & Woodring Drive	Two-way stop	Two-way stop									Mather South
33	Bradshaw Road & Folsom Blvd.	Signal	Signal									
34	Bradshaw Road & US 50 Westbound Ramps	Signal	Signal									
35	Bradshaw Road & US 50 Eastbound Ramps	Signal	Signal									
36	Bradshaw Road & Old Placerville Road	Signal	Signal									
37	Bradshaw Road & Kiefer Boulevard	Signal	Signal									West Jackson
38	Jackson Road & Bradshaw Road	Signal	Signal									West Jackson
39	Bradshaw Road & Elder Creek Road	Signal	Signal									West Jackson
40	Bradshaw Road & Florin Road	Signal	Signal									
41	Bradshaw Road & Gerber Road	Signal	Signal									
42	Happy Lane & Old Placerville Road	Two-way stop	Signal									
43	Kiefer Boulevard & Happy Ln		Signal									West Jackson
44	Excelsior Road & Kiefer Boulevard	Two-way stop	Signal									West Jackson; Jackson Township
45	Excelsior Road & Jackson Road	Signal	Signal									West Jackson; Jackson Township
46	Excelsior Road & Elder Creek Road	Two-way stop	Signal									West Jackson
47	Excelsior Road & Florin Road	All-way stop	Signal									West Jackson
48	Excelsior Road & Gerber Road/Birch Ranch Drive	Signal	Signal									
49	Mather Field Road & US 50 Westbound Ramps	Signal	Signal									
50	Mather Field Road & US 50 Eastbound Ramps	Signal	Signal									
51	Mather Field Road & Rockingham Drive	Signal	Signal									
52	Mather Boulevard & Douglas Road	Signal	Signal									

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 6.6

CEQA Cumulative and CEQA Cumulative Plus FOUR PROJECTS Intersection Geometrics

	Intersection	Traffic Control		CEQA Cumulative No Project Lane Geometrics				CEQA Cumulative Plus FOUR PROJECTS Lane Geometrics				Project(s) Responsible for Change
		CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
53	Zinfandel Drive & US 50 Westbound	Signal	Signal	↑↑↑ r	L↓↓↓		↰↰r	↑↑↑ r	L↓↓↓		↰↰r	
54	Zinfandel Drive & US 50 Eastbound Ramps/Gold Center Drive	Signal	Signal	↑↑↑ ↱	L↓↓↓	↰↰ ↱r	rr	↑↑↑ ↱	L↓↓↓	↰↰ ↱r	rr	
55	Zinfandel Drive & White Rock Road	Signal	Signal	↰↰↑↑ ↱	L↓↓↓↘↘	↰↰↑↑ ↱	↰↰↑ ↱r	↰↰↑↑ ↱	L↓↓↓↘↘	↰↰↑↑ ↱	↰↰↑ ↱r	
56	Zinfandel Drive & Data Drive	Signal	Signal	↰↑↑ ↱	↓↓↓↘	↰Y	↰↰r	↰↑↑ ↱	↓↓↓↘	↰Y	↰↰r	
57	Zinfandel Dr & International Dr	Signal	Signal	↰↰↑↑↑ r	↓↓↓↘↘	↰↰↑↑ ↱	↰↰↑↑↑ r	↰↰↑↑↑ r	↓↓↓↘↘	↰↰↑↑ ↱	↰↰↑↑↑ r	
58	Zinfandel Drive & Douglas Road	Signal	Signal	↰↱	L↓↘↘	↰↑ ↱	↰↰↑↑ r	↰↱	L↓↘↘	↰↑ ↱	↰↰↑↑ r	
59	Eagles Nest Road/Zinfandel Drive & Kiefer Boulevard		Signal	r			↰	↰↰↑↑ r	L↓↓↘↘	↰↰↑↑ r	↰↰↑↑ r	NewBridge; Mather South
60	Eagles Nest Road & Jackson Road	Two-way stop	Signal	Y	⅄	↰↱	↰↱	↰↑r	L↓↘↘	↰↰↑ ↱	↰↑↑ r	NewBridge
61	Eagles Nest Rd/Eagles Nest Road & Florin Road	Two-way stop	Signal	Y	⅄	Y	Y	Y	⅄	Y	Y	
62	Sunrise Boulevard & US 50 Westbound Ramps	Signal	Signal	↑↑↑ r	L↓↓↓		↰↰rr	↑↑↑ r	L↓↓↓		↰↰rr	
63	Sunrise Boulevard & US 50 Eastbound Ramps	Signal	Signal	↑↑↑↑ r	L↓↓↓	↰↰↰rr		↑↑↑↑ r	L↓↓↓	↰↰↰rr		
64	Sunrise Boulevard & Folsom Boulevard	Signal	Signal	↰↰↑↑↑↑ r	L↓↓↓↘↘	↰↰↑↑ r	↰↰↑ ↱r	↰↰↑↑↑↑ r	L↓↓↓↘↘	↰↰↑↑ r	↰↰↑ ↱r	
65	Sunrise Boulevard & White Rock Road	Signal	Signal	↰↰↑↑↑ r	L↓↓↓↘↘	↰↰↑↑ r	↰↰↑↑↑ r	↰↰↑↑↑ r	L↓↓↓↘↘	↰↰↑↑ r	↰↰↑↑↑ r	
66	Sunrise Boulevard & International Drive/Monier Circle	Signal	Signal	↰↰↑↑↑ r	L↓↓↓↘↘	↰↰↑↑↑ r	↰↰↑↑↑ r	↰↰↑↑↑ r	L↓↓↓↘↘	↰↰↑↑↑ r	↰↰↑↑↑ r	
67	Sunrise Boulevard & Douglas Road	Signal	Signal	↰↰↑↑↑ r	L↓↓↓↘↘	↰↰↑↑ ↱	↰↰↑↑↑ r	↰↰↑↑↑ r	L↓↓↓↘↘	↰↰↑↑ ↱	↰↰↑↑↑ r	
68	Sunrise Boulevard & Chrysanthy Boulevard	Signal	Signal	↑↑↑ r	↓↓↘↘		↰↰r	↑↑↑ r	↓↓↘↘		↰↰r	
69	Sunrise Boulevard & Kiefer Boulevard	Signal	Signal	↰↑↑ r	⅄↓↘↘	Y	↰Y r	↰↑↑ r	⅄↓↘↘	↰↰↑↑ r	↰Y r	NewBridge; Mather South
70	Sunrise Boulevard & Jackson Road	Signal	Signal	↰↰↑↑ r	L↓↓↘↘	↰↰↑↑ r	↰↰↑↑ r	↰↰↑↑ r	L↓↓↘↘	↰↰↑↑ r	↰↰↑↑ r	
71	Sunrise Boulevard & Florin Road	Signal	Signal	↰↑↑	⅄↓	⅄		↰↑↑	⅄↓	⅄		
72	Sheldon Lake Drive/Sunrise Boulevard & Grant Line Road	Signal	Signal	Y	⅄↱	↰↑↑ r	↰↑ ↱	Y	⅄↱	↰↑↑ r	↰↑ ↱	
73	Hazel Avenue & Tributary Point Drive/US 50 Westbound Off-ramp	Signal	Signal	↰↰↑↑↑	L↓↓↓↓	r	Y rr	↰↰↑↑↑	L↓↓↓↓	r	Y rr	
74	Hazel Aveneu/Hazel Avenue & US 50 Eastbound Ramps	Signal	Signal	↑↑ ↱	L↓↓↓	↰↰↰rr		↑↑ ↱	L↓↓↓	↰↰↰rr		
76	White Rock Road & Prairie City Road	Signal	Signal		LL↘↘	↰↰↑↑	↑↑ r		LL↘↘	↰↰↑↑	↑↑ r	
77	Grant Line Road & White Rock Road	Signal	Signal	↰↑↑	L↓↓	↰↰r		↰↑↑	L↓↓	↰↰r		
78	Grant Line Road & Douglas Road	All-way stop	All-way stop	↰↰↑↑	L↓↓	↰r		↰↰↑↑	L↓↓	↰r		

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 6.6

CEQA Cumulative and CEQA Cumulative Plus FOUR PROJECTS Intersection Geometrics

	Intersection	Traffic Control		CEQA Cumulative No Project Lane Geometrics				CEQA Cumulative Plus FOUR PROJECTS Lane Geometrics				Project(s) Responsible for Change
		CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
79	Grant Line Road & Kiefer Boulevard	All-way stop	All-way stop	2 2 1 1	1 1 1	2 2 1	2 1	2 2 1 1	1 1 1	2 2 1	2 1	
80	Grant Line Road & Jackson Road	Signal	Signal	2 2 1 1	1 1 1 1	2 2 1 1	2 2 1 1	2 2 1 1	1 1 1 1	2 2 1 1	2 2 1 1	
81	Watt Avenue & US-50 EB Ramps	Signal	Signal	1 1 1 1	1 1	2 2		1 1 1 1	1 1	2 2		
82	Watt Avenue & US-50 WB Ramps	Signal	Signal	1 1	1 1 1		2 2	1 1	1 1 1		2 2	
83	Mayhew Rd & Folsom Blvd.	Signal	Signal	2 2		1 1	2 1 1	2 2		1 1	2 1 1	
84	65th Street Expy & Fruitridge Road	Signal	Signal	2 1 1	1 1 1	2 1 1	2 1 1	2 1 1	1 1 1	2 1 1	2 1 1	
85	Power Inn Road & Elder Creek Road	Signal	Signal	2 1	1 1	2 1 1	2 1	2 1	1 1	2 1 1	2 1	
86	Power Inn Road & Florin Rd	Signal	Signal	2 1	1 1 1	2 1 1	2 1 1 1	2 1	1 1 1	2 1 1	2 1 1 1	
87	Florin Perkins Road & Florin Rd	Signal	Signal	2 1 1	1 1 1	2 1	2 1 1	2 1 1	1 1 1	2 1	2 1 1	
88	Bradshaw Rd & Calvine Rd	Signal	Signal	2 2 1	1 1 1 1	2 2 1 1 1	2 2 1 1 1	2 2 1	1 1 1 1	2 2 1 1 1	2 2 1 1 1	
89	Vineyard Rd & Calvine Rd	Signal	Signal	3	1 1	2 1	2 1	3	1 1	2 1	2 1	
90	Excelsior Road & Calvine Rd	Signal	Signal	2 1	1 1	2 1	2 1	2 1	1 1	2 1	2 1	
91	Grant Line Road & Eagles Nest Rd/Sloughhouse Rd	Signal	Signal	2 1 1	2 1	3	2	2 1 1	2 1	3	2	
92	Grant Line Road & Calvine Rd	Signal	Signal	2 1	2	2		2 1	2	2		
93	Grant Line Road & Driveway/Wilton Rd	Signal	Signal	2 1	2 1	2	2	2 1	2 1	2	2	
94	Bond Rd/Wrangler Dr & Grant Line Road	Signal	Signal	2 1	1 1	3	3	2 1	1 1	3	3	
95	Florin Perkins Road & 14th Avenue		Signal	2 2 1 1	1 1 1 1	2 2 1 1	2 2 1 1	2 2 1 1	1 1 1 1	2 2 1 1	2 2 1 1	
96	14th Avenue & Jackson Road		Signal		3 1	2 1 1	2 1 1		3 1	2 2 1 1	2 1 1	
97	Rock Creek Pkwy & Jackson Road		Signal	2 1	1 1	2 1	2 1	2 1	1 1	2 1	2 1	
98	Aspen 1 Access Road & Jackson Road		Signal	2		1 2	2 1 1	2		1 2	2 1 1	
99	Rancho Cordova Pkwy & US-50 WB Ramps		Signal	2 2			2 3	2 2			2 3	
100	Rancho Cordova Pkwy & US-50 EB Ramps		Signal	1 2 2	1 1 1	3 2		1 2 2	1 1 1	3 2		
101	Rancho Cordova Pkwy & Easton Valley Pkwy		Signal	1 1 1	1 1 1 1		2 2 2	1 1 1	1 1 1 1		2 2 2	
102	Rancho Cordova Pkwy & White Rock Road		Signal	2 2 1 1 1	2 1 1 1 1	2 2 1 1	2 2 1 1	2 2 1 1 1	2 1 1 1 1	2 2 1 1	2 2 1 1 1	
103	Rancho Cordova Pkwy & Douglas Road		Signal	2 2 1 1	2 1 1 1 1	2 2 1 1 1	2 2 1 1 1	2 2 1 1	2 1 1 1 1	2 2 1 1 1	2 2 1 1 1	
104	Rancho Cordova Pkwy & Chrysanthy Blvd		Signal	2 2 1 1	2 1 1 1 1	2 2 1 1	2 2 1 1	2 2 1 1	2 1 1 1 1	2 2 1 1	2 2 1 1	

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 6.6

CEQA Cumulative and CEQA Cumulative Plus FOUR PROJECTS Intersection Geometrics

Intersection		Traffic Control		CEQA Cumulative No Project Lane Geometrics				CEQA Cumulative Plus FOUR PROJECTS Lane Geometrics				Project(s) Responsible for Change
		CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
105	Rancho Cordova Pkwy & Kiefer Blvd		Signal									
106	Grant Line Road & Rancho Cordova Pkwy		Signal									
107	Americanos Blvd & White Rock Road		Signal									
108	Americanos Blvd & Douglas Road		Signal									
109	Americanos Blvd & Chrysanthy Blvd		Signal									
110	Kiefer Blvd & Americanos Blvd		Signal									
111	Grant Line Road & Chrysanthy Blvd		Signal									
112	Easton Valley Pkwy & Hazel Avenue		Signal									
200	Excelsior Road & Collector WJ-1/Collector JT-1		Signal									West Jackson; Jackson Township
201	Excelsior Road & Collector WJ-2/Collector JT-2		Signal									West Jackson; Jackson Township
202	Kiefer Boulevard & W Collector MS-1		Signal									Mather South
203	Northbridge Dr & Kiefer Boulevard		Signal									NewBridge
204	Kiefer Boulevard & E Collector MS-5		Signal									Mather South
300	Collector WJ-3 & Jackson Road		Signal									West Jackson
301	Collector WJ-4 & Jackson Road		Signal									West Jackson
303	Vineyard Road & Jackson Road		Signal									West Jackson
304	Collector WJ-5 & Jackson Road		Signal									West Jackson
305	Collector WJ-6 & Jackson Road		Signal									West Jackson
306	Excelsior Road & Collector WJ-6		Signal									West Jackson
307	S. Watt Avenue & Rock Creek Pkwy		Signal									West Jackson
308	Hedge Avenue & Rock Creek Pkwy Westbound		Roundabout									West Jackson
309	Hedge Avenue & Rock Creek Pkwy Eastbound		Roundabout									West Jackson
310	Mayhew Road & Rock Creek Pkwy Westbound		Roundabout									West Jackson
311	Mayhew Road & Rock Creek Pkwy Eastbound		Roundabout									West Jackson

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 6.6

CEQA Cumulative and CEQA Cumulative Plus FOUR PROJECTS Intersection Geometrics

Intersection		Traffic Control		CEQA Cumulative No Project Lane Geometrics				CEQA Cumulative Plus FOUR PROJECTS Lane Geometrics				Project(s) Responsible for Change
		CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
312	Bradshaw Road & Rock Creek Pkwy		Signal					↰ ↑ ↑ ↑	↲ ↓ ↓	↰ ↱		West Jackson
314	Vineyard Road & Rock Creek Pkwy		Signal					↰ ↑ ↑	↲ ↓	↰ ↱		West Jackson
315	Douglas Road & Rock Creek Pkwy		Signal					↰ ↑ ↑	↲ ↓	↰ ↱		West Jackson
316	Bradshaw Road & Collector WJ-8		Signal					↑ ↑ ↱	↓ ↓ ↓ ↘		↰ ↱	West Jackson
317	Bradshaw Road & Collector WJ-9		Signal					↑ ↑ ↱	↓ ↓ ↓ ↘		↰ ↱	West Jackson
318	Bradshaw Road & Mayhew Road		Signal					↰ ↰ ↑ ↑ ↑ ↱	↙ ↓ ↓ ↓ ↘ ↘	↰ ↰ ↑ ↑ ↱	↰ ↰ ↑ ↑ ↱	West Jackson
319	Bradshaw Road & Collector WJ-10		Signal					↑ ↑ ↱	↓ ↓ ↓ ↘		↰ ↱	West Jackson
320	Bradshaw Road & Collector WJ-11		Signal					↰ ↑ ↑ ↑	↲ ↓ ↓	↰ ↱		West Jackson
321	Collector WJ-12 & Fruitridge Road		Signal					↰ ↑ ↱	↙ ↓ ↘	↰ ↑ ↱	↰ ↑ ↱	West Jackson
322	Mayhew Road & Collector WJ-13		Signal					↰ ↑ ↑	↲ ↓	↰ ↱		West Jackson
323	Collector WJ-14 & Kiefer Boulevard		Signal					↰ ↑ ↱	↙ ↓ ↘	↰ ↑ ↑ ↱	↰ ↑ ↑ ↱	West Jackson
325	Douglas Road Extension & Kiefer Boulevard		Signal					↰ ↰ ↑ ↑ ↱	↙ ↓ ↓ ↘ ↘	↰ ↰ ↑ ↑ ↑ ↱	↰ ↰ ↑ ↑ ↱	West Jackson
327	Vineyard Road & Elder Creek Road		Signal					↰ ↰ ↑ ↑ ↱	↙ ↓ ↓ ↘ ↘	↰ ↰ ↑ ↑ ↱	↰ ↰ ↑ ↑ ↱	West Jackson
328	Vineyard Road & Florin Road	Signal	Signal	↰ ↰ ↱		↑ ↱	↰ ↑	↰ ↰ ↑ ↑ ↱	↙ ↓ ↓ ↘ ↘	↰ ↰ ↑ ↱	↰ ↰ ↑ ↑ ↱	West Jackson
329	Routier Ext & Kiefer Boulevard		Signal					↰ ↰ ↑ ↑ ↱	↙ ↓ ↓ ↘ ↘	↰ ↰ ↑ ↑ ↑ ↱	↰ ↰ ↑ ↑ ↑ ↱	West Jackson
330	Happy Lane & Routier Ext		Signal					↰ ↑ ↱	↙ ↓ ↘	↰ ↑ ↱	↰ ↑ ↱	West Jackson
331	Routier Ext/Routier Rd & Old Placerville Road		Signal					↰ ↑ ↑ ↱	↙ ↓ ↓ ↘ ↘	↰ ↑ ↑ ↱	↰ ↰ ↑ ↱	West Jackson
400	Jackson Road & Collector JT-3		Signal						↙ ↘	↰ ↰ ↑ ↑	↑ ↑ ↱	Jackson Township
401	Jackson Road & Tree View Lane		Signal						↙ ↘ ↘	↰ ↰ ↑ ↑	↑ ↑ ↱	Jackson Township
402	Jackson Road & Collector JT-4		Signal						↙ ↘	↰ ↑ ↑	↑ ↱	Jackson Township
403	Tree View Lane & Collector JT-5		Signal					↰ ↑ ↱	↲ ↓ ↘	↰ ↑ ↱	↰ ↑ ↱	Jackson Township
404	Tree View Lane & Collector JT-6		Signal					↰ ↑ ↱	↲ ↓ ↘	↰ ↑ ↱	↰ ↑ ↱	Jackson Township
405	Tree View Lane & Collector JT-1		Signal					↰ ↑ ↱	↲ ↓ ↘	↰ ↑ ↱	↰ ↑ ↱	Jackson Township
406	Tree View Lane & Kiefer Boulevard		Signal					↰ ↰ ↱		↑ ↑ ↱	↰ ↰ ↑ ↑	Jackson Township
407	HS/MS Dwy & Kiefer Boulevard		Signal					↰ ↱		↑ ↱	↰ ↑ ↑	Jackson Township
500	Jackson Road & Rockbridge Dr		Signal						↙ ↘	↰ ↑ ↑	↑ ↱	NewBridge

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 6.6

CEQA Cumulative and CEQA Cumulative Plus FOUR PROJECTS Intersection Geometrics

Intersection		Traffic Control		CEQA Cumulative No Project Lane Geometrics				CEQA Cumulative Plus FOUR PROJECTS Lane Geometrics				Project(s) Responsible for Change
		CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
501	Eagles Nest Road & N Bridgewater Dr		Signal					↑ ↱	↓ ↓ ↳		↰	NewBridge
502	Eagles Nest Road & S Bridgewater Dr		Signal					↰ ↑ ↱	↲ ↓ ↳	↰ ↑	↰ ↑	NewBridge
600	Zinfandel Drive & Collector MS-2		Roundabout					↑ ↱	↓ ↳		↖	Mather South
601	Zinfandel Drive & Collector MS-3		Roundabout					↑ ↱	↓ ↳		↰	Mather South
602	Zinfandel Drive & Collector MS-4		Roundabout					↑ ↱	↓ ↳		↰	Mather South
603	Collector MS-5 & Collector MS-2		Two-way stop					↰	↲	↖		Mather South
604	Collector MS-5 & Collector MS-3		Two-way stop					↰	↲	↖		Mather South
605	Collector MS-5 & Collector MS-4		Two-way stop					↰	↲	↖		Mather South
606	E Collector MS-1/Collector MS-5 & W Collector MS-1		Two-way stop					↰ ↑	↲ ↓	↰		Mather South

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 6.7: CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Peak Hour Freeway Basic Segment Level of Service									
Direc-tion	Location	CEQA Cumulative				CEQA Cumulative Plus FOUR PROJECTS			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Volume	LOS	Volume	LOS	Volume	LOS	Volume	LOS
East-bound US 50	SR 99 / SR 51 to Stockton Boulevard	8,751	D	8,638	D	9,295	D	8,855	D
	Stockton Boulevard to 59th Street	8,168	**F**	7,819	**F**	8,642	**F**	8,051	**F**
	59th Street to 65th Street	7,637	D	7,343	D	8,099	E	7,521	D
	65th Street to Howe Avenue	8,019	D	7,667	D	8,272	D	7,812	D
	Howe Avenue to Watt Avenue	7,213	C	6,672	C	7,366	C	6,679	C
	Watt Avenue to Bradshaw Road	9,633	**F**	8,982	E	9,825	**F**	9,056	E
	Bradshaw Rd to Mather Field Rd	9,467	**F**	9,052	C	9,483	**F**	9,015	C
	Mather Field Rd to Zinfandel Drive	9,072	D	8,767	D	9,211	D	8,916	D
	Zinfandel Drive to Sunrise Blvd	6,313	C	6,370	**F**	6,400	C	6,551	**F**
	Sunrise Bl to Rancho Cordova Pkwy	5,835	C	5,878	**F**	5,892	C	6,121	**F**
	Rancho Cordova Pkwy to Hazel Ave	7,170	D	6,636	**F**	7,249	D	6,929	**F**
West-bound US 50	Hazel Ave to Rancho Cordova Pkwy	5,376	B	5,162	C	5,643	B	5,218	C
	Rancho Cordova Pkwy to Sunrise Bl	6,906	C	4,366	B	7,103	C	4,461	B
	Sunrise Blvd to Zinfandel Drive	8,587	D	5,233	B	8,801	D	5,378	B
	Zinfandel Drive to Mather Field Rd	9,480	D	7,406	C	9,493	D	7,454	C
	Mather Field Rd to Bradshaw Road	9,560	**F**	8,720	D	9,406	**F**	8,544	D
	Bradshaw Road to Watt Avenue	9,001	**F**	7,882	D	8,854	**F**	8,099	E
	Watt Avenue to Howe Avenue	7,880	**F**	5,892	**F**	7,679	**F**	6,132	**F**
	Howe Avenue to 65th Street	8,761	**F**	8,070	**F**	8,972	**F**	8,384	**F**
	65th Street to 59th Street	8,809	**F**	7,978	**F**	9,012	**F**	8,296	**F**
	59th Street to Stockton Boulevard	9,692	D	8,294	**F**	9,890	D	8,656	**F**
	Stockton Boulevard to SR 99 / SR 51	10,187	E	9,674	**F**	10,300	E	9,916	**F**

Bold values denote level of service "F" conditions.

Red shaded values indicate project impacts.

Source: *DKS Associates, 2018.*

6.4.4 CEQA Cumulative Plus FOUR PROJECTS Pedestrian and Bicycle Facility Impacts

The FOUR PROJECTS would not remove any existing or planned pedestrian facility that is planned in the Bikeway Master Plan. The FOUR PROJECTS would add pedestrian and bicycle demands within the FOUR PROJECTS site and to and from nearby land uses. Specific information on improvements to on- and off-site bicycle and pedestrian facilities is not available at this time. Because the FOUR PROJECTS would add demand for pedestrian and bicycle facilities that may not be available, the impact of the FOUR PROJECTS on pedestrian and bicycle circulation is potentially significant.

Table 6.8 CEQA Cumulative Plus FOUR PROJECTS (Alt. 2) Peak Hour Freeway Merge/Diverge/Weave Segment Level of Service										
Direc-tion	**Location**	**Junction Type**	**CEQA Cumulative**				**CEQA Cumulative Plus FOUR PROJECTS**			
			A.M. Peak Hour		**P.M. Peak Hour**		**A.M. Peak Hour**		**P.M. Peak Hour**	
			Ramp Volume	**LOS**	**Ramp Volume**	**LOS**	**Ramp Volume**	**LOS**	**Ramp Volume**	**LOS**
East-bound US 50	Northbound 65th Street Slip Entrance	Weave	945	**F**	777	**F**	918	**F**	724	**F**
	Howe Avenue / Hornet Drive Exit		2,088		2,140		2,120		2,267	
	Southbound Howe Avenue Loop Entrance	One-Lane Merge	729	D	1,342	D	750	D	1,332	D
	Northbound Howe Avenue Slip Entrance	One-Lane Merge	609	D	532	D	528	D	524	D
	Watt Avenue Exit	Two-Lane Diverge	1,538	B	1,705	B	1,532	B	1,604	A
	Southbound Watt Avenue Loop Entrance	One-Lane Merge	1,615	D	1,368	C	1,551	D	1,213	C
	Northbound Watt Avenue Slip Entrance	One-Lane Merge	682	D	588	C	608	D	597	C
	Bradshaw Road Exit	Two-Lane Diverge	2,068	**F**	1,631	B	2,264	**F**	1,835	C
	Southbound Bradshaw Road Loop Entrance	One-Lane Merge	268	D	422	D	274	D	505	D
	Northbound Bradshaw Road Slip Entrance	One-Lane Merge	1,486	D	1,029	C	1,511	D	1,102	C

Table 6.8
CEQA Cumulative Plus FOUR PROJECTS (Alt. 2) Peak Hour Freeway Merge/Diverge/Weave Segment Level of Service

Direc-tion	Location	Junction Type	CEQA Cumulative				CEQA Cumulative Plus FOUR PROJECTS			
			A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
			Ramp Volume	LOS	Ramp Volume	LOS	Ramp Volume	LOS	Ramp Volume	LOS
	Mather Field Road Exit	Two-Lane Diverge	1,490	B	1,530	B	1,481	B	1,489	B
	Southbound Mather Field Road Loop Entrance	One-Lane Merge	252	C	222	C	252	C	169	C
	Northbound Mather Field Road Slip Entrance	Weave	431	**F**	894	**F**	571	**F**	1,123	**F**
	Zinfandel Drive Exit		3,083		1,861		3,082		1,797	
	Southbound Zinfandel Drive Loop Entrance	One-Lane Merge	183	C	173	C	185	C	151	C
	Northbound Zinfandel Drive Slip Entrance	Lane Addition	665	A	714	B	656	B	784	B
	Sunrise Boulevard Exit	Major Diverge	1,878	C	2,308	C	1,899	C	2,364	C
	Sunrise Boulevard Entrance	Lane Addition / Weave	1,233	D	1,122	C	1,174	B	1,162	C
	Rancho Cordova Parkway Exit	Major Diverge / Weave	374		763		327	C	816	
	Rancho Cordova Parkway Entrance	Weave	1,787	**F**	1,748	**F**	1,748	**F**	1,823	**F**
	Hazel Avenue Exit		1,904		2,611		1,950		2,718	

Table 6.8
CEQA Cumulative Plus FOUR PROJECTS (Alt. 2) Peak Hour Freeway Ramp Junction/Weaving Level of Service

Direc-tion	Location	Junction Type	CEQA Cumulative				CEQA Cumulative Plus FOUR PROJECTS			
			A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
			Ramp Volume	LOS	Ramp Volume	LOS	Ramp Volume	LOS	Ramp Volume	LOS
	Hazel Avenue Entrance	Weave	1,174	E	2,148	**F**	1,072	D	2,091	D
	Aerojet Road Exit		584		203		613		171	
West-bound US 50	Hazel Avenue Exit	Two-Lane Diverge	1,098	B	1,031	C	1,057	B	1,032	C
	Northbound Hazel Avenue Loop Entrance	One-Lane Merge	69	B	434	C	93	B	434	C
	Southbound Hazel Avenue Slip Entrance	Weave	2,306	**F**	2,263	**F**	2,369	**F**	2,302	**F**
	Rancho Cordova Parkway Exit		1,800		2,225		1,867		2,173	
	Rancho Cordova Parkway Entrance	Lane Addition / Weave	1,428	C	1,165	B	1,389	C	1,138	B
	Sunrise Boulevard Exit	Major Diverge / Weave	729		751	C	760		729	C
	Northbound Sunrise Boulevard Loop Entrance	Lane Addition	169	A	259	A	170	A	234	A
	Southbound Sunrise Boulevard Slip Entrance	Lane Addition	2,323	**F**	1,524	C	2,354	**F**	1,613	C
	Zinfandel Drive Exit	One-Lane Diverge	1,384	E	1,183	D	1,393	E	1,200	D

Table 6.8
CEQA Cumulative Plus FOUR PROJECTS (Alt. 2) Peak Hour Freeway Ramp Junction/Weaving Level of Service

Direc-tion	Location	Junction Type	CEQA Cumulative				CEQA Cumulative Plus FOUR PROJECTS			
			A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
			Ramp Volume	LOS	Ramp Volume	LOS	Ramp Volume	LOS	Ramp Volume	LOS
	Northbound Zinfandel Drive Loop Entrance	Lane Addition	909	C	1,443	D	803	C	1,295	C
	Southbound Zinfandel Drive Slip Entrance	One-Lane Merge	1,544	D	663	B	1,349	D	663	B
	Mather Field Road Exit	One-Lane Drop	1,350	D	826	C	1,581	D	1,025	C
	Northbound Mather Field Road Loop Entrance	One-Lane Merge	626	C	1,192	C	499	C	1,193	C
	Southbound Mather Field Road Slip Entrance	One-Lane Merge	303	C	504	C	427	C	428	B
	Bradshaw Road Exit	Two-Lane Diverge	1,533	C	1,756	B	1,692	C	1,809	B
	Northbound Bradshaw Road Loop Entrance	One-Lane Merge	999	**F**	927	D	1,318	**F**	1,593	D
	Southbound Bradshaw Road Slip Entrance	One-Lane Merge	385	**F**	851	D	391	**F**	816	D
	Watt Avenue Exit	Major Diverge	1,568	E	1,112	D	1,364	E	991	D
	Northbound Watt Avenue Loop Entrance	One-Lane Merge	774	D	1,125	D	726	D	1,100	D
	Southbound Watt Avenue Slip Entrance	Lane Addition	1,134	D	1,062	C	919	D	1,006	D
	Howe Avenue Exit	Major Diverge	1,879	E	1,687	D	1,709	E	1,695	D

Table 6.8
CEQA Cumulative Plus FOUR PROJECTS (Alt. 2) Peak Hour Freeway Ramp Junction/Weaving Level of Service

Direc-tion	Location	Junction Type	CEQA Cumulative				CEQA Cumulative Plus FOUR PROJECTS			
			A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
			Ramp Volume	LOS	Ramp Volume	LOS	Ramp Volume	LOS	Ramp Volume	LOS
	Northbound Howe Avenue Loop Entrance	One-Lane Merge	613	D	572	D	607	D	563	D
	Southbound Howe Avenue Slip Entrance	One-Lane Merge	668	**F**	699	C	807	**F**	646	C

Bold values denote level of service "F" conditions.
Red shaded values indicate project impacts.
Source: *DKS Associates, 2018.*

Table 6.9: CEQA Cumulative Peak Hour Freeway Ramp Termini Queuing

Direction	US 50 Exit Ramp	Available Storage Length (feet / lane)			Maximum Queue Length (feet / lane)					
					AM Peak Hour			PM Peak Hour		
		L	T	R	L	T	R	L	T	R
Eastbound US-50	Howe Avenue	765	-	765	136	-	**797**	137	-	346
	Watt Avenue	1,500	-	1,500	210	-	403	244	-	242
	Bradshaw Road	1,250	-	1,250	149	-	566	159	-	317
	Mather Field Road	1,385	-	1,385	132	-	383	241	-	453
	Zinfandel Drive	1,025	1,025	1,025	163	**1,416**	1,306	396	368	930
	Sunrise Boulevard	1,695	-	1,695	106	-	199	196	-	114
	Rancho Cordova Pkwy.	-	-	1,850	-	-	394	-	-	528
	Hazel Avenue	1,310	-	1,310	305	-	23	711	-	18
Westbound US-50	Hazel Avenue	1,995		1,995	302		855	300		669
	Rancho Cordova Pkwy	1,065	-	-	**1,651**	-	-	**1,746**	-	-
	Sunrise Boulevard	1,540	-	1,540	52	-	198	23	-	442
	Zinfandel Drive	1,065	-	1,065	245	-	70	143	-	197
	Mather Field Road	1,335	-	1,335	362	-	331	176	-	183
	Bradshaw Road	1,330	-	1,330	177	-	122	265	-	47
	Watt Avenue	1,480	-	1,480	230	-	778	164	-	567
	Howe Avenue	1,355	1,355	1,355	85	412	804	199	412	684

Bold values exceed storage capacity.
L = left turn movement, T = through movement, R = right turn movement
Source: *DKS Associates, 2018.*

Table 6.10: CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Peak Hour Freeway Ramp Termini Queuing											
		Available Storage Length (feet / lane)			Maximum Queue Length (feet / lane)						
					AM Peak Hour			PM Peak Hour			
Direction	US 50 Exit Ramp	L	T	R	L	T	R	L	T	R	
Eastbound US-50	Howe Avenue	765	-	765	143	-	**1,025**	161	-	514	
	Watt Avenue	1,500	-	1,500	274	-	605	226	-	328	
	Bradshaw Road	1,250	-	1,250	191	-	1,147	119	-	734	
	Mather Field Road	1,385	-	1,385	168	-	386	311	-	289	
	Zinfandel Drive	1,025	1,025	1,025	152	**1,398**	**1,359**	439	369	662	
	Sunrise Boulevard	1,695	-	1,695	111	-	188	220	-	98	
	Rancho Cordova Pkwy.	-	-	1,850	-	-	365	-	-	555	
	Hazel Avenue	1,310	-	1,310	311	-	27	760	-	16	
Westbound US-50	Hazel Avenue	1,995		1,995	317		796	319		656	
	Rancho Cordova Pkwy	1,065	-	-	**1,705**	-	-	**1,682**	-	-	
	Sunrise Boulevard	1,540	-	1,540	57	-	185	38	-	410	
	Zinfandel Drive	1,065	-	1,065	253	-	69	183	-	192	
	Mather Field Road	1,335	-	1,335	489	-	456	248	-	221	
	Bradshaw Road	1,330	-	1,330	232	-	118	291	-	53	
	Watt Avenue	1,480	-	1,480	268	-	682	174	-	607	
	Howe Avenue	1,355	1,355	1,355	47	412	754	170	412	785	

Red shaded values indicate project impacts.
L = left turn movement, T = through movement, R = right turn movement
Source: *DKS Associates, 2018.*

6.4.5 CEQA Cumulative Plus FOUR PROJECTS Transit System Impacts

Public transit would not be provided to the sites of the FOUR PROJECTS under CEQA Cumulative scenario without development of the FOUR PROJECTS. In the preparation of this analysis, a transit system to serve the FOUR PROJECTS was developed (see Section 3.1.2.3). However, the timing and implementation of the transit system are uncertain at this time. The FOUR PROJECTS would increase demands for public transit facilities. Therefore, the impact of the FOUR PROJECTS on the transit system is potentially significant.

6.4.6 CEQA Cumulative Plus FOUR PROJECTS Functionality Impacts

Table 6.11 summarizes the results of the rural roadway segment functionality analysis. **Figure 6.7** illustrates the resultant functionality impacts. The table includes the number of lanes assumed with the implementation of the FOUR PROJECTS, which in many cases is greater than the number of lanes in the existing condition. The shaded table cells under the "Travel Lanes" heading illustrates new roadways and widened roadways that are assumed part of the FOUR PROJECTS. The "Substandard?" heading indicates whether or not a roadway meets the County standards of 12-foot lanes and 6-foot shoulders. If the FOUR PROJECTS make improvements to a roadway segment such as widening, they would be required to reconstruct the entire substandard roadway segment to County standards. The shaded table cells under the "Functionality Impact?" heading indicate those locations with a functionality impact.

As stated above, the traffic analysis assumed that the FOUR PROJECTS would construct a number of travel lanes on roadway segments that are internal to or on the boundary of the FOUR PROJECTS, and the entire roadway segment would be reconstructed to County standards at that time. The timing of implementation of such additional traffic lanes on these internal or boundary roadway segments will affect whether or not impacts would exist at some time prior to full build out of the FOUR PROJECTS.

Table 6.11
CEQA Cumulative Plus FOUR PROJECTS Functionality Impacts

ID	Roadway	Segment		Jurisdiction	Existing Substandard Roadways				CEQA Cumulative + FOUR PROJECTS			
		From	To		Travel Lanes	Pavement (ft)	Substandard? [1]	Existing Volume	Travel Lanes	Facility Type[1]	Forecasted Volume	Functionality Impact? [2]
15	Douglas Rd	Mather Blvd	Zinfandel Dr	County	2	23	Yes	6,635	4	Arterial M	33,390	Yes[3]
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd	Rancho Cordova/County	2	23	Yes	8,369	6	Arterial M	50,360	Yes[3]
19	Eagles Nest Rd	Kiefer Blvd	Jackson Rd	County	2	20	Yes	740	4	Arterial M	13,130	Yes[3]
20	Eagles Nest Rd	Jackson Rd	Florin Rd	County	2	<21	Yes	517	2	Arterial M	9,110	Yes
21	Eagles Nest Rd	Florin Rd	Grant Line Rd	County	2	<21	Yes	189	2	Arterial M	4,530	No
25	Elder Creek Rd	South Watt Ave	Hedge Ave	County	2	23	Yes	5,576	4	Arterial M	52,900	Yes[3]
26	Elder Creek Rd	Hedge Ave	Mayhew Rd	County	2	23	Yes	5,797	4	Arterial M	33,660	Yes[3]
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd	County	2	23	Yes	5,355	4	Arterial M	40,490	Yes[3]
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd	County	2	23	Yes	2,158	3	Arterial M	30,740	Yes[3]
30	Excelsior Rd	Kiefer Blvd	Jackson Rd	County	2	22	Yes	3,716	2	Arterial M	26,970	Yes
31	Excelsior Rd	Jackson Rd	Elder Creek Rd	County	2	<21	Yes	5,075	3	Arterial M	36,220	Yes[3]
32	Excelsior Rd	Elder Creek Rd	Florin Rd	County	2	<21	Yes	4,203	3	Arterial M	12,520	Yes[3]
33	Excelsior Rd	Florin Rd	Gerber Rd	County	2	<21	Yes	5,423	2	Arterial M	13,080	Yes
34	Excelsior Rd	Gerber Rd	Calvine Rd	County	2	<21	Yes	4,229	2	Arterial M	8,360	Yes
39	Florin Rd	South Watt Ave	Hedge Ave	County	2	22	Yes	7,718	4	Arterial M	12,010	Yes[3]
40	Florin Rd	Hedge Ave	Mayhew Rd	County	2	22	Yes	6,312	4	Arterial M	13,280	Yes[3]
41	Florin Rd	Mayhew Rd	Bradshaw Rd	County	2	22	Yes	6,317	4	Arterial M	40,200	Yes[3]
42	Florin Rd	Bradshaw Rd	Excelsior Rd	County	2	22	Yes	3,478	4	Arterial M	26,070	Yes[3]
43	Florin Rd	Excelsior Rd	Sunrise Blvd	County	2	22	Yes	3,835	2	Arterial M	17,090	Yes
48	Fruitridge Rd	South Watt Ave	Hedge Ave	City of Sacramento/ County	2	22	Yes	2,890	3	Arterial M	24,240	Yes[3]
49	Fruitridge Rd	Hedge Ave	Mayhew Rd	County	2	22	Yes	1,790	4	Arterial M	21,800	Yes[3]
50	Grant Line Rd	White Rock Rd	Douglas Rd	Rancho Cordova/County	2	22	Yes	7,189	4	Arterial M	41,130	Yes[3]
58	Happy Ln	Old Placerville Rd	Kiefer Blvd	County	2	22	Yes	4,635	2	Arterial M	13,820	Yes
59	Hedge Ave	Jackson Rd	Fruitridge Rd	County	2	22	Yes	3,061	2	Arterial M	11,760	Yes

Red text with light gray shading indicate project impacts.

Table 6.11
CEQA Cumulative Plus FOUR PROJECTS Functionality Impacts

ID	Roadway	Segment		Jurisdiction	Existing Substandard Roadways				CEQA Cumulative + FOUR PROJECTS			
		From	To		Travel Lanes	Pavement (ft)	Substandard? [1]	Existing Volume	Travel Lanes	Facility Type[1]	Forecasted Volume	Functionality Impact? [2]
60	Hedge Ave	Fruitridge Rd	Elder Creek Rd	City of Sacramento/County	2	22	Yes	3,737	2	Arterial M	10,010	**Yes**
61	Hedge Ave	Elder Creek Rd	Florin Rd	County	2	22	Yes	2,722	2	Arterial M	22,460	**Yes**
70	Jackson Rd	Bradshaw Rd	Excelsior Rd	County	2	26	Yes	13,030	6	Arterial M	59,380	**Yes[3]**
71	Jackson Rd	Excelsior Rd	Eagles Nest Rd	County	2	26	Yes	10,478	4	Arterial M	62,220	**Yes[3]**
74	Kiefer Blvd	Florin Perkins Rd	South Watt Ave	City of Sacramento/County	2	22	Yes	4,616	2	Arterial M	4,830	No
77	Kiefer Blvd	Bradshaw Rd	Happy Ln	County	2	22	Yes	4,618	6	Arterial M	50,960	**Yes[3]**
78	Kiefer Blvd	Zinfandel Dr	Sunrise Blvd	County	2	22	Yes	656	3	Arterial M	39,820	**Yes[3]**
83	Mather Blvd-Excelsior Rd[4]	Douglas Rd	Kiefer Blvd	County	2	22	Yes	6,751	2	Res Collector F	6,410	No
89	Mayhew Rd	Jackson Rd	Fruitridge Rd	County	2	22	Yes	1,616	4	Arterial M	47,790	**Yes[3]**
116	White Rock Rd	Fitzgerald Rd	Grant Line Rd	Rancho Cordova/County	2	20	Yes	2,490	4	Arterial M	55,810	**Yes[3]**
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd	County	2	<21	Yes	2,848	4	Arterial M	22,250	**Yes[3]**

Red text with light gray shading indicate project impacts.

Table 6.11
CEQA Cumulative Plus FOUR PROJECTS Functionality Impacts

ID	Roadway	Segment		Jurisdiction	Existing Substandard Roadways				CEQA Cumulative + FOUR PROJECTS			
		From	To		Travel Lanes	Pavement (ft)	Substandard? [1]	Existing Volume	Travel Lanes	Facility Type[1]	Forecasted Volume	Functionality Impact? [2]

Note: Gray shading indicates changes in travel lanes or facility type that the project is responsible to provide. For all roadway segments to be widened, the project is responsible to build the entire roadway to County standards.

[1] Substandard rural roads are defined as rural, 2-lane roadway segments with travel lanes narrower than 12 feet and/or roadside shoulders narrower than 6 feet.
[2] Functionality impacts are triggered when a substandard rural road increases over a threshold of 6,000 ADT, or for a roadway already above 6,000 ADT, increases by more than 600 ADT.
[3] The potential for an impact exists should the project generate traffic volumes on the roadway exceeding 6,000 ADT, or increasing more than 600 ADT on a roadway already above 6,000 ADT, prior to the construction of roadway improvements.
[4] Excluding the roadway segment that is within the developed community of Independence at Mather.
[5] The functionality impact is mitigated by improving the roadway to County standards, including widening travel lanes to 12 feet and/or widening or providing paved shoulders to 6 feet.

Red text with light gray shading indicate project impacts.

FIGURE 6.7
CEQA CUM PLUS FOUR PROJECTS
(JT ALTERNATIVE 2)
FUNCTIONALITY IMPACTS

Legend

- Substandard Roadways
- Functionality Impact
- Functionality Impact if Roadway is Not Already Improved
- Cities
- Mather Airport

6.5 MITIGATION

6.5.1 CEQA Cumulative Plus FOUR PROJECTS Roadway Segment Mitigation

Table 6.12 summarizes the results of the operations analysis for the study area roadway segments with mitigation. Where feasible, the number of roadway lanes was increased to mitigate the impact. However, the increased number of lanes could not exceed the maximum General Plan designations of the appropriate jurisdictions. The shaded table cells under the "Travel Lanes" and "Facility Type" headings illustrate widened roadways for mitigation purposes, which would be the responsibility of the FOUR PROJECTS to fund. The Jackson Township project would contribute a fair share. The shaded table cells under the "Level of Service" heading indicate those locations that would continue to have LOS impacts after mitigation. The table also includes the constraint that precluded full mitigation of the LOS impact.

The "LOS Impact with Mitigation?" column shows whether there is still an LOS impact after the mitigation measure is applied. In other words, this column shows whether a mitigation measure successfully mitigates the impact or not. In several locations where the improvements allowed under the General Plan would not mitigate an LOS impact, the County has proposed alternative mitigation measures, which are shown in the "Alternative Mitigation" column. These alternative mitigation measures will either fully mitigate the impact or substantially reduce the level of impact.

6.5.2 CEQA Cumulative Plus FOUR PROJECTS Intersection Mitigation

Tables 6.13a and 6.14a summarize the results of the operations analysis for the study area intersections with mitigation. However, the increased number of lanes on each approach does not exceed the County's standard number of approach lanes. **Tables 6.13b and 6.14b** summarize the results of the operations analysis for the study area intersections with the ultimate mitigation, which may exceed the County's standard number of approach lanes. Shaded table cells indicate those locations where changes in traffic control and / or number of approach lanes by type have been made to mitigate impacts, which would be the responsibility of the FOUR PROJECTS to fund. The Jackson Township project would contribute a fair share. The shaded table cells under the "Level of Service" heading indicate those locations with an LOS impact after mitigation. Table 6.14a and Table 6.14b also identify those intersections that would continue to have LOS impacts after mitigation, along with the constraint that precluded full mitigation. Detailed analysis information is included in the technical appendix.

The "LOS Impact with Mitigation?" column shows whether there is still an LOS impact after the mitigation measure is applied. In other words, this column shows whether a mitigation measure successfully mitigates the impact or not. In several locations where the LOS impact could not be mitigated by implementing the County's standard number of approach lanes, the County has proposed alternative mitigation measures, which are shown in the "Alternative Mitigation" column. These generally include providing additional turn lanes, carrying an additional through lane past the intersection, or designating the intersection as a High Capacity Intersection. These

alternative mitigation measures will either fully mitigate the impact or substantially reduce the level of impact.

High Capacity Intersections

Three intersections are currently designated as "High Capacity Intersections" on the County's General Plan: Watt Avenue & Folsom Boulevard, Watt Avenue & Kiefer Boulevard, and Watt Avenue & Jackson Road. At two intersections on Bradshaw Road where an LOS impact could not be mitigated by implementing the County's standard number of approach lanes, the County has proposed alternative mitigation measures by designating those two intersections as High Capacity Intersections: Bradshaw Road & Mayhew Road and Bradshaw Road & Jackson Road.

A high capacity intersection would utilize special treatments to increase the capacity of the intersection so as to reduce congestion and travel delay. Since each intersection could have unique travel movements, volumes and existing context sensitive conditions, the special treatments utilized at each high capacity intersection will be selected to meet the specific needs of each intersection. The range of special treatments is quite wide, ranging from the restriction of certain turning movements to various combinations that could include grade separating certain movements. While the field of traffic engineering is ever expending and evolving resulting in the use of new technologies and treatments, special treatments such as the following could be utilized at a high capacity intersection:

- Restricting turning movements
- Median U-turns
- Roundabouts
- Split intersections
- Quadrant roadway intersections
- Bowtie intersections
- Directional flyovers
- Center turn overpass
- Grade separated Roundabout
- Diverging diamond grade separation
- Compact diamond grade separation
- Single point urban grade separation
- Traditional urban grade separation

The County has conducted conceptual engineering to define potential improvements at the three study area intersections on Watt Avenue that are currently designated as "High Capacity Intersections" on the County's General Plan. These are:

- At the **Watt Avenue & Folsom Boulevard** intersection, the County proposes an ultimate configuration involving grade separation of the northbound and southbound through movements of Watt Avenue. Access to and from Folsom Boulevard would be accomplished via on and off-ramps from the left lanes of Watt Avenue to a single signalized intersection. A bus rapid transit (BRT) lane along Watt Avenue would also intersect Folsom Boulevard at the traffic signal. This design is consistent with the

recommendations of the South Watt Area Transportation Study (SWATS) dated November 1, 2002 and approved by the Board of Supervisors on November 26, 2002, and with the planning study for the *State Route 16 (Jackson Road) Corridor Study* (Fehr & Peers, 2012). It should be noted that the State Route 16 study has only had a staff-level review done by Caltrans, Sacramento County Department of Transportation, City of Rancho Cordova, and City of Sacramento. Other equivalent mitigation measures may be selected to the satisfaction of the Department of Transportation to mitigate the project's impact.

- At the **Watt Avenue & Kiefer Boulevard** intersection, the County proposes a tight diamond interchange as the ultimate improvement. The through movements (and BRT lane) on Watt Avenue would be grade separated from Kiefer Boulevard. Access to and from Kiefer Boulevard would be accomplished via on and off-ramps at two signalized intersections along Kiefer Boulevard. This design is proposed in the planning study prepared for *State Route 16 (Jackson Road) Corridor Study* (Fehr & Peers, 2012). It should be noted that the State Route 16 study has only had a staff-level review done by Caltrans, Sacramento County Department of Transportation, City of Rancho Cordova, and City of Sacramento. Other equivalent mitigation measures may be selected to the satisfaction of the Department of Transportation to mitigate the project's impact.

- At the **Watt Avenue & Jackson Road** intersection, the County proposes a standard six-by-six signalized intersection (two left-turn lanes, three through lanes, and one right-turn lane, on each approach) with three modifications. 1) The southbound left-turn movement would be grade separated; 2) The westbound right-turn movement would be grade separated; and 3) Three northbound left-turn lanes are proposed. This configuration represents an enhanced version of Alternative 6 in the planning study prepared for *State Route 16 (Jackson Road) Corridor Study* (Fehr and Peers, 2012). It should be noted that the State Route 16 study has only had a staff-level review done by Caltrans, Sacramento County Department of Transportation, City of Rancho Cordova, and City of Sacramento. Other equivalent mitigation measures may be selected to the satisfaction of the Department of Transportation to mitigate the project's impact.

At the new proposed "High Capacity Intersection" at Bradshaw Road and Jackson Road, the ultimate configuration has not been defined. A number of improvement options involving one or more of the special treatments identified above could be defined that would mitigate the LOS impact at this location.

Additionally, grade separated intersections are proposed along Grant Line Road, in order to meet the Connector JPA's level of service policy. These grade separations would be constructed at Prairie City Road (which is also a designated High Capacity Intersection), White Rock Road, Douglas Road, Kiefer Boulevard, Jackson Road, and Sunrise Boulevard.

Since each of these intersections have unique travel movements, volumes and existing context sensitive conditions (potential environmental issues, right-of-way, physical constraints, etc.), the special treatments utilized at each location will need to be studied to select the treatments that mitigate the LOS impact, while avoiding or minimizing other impacts.

6.5.3 CEQA Cumulative Plus FOUR PROJECTS U.S. 50 Freeway Mitigation

According to Caltrans' US-50 Transportation Concept Report (TCR) and Corridor System Management Plan (CSMP), all mainline freeway lanes of the 8-lane ultimate facility (4 lanes in each direction) have already been built, with the exception of the segment between Zinfandel Drive and Sunrise Boulevard (where 6 of the 8 ultimate lanes exist today). With the exception of this segment, capacity improvements to widen the freeway mainline are precluded by the ultimate configuration in the TCR/CSMP. The TCR/CSMP does conceptualize other projects that will benefit the US-50 corridor without adding additional mainline travel lanes. These improvements generally fall into one of three categories:

- Intelligent transportation systems (ITS) and integrated corridor management (ICM) projects. Some examples may include ramp metering and multimodal improvements.
- Improvements to parallel local facilities. Such projects are expected to reduce travel demand on US-50.
- Future HOV lanes and auxiliary lanes. These projects would extend, or bridge gaps in, the existing HOV and auxiliary lane network. Constructing these lanes is permissible even when further widening of the mainline is not allowable, and is consistent with the ultimate configuration in the TCR/CSMP.

The FOUR PROJECTS shall participate in one or more of these alternative improvements that could directly reduce the severity of the project's impact and/or provide operational benefits to the US-50 corridor in general.

6.5.3.1 US-50 Eastbound Alternative Improvements

To lessen the impact to the eastbound US-50 mainline between Stockton Boulevard and 59th Street, the project may pay a fair share toward the construction of:

- Ramp meter improvements (Caltrans ITS/OPS Project List)

6.5.3.2 US-50 Westbound Alternative Improvements

To lessen the impact to the westbound US-50 weave between Hazel Avenue and Rancho Cordova Parkway, the project may pay a fair share toward the construction of:

- Multi-modal corridor improvements and interchange improvements at Hazel Avenue (2035 SACOG MTP)
- Auxiliary lanes between Hazel Avenue and Rancho Cordova Parkway (2035 SACOG MTP)

Table 6.12
CEQA Cumulative Plus FOUR PROJECTS Roadway Segment Mitigations

ID	Roadway	Segment		CEQA Cumulative + FOUR PROJECTS					Mitigated CEQA Cumulative + FOUR PROJECTS						
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Volume / Capacity Ratio	Level of Service	LOS Impact with Mitigation?	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
2	Bradshaw Rd	US 50	Lincoln Village Dr	6	Arterial M	84,620	1.57	**F**	6	Arterial M	1.57	**F**	Yes		Maximum General Plan lanes
3	Bradshaw Rd	Lincoln Village Dr	Old Placerville Rd	6	Arterial M	76,770	1.42	**F**	6	Arterial M	1.42	**F**	Yes		Maximum General Plan lanes
4	Bradshaw Rd	Old Placerville Rd	Goethe Rd	6	Arterial M	73,340	1.36	**F**	6	Arterial M	1.36	**F**	Yes		Maximum General Plan lanes
5.1	Bradshaw Rd	Goethe Rd	Collector WJ-8	6	Arterial M	62,160	1.15	**F**	6	Arterial M	1.15	**F**	Yes		Maximum General Plan lanes
5.2	Bradshaw Rd	Collector WJ-8	Kiefer Blvd	6	Arterial M	58,600	1.09	**F**	6	Arterial M	1.09	**F**	Yes		Maximum General Plan lanes
6.2	Bradshaw Rd	Collector WJ-9	Mayhew Rd	6	Arterial M	54,090	1.00	**F**	6	Arterial M	1.00	**F**	Yes		Maximum General Plan lanes
6.3	Bradshaw Rd	Mayhew Rd	Jackson Rd	6	Arterial M	57,490	1.06	**F**	6	Arterial M	1.06	**F**	Yes		Maximum General Plan lanes
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd	6	Arterial M	50,360	0.93	**E**	6	Arterial M	0.93	**E**	Yes		Maximum General Plan lanes
23	Elder Creek Rd	Power Inn Rd	Florin-Perkins Rd	2	Arterial M	28,360	1.58	**F**	4	Arterial M	0.79	C	No		
25	Elder Creek Rd	South Watt Ave	Hedge Ave	4	Arterial M	52,900	1.47	**F**	6	Arterial M	0.98	**E**	No		
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd	4	Arterial M	40,490	1.12	**F**	6	Arterial M	0.75	C	No		
28.1	Elder Creek Rd	Bradshaw Rd	Vineyard Rd	3	Arterial M	30,740	1.71	**F**	4	Arterial M	0.85	D	No		
31.1	Excelsior Rd	Jackson Rd	Collector WJ-6	3	Arterial M	36,910	2.05	**F**	6	Arterial M	0.68	B	No		
31.2	Excelsior Rd	Collector WJ-6	Elder Creek Rd	3	Arterial M	36,220	2.01	**F**	6	Arterial M	0.67	B	No		
37	Florin Rd	Power Inn Rd	Florin-Perkins Rd	4	Arterial M	43,690	1.21	**F**	4	Arterial M	1.21	**F**	Yes	Construct 2-lane Alta Florin Road	Maximum General Plan lanes
41	Florin Rd	Mayhew Rd	Bradshaw Rd	4	Arterial M	40,200	1.12	**F**	6	Arterial M	0.74	C	No		
42.2	Florin Rd	Vineyard Rd	Excelsior Rd	3	Arterial M	19,920	1.11	**F**	4	Arterial M	0.55	A	No		

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 6.12
CEQA Cumulative Plus FOUR PROJECTS Roadway Segment Mitigations

ID	Roadway	Segment		CEQA Cumulative + FOUR PROJECTS					Mitigated CEQA Cumulative + FOUR PROJECTS						
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Volume / Capacity Ratio	Level of Service	LOS Impact with Mitigation?	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
44	Folsom Blvd	Howe Ave	Jackson Rd	4	Arterial M	56,000	1.56	**F**	4	Arterial M	1.56	**F**	Yes		Maximum General Plan lanes
47	Fruitridge Rd	Florin Perkins Rd	South Watt Ave	2	Arterial M	27,770	1.54	**F**	4	Arterial M	0.77	C	No		
48	Fruitridge Rd	South Watt Ave	Hedge Ave	3	Arterial M	24,240	1.35	**F**	4	Arterial M	0.67	B	No		
51.2	Grant Line Rd	Chrysanthy Blvd	Kiefer Blvd	4	Arterial H	47,640	1.19	**F**	4	Arterial H	1.19	**F**	Yes		Maximum General Plan lanes
52.1	Grant Line Rd	Kiefer Blvd	Rancho Cordova Pkwy	4	Arterial H	37,030	0.93	**E**	4	Arterial H	0.93	**E**	Yes		Maximum General Plan lanes
56	Grant Line Rd	Sheldon Rd	Wilton Rd	4	Arterial M	45,430	1.26	**F**	4	Arterial M	1.26	**F**	Yes		Maximum General Plan lanes
57	Grant Line Rd	Wilton Rd	Bond Rd	4	Arterial M	40,370	1.12	**F**	4	Arterial M	1.12	**F**	Yes		Maximum General Plan lanes
58.2	Happy Ln	Routier Ext	Kiefer Blvd	2	Arterial M	20,580	1.14	**F**	2	Arterial M	1.14	**F**	Yes		Maximum General Plan lanes
62	Howe Ave	US 50	Folsom Blvd	6	Arterial M	71,420	1.32	**F**	6	Arterial M	1.32	**F**	Yes		Maximum General Plan lanes
66.1	Jackson Rd	Florin Perkins Rd	14th Ave	4	Arterial M	44,100	1.23	**F**	4	Arterial M	1.23	**F**	Yes		Maximum General Plan lanes
66.2	Jackson Rd	14th Ave	Rock Creek Pkwy	4	Arterial M	61,980	1.72	**F**	4	Arterial M	1.72	**F**	Yes		Maximum General Plan lanes
66.3	Jackson Rd	Rock Creek Pkwy	Aspen 1 Dwy	4	Arterial M	57,690	1.60	**F**	4	Arterial M	1.60	**F**	Yes		Maximum General Plan lanes
66.4	Jackson Rd	Aspen 1 Dwy	South Watt Ave	4	Arterial M	55,370	1.54	**F**	4	Arterial M	1.54	**F**	Yes		Maximum General Plan lanes

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Table 6.12
CEQA Cumulative Plus FOUR PROJECTS Roadway Segment Mitigations

ID	Roadway	Segment		CEQA Cumulative + FOUR PROJECTS					Mitigated CEQA Cumulative + FOUR PROJECTS						
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Volume / Capacity Ratio	Level of Service	LOS Impact with Mitigation?	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
67	Jackson Rd	South Watt Ave	Hedge Ave	4	Arterial M	66,380	1.84	**F**	6	Arterial M	1.23	**F**	Yes		Maximum General Plan lanes
68.1	Jackson Rd	Hedge Ave	Collector WJ-3	4	Arterial M	56,540	1.57	**F**	6	Arterial M	1.05	**F**	Yes		Maximum General Plan lanes
68.2	Jackson Rd	Collector WJ-3	Mayhew Rd	4	Arterial M	57,880	1.61	**F**	6	Arterial M	1.07	**F**	Yes		Maximum General Plan lanes
69	Jackson Rd	Mayhew Rd	Bradshaw Rd	6	Arterial M	56,220	1.04	**F**	6	Arterial M	1.04	**F**	Yes		Maximum General Plan lanes
70.1	Jackson Rd	Bradshaw Rd	Collector WJ-4	6	Arterial M	59,380	1.10	**F**	6	Arterial M	1.10	**F**	Yes		Maximum General Plan lanes
70.2	Jackson Rd	Collector WJ-4	Rock Creek Pkwy	6	Arterial M	59,660	1.10	**F**	6	Arterial M	1.10	**F**	Yes		Maximum General Plan lanes
71.1	Jackson Rd	Excelsior Rd	Collector JT-3	4	Arterial M	62,220	1.73	**F**	6	Arterial M	1.15	**F**	Yes		Maximum General Plan lanes
71.2	Jackson Rd	Collector JT-3	Tree View Ln	4	Arterial M	46,480	1.29	**F**	6	Arterial M	0.86	D	No		
71.3	Jackson Rd	Tree View Ln	Collector JT-4	4	Arterial M	41,360	1.15	**F**	6	Arterial M	0.77	C	No		
72.1	Jackson Rd	Eagles Nest Rd	Rockbridge Dr	4	Arterial M	37,120	1.03	**F**	6	Arterial M	0.69	B	No		
72.2	Jackson Rd	Rockbridge Dr	Sunrise Blvd	4	Arterial M	37,910	1.05	**F**	6	Arterial M	0.70	C	No		
73	Jackson Rd	Sunrise Blvd	Grant Line Rd	4	Arterial M	45,290	1.26	**F**	6	Arterial M	0.84	D	No		
76	Kiefer Blvd	Mayhew Rd	Bradshaw Rd	4	Arterial M	42,310	1.18	**F**	4	Arterial M	1.18	**F**	Yes		Maximum General Plan lanes
78.4	Kiefer Blvd	E Collector MS-1	Sunrise Blvd	3	Arterial M	39,820	2.21	**F**	4	Arterial M	1.11	**F**	Yes		Maximum General Plan lanes
79	Kiefer Blvd	Sunrise Blvd	Rancho Cordova Pkwy	4	Arterial M	33,580	0.93	**E**	4	Arterial M	0.93	**E**	Yes		Maximum General Plan lanes

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Table 6.12
CEQA Cumulative Plus FOUR PROJECTS Roadway Segment Mitigations

ID	Roadway	Segment		CEQA Cumulative + FOUR PROJECTS					Mitigated CEQA Cumulative + FOUR PROJECTS						
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Volume / Capacity Ratio	Level of Service	LOS Impact with Mitigation?	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
89.1	Mayhew Rd	Jackson Rd	Rock Creek Pkwy	4	Arterial M	47,790	1.33	**F**	6	Arterial M	0.89	D	No		
89.2	Mayhew Rd	Rock Creek Pkwy	Fruitridge Rd	4	Arterial M	46,860	1.30	**F**	6	Arterial M	0.87	D	No		
93	Old Placerville Rd	Routier Rd	Rockingham Dr	4	Arterial M	36,350	1.01	**F**	4	Arterial M	1.01	**F**	Yes		Maximum General Plan lanes
95	Rockingham Dr	Old Placerville Rd	Mather Field Rd	4	Arterial M	40,280	1.12	**F**	4	Arterial M	1.12	**F**	Yes		Maximum General Plan lanes
96	South Watt Ave	Folsom Blvd	Kiefer Blvd	6	Arterial M	81,880	1.52	**F**	6	Arterial M	1.52	**F**	Yes		Maximum General Plan lanes
97	South Watt Ave	Kiefer Blvd	Jackson Rd	6	Arterial M	70,930	1.31	**F**	6	Arterial M	1.31	**F**	Yes		Maximum General Plan lanes
100	South Watt Ave	Elder Creek Rd	Florin Rd	6	Arterial M	59,670	1.11	**F**	6	Arterial M	1.11	**F**	Yes		Maximum General Plan lanes
104.3	Sunrise Blvd	Rio Del Oro Pkwy	Douglas Rd	6	Arterial M	63,690	1.18	**F**	6	Arterial M	1.18	**F**	Yes		Maximum General Plan lanes
105	Sunrise Blvd	Douglas Rd	Kiefer Blvd	5	Arterial M	43,880	1.22	**F**	6	Arterial M	0.81	D	No		
106	Sunrise Blvd	Kiefer Blvd	Jackson Rd	4	Arterial M	33,930	0.94	**E**	6	Arterial M	0.63	B	No		
110	Watt Ave	US 50	Folsom Blvd	6	Arterial H	106,480	1.77	**F**	6	Arterial H	1.77	**F**	Yes		Maximum General Plan lanes
117	White Rock Rd	Grant Line Rd	Prairie City Rd	4	Arterial H	56,000	1.40	**F**	4	Arterial H	1.40	**F**	Yes		Maximum General Plan lanes
132	Kiefer Blvd	Americanos Blvd	Grant Line Rd	2	Arterial M	19,200	1.07	**F**	4	Arterial M	0.53	A	No		
135	Rancho Cordova Pkwy	White Rock Rd	International Dr	6	Arterial M	49,960	0.93	**E**	6	Arterial M	0.93	**E**	Yes		Maximum General Plan lanes
136	Rancho Cordova Pkwy	International Dr	Rio Del Oro Pkwy	6	Arterial M	59,540	1.10	**F**	6	Arterial M	1.10	**F**	Yes		Maximum General Plan lanes

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Table 6.12
CEQA Cumulative Plus FOUR PROJECTS Roadway Segment Mitigations

ID	Roadway	Segment		CEQA Cumulative + FOUR PROJECTS					Mitigated CEQA Cumulative + FOUR PROJECTS						
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Volume / Capacity Ratio	Level of Service	LOS Impact with Mitigation?	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
200	Kiefer Blvd	Tree View Ln	Eagles Nest Rd	4	Arterial M	37,180	1.03	**F**	4	Arterial M	1.03	**F**	Yes		Maximum General Plan lanes
301	Douglas Rd	Rock Creek Pkwy	Kiefer Blvd	4	Arterial M	36,990	1.03	**F**	4	Arterial M	1.03	**F**	Yes		Maximum General Plan lanes
302	Kiefer Blvd	Happy Ln	Douglas Rd	6	Arterial M	63,170	1.17	**F**	6	Arterial M	1.17	**F**	Yes		Maximum General Plan lanes
304	Mayhew Rd	Routier Ext	Bradshaw Rd	4	Arterial M	39,470	1.10	**F**	6	Arterial M	0.73	C	No		
305	Mayhew Rd	Bradshaw Rd	Jackson Rd	4	Arterial M	40,970	1.14	**F**	6	Arterial M	0.76	C	No		
307	Mayhew Rd	Collector WJ-13	Elder Creek Rd	3	Arterial M	32,580	1.81	**F**	4	Arterial M	0.91	E	No		
312	Rock Creek Pkwy East	Collector WJ-16	Jackson Road	2	Arterial M	19,230	1.07	**F**	2	Arterial M	1.07	**F**	Yes		Maximum General Plan lanes
317	Routier Ext	Old Placerville Road	Happy Lane	4	Arterial H	41,410	1.04	**F**	4	Arterial H	1.04	**F**	Yes		Maximum General Plan lanes
405	Collector JT-3	Collector JT-5	Jackson Rd	2	Arterial M	20,070	1.12	**F**	4	Arterial M	0.56	A	No		

Note: Gray shading represents changes in travel lanes or facility type that the project is responsible to provide.

[1] The following classifications are used to determine daily roadway capacity:
Arterial L - Arterial, Low Access Control
Arterial M - Arterial, Moderate Access Control
Arterial H - Arterial, High Access Control
Rural Hwy - Rural 2-lane Highway
Rural S - Rural 2-lane Road, 24'-36' of pavement, Paved Shoulders
Rural NS - Rural 2-lane Road, 24'-36' of pavement, No Shoulders
Res Collector F - Residential Collector with Frontage
Res Collector NF - Residential Collector with No Frontage

[2] Alternative mitigations represent proposed mitigations beyond the General Plan, as proposed by the County of Sacramento.

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Table 6.13a

CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Impacted Intersections and County Standard Intersection Geometry

	Intersection	AM Peak Hour							PM Peak Hour						
		CEQA Cumulative Plus All			County Standard Geometry CEQA Cumulative Plus FOUR PROJECTS			Alternative Mitigation	CEQA Cumulative Plus All			County Standard Geometry CEQA Cumulative Plus FOUR PROJECTS			Alternative Mitigation
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
3	Power Inn Road/Howe Avenue & Folsom Blvd	Signal	**F**	**108.2**	**-**	**-**	**-**	Yes	Signal	**F**	**88.4**	**-**	**-**	**-**	Yes
4	Power Inn Road & 14th Avenue	Signal	**F**	**166.0**	Signal	**F**	**126.4**	Yes	Signal	**F**	**123.7**	Signal	**F**	**109.2**	Yes
12	Watt Avenue & Folsom Blvd.	Signal	**F**	**182.3**	Signal	**F**	**185.2**	Yes	Signal	**F**	**199.9**	Signal	E	57.6	No
14	S. Watt Avenue & Kiefer Blvd.	Signal	**F**	**91.8**	Signal	**F**	**83.2**	Yes	Signal	E	73.3	Signal	E	66.2	No
16	S. Watt Avenue & Jackson Road	Signal	**F**	**237.3**	Signal	**F**	**153.4**	Yes	Signal	**F**	**185.0**	Signal	**F**	**121.0**	Yes
17	S. Watt Avenue & Fruitridge Road	Signal	**F**	**93.1**	Signal	D	44.0	No	Signal	**F**	**114.3**	Signal	D	49.6	No
20	Elk Grove Florin Road/S. Watt Ave. & Florin Road	Signal	**F**	**>300**	Signal	**F**	**157.3**	No	Signal	**F**	**238.2**	Signal	**F**	**164.5**	Yes
23	Hedge Avenue & Jackson Road	Signal	**F**	**123.1**	Signal	D	53.3	No	Signal	D	41.8	Signal	C	24.1	No
25	Hedge Avenue & Elder Creek Road	Signal	**F**	**138.8**	**-**	**-**	**-**	Yes	Signal	**F**	**135.0**	**-**	**-**	**-**	Yes
28	Mayhew Road & Kiefer Boulevard	Signal	**F**	**91.2**	Signal	E	68.2	No	Signal	E	74.2	Signal	E	62.4	No
29	Mayhew Road & Jackson Road	Signal	**F**	**117.9**	Signal	E	64.5	No	Signal	**F**	**107.2**	Signal	E	61.7	No
31	Mayhew Road & Elder Creek Road	Signal	**F**	**>300**	Signal	E	68.5	No	Signal	**F**	**<300**	Signal	D	43.3	No
32	Woodring Drive & Zinfandel Drive	Two-way stop			Round	A	8.7	No	Two-way stop			Round	B	10.4	No
	Eastbound		***F***	***85.0***						***F***	***223.4***				

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Table 6.13a

CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Impacted Intersections and County Standard Intersection Geometry

	Intersection	AM Peak Hour							PM Peak Hour						
		CEQA Cumulative Plus All			County Standard Geometry CEQA Cumulative Plus FOUR PROJECTS			Alternative Mitigation	CEQA Cumulative Plus All			County Standard Geometry CEQA Cumulative Plus FOUR PROJECTS			Alternative Mitigation
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
	Northbound Left Turn		*B*	*10.6*						*B*	*12.4*				
36	Bradshaw Road & Old Placerville Road	Signal	**F**	**101.6**	Signal	**F**	**98.6**	Yes	Signal	**F**	**82.4**	Signal	E	76.4	No
37	Bradshaw Road & Kiefer Boulevard	Signal	**F**	**144.2**	Signal	**F**	**117.3**	Yes	Signal	**F**	**137.6**	Signal	**F**	**113.1**	Yes
38	Bradshaw Road & Jackson Road	Signal	**F**	**172.2**	**-**	-	-	No	Signal	**F**	**161.0**	**-**	**-**	**-**	Yes
39	Bradshaw Road & Elder Creek Road	Signal	**F**	**173.1**	Signal	E	66.1	No	Signal	**F**	**201.7**	Signal	D	49.4	No
40	Bradshaw Road & Florin Road	Signal	**F**	**125.3**	Signal	**F**	**85.3**	No	Signal	**F**	**89.9**	Signal	E	72.8	No
42	Happy Lane & Old Placerville Road	Two-way stop			Modify access control to allow only right-in and right-out on Happy Lane. Median will allow Westbound left-turns to Happy Lane. Construct 4-lane Routier extension.			Yes	Two-way stop			Modify access control to allow only right-in and right-out on Happy Lane. Median will allow Westbound left-turns to Happy Lane. Construct 4-lane Routier extension.			Yes
	Northbound Left Turn		***F***	***>300***						***F***	***>300***				
	Northbound Right Turn		***F***	***236.0***						***C***	***19.2***				
	Westbound Left Turn		*C*	*23.4*						***F***	***53.3***				
43	Happy Lane & Kiefer Boulevard	Signal	**F**	**139.2**	**-**	**-**	**-**	Yes	Signal	E	67.8	-	-	-	No
45	Excelsior Road & Jackson Road	Signal	**F**	**330.8**	Signal	**F**	**106.9**	Yes	Signal	**F**	**269.1**	Signal	**F**	**144.6**	Yes
47	Excelsior Road & Florin Road	Signal	**F**	**111.2**	Signal	D	48.4	No	Signal	E	74.2	Signal	E	73.1	No
51	Mather Field Road & Rockingham Drive	Signal	**F**	**>300**	**-**	**-**	**-**	Yes	Signal	**F**	**170.3**	**-**	**-**	**-**	Yes
58	Zinfandel Drive & Douglas Road	Signal	**F**	**216.8**	Signal	E	62.1	No	Signal	**F**	**220.1**	Signal	E	66.9	No

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Table 6.13a

CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Impacted Intersections and County Standard Intersection Geometry

	Intersection	AM Peak Hour							PM Peak Hour						
		CEQA Cumulative Plus All			County Standard Geometry CEQA Cumulative Plus FOUR PROJECTS			Alternative Mitigation	CEQA Cumulative Plus All			County Standard Geometry CEQA Cumulative Plus FOUR PROJECTS			Alternative Mitigation
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
61	Eagles Nest Road & Florin Road	Two-way stop			Signal	F	121.3	Yes	Two-way stop			Signal	F	138.5	Yes
	Northbound		***F***	***>300***						***F***	***>300***				
	Southbound		***F***	***>300***						***F***	***>300***				
	Eastbound Left Turn		*B*	*11*						*A*	*9.3*				
	Westbound Left Turn		*A*	*0*						*A*	*8.7*				
66	Sunrise Boulevard & International Drive/Monier Circle	Signal	F	118.6	-	-	-	Yes	Signal	E	76.7	-	-	-	No
67	Sunrise Boulevard & Douglas Road	Signal	F	190.0	Signal	F	189.8	Yes	Signal	F	105.4	Signal	F	90.9	Yes
69	Sunrise Boulevard & Kiefer Boulevard	Signal	F	>300	Signal	F	113.3	No	Signal	F	261.4	Signal	E	70.7	No
70	Sunrise Boulevard & Jackson Road	Signal	F	90.0	Signal	D	53.7	No	Signal	E	79.3	Signal	D	52.9	No
72	Sheldon Lake Drive/Sunrise Boulevard & Grant Line Road	Signal	F	120.4	Signal	D	36.4	No	Signal	E	71.0	Signal	E	70.1	Yes
80	Grant Line Road & Jackson Road	Signal	F	119.0	Signal	F	119.0	Yes	Signal	F	101.1	Signal	F	101.1	Yes
86	Power Inn Road & Florin Rd	Signal	F	119.3	Signal	E	57.1	No	Signal	E	73.9	Signal	D	47.1	No
91	Grant Line Rd & Eagles Nest Rd/Sloughhouse Rd	Signal	D	43.2	Signal	D	39.1	No	Signal	D	52.0	Signal	D	38.4	No
92	Grant Line Rd & Calvine Rd	Signal	D	36.5	Signal	B	11.6	No	Signal	C	30.9	Signal	A	9.5	No
93	Grant Line Rd & Dwy/Wilton Rd	Signal	F	83.4	Signal	E	59.8	No	Signal	F	95.2	Signal	F	82.1	Yes

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Table 6.13a

CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Impacted Intersections and County Standard Intersection Geometry

	Intersection	AM Peak Hour							PM Peak Hour						
		CEQA Cumulative Plus All			County Standard Geometry CEQA Cumulative Plus FOUR PROJECTS			Alternative Mitigation	CEQA Cumulative Plus All			County Standard Geometry CEQA Cumulative Plus FOUR PROJECTS			Alternative Mitigation
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
95	Florin Perkins Road & 14th Avenue	Signal	**E**	**67.8**	-	-	-	Yes	Signal	D	46.9	-	-	-	No
96	Jackson Road & 14th Avenue	Signal	**F**	**119.3**	-	-	-	Yes	Signal	**E**	**57.0**	-	-	-	Yes
103	Rancho Cordova Pkwy & Douglas Road	Signal	**E**	**57.9**	Signal	**E**	**57.2**	No	Signal	**E**	**76.1**	Signal	**E**	**76.1**	Yes
303	Rock Creek Pkwy & Jackson Road	Signal	**F**	**128.3**	Signal	E	77.4	No	Signal	**F**	**96.4**	Signal	D	54.7	No
308	Hedge Avenue & Rock Creek Pkwy WB	Round	**F**	**60.5**	Round	C	15.5	No	Round	B	11.2	Round	B	10.2	No
310	Mayhew Road & Rock Creek Pkwy WB	Round	**F**	**181.2**	-	-	-	Yes	Round	**F**	**106.4**	-	-	-	Yes
311	Mayhew Road & Rock Creek Pkwy EB	Round	**F**	**171.2**	-	-	-	Yes	Round	**F**	**215.2**	-	-	-	Yes
318	Bradshaw Road & Mayhew Road	Signal	**F**	**142.3**	Signal	**F**	**115.8**	Yes	Signal	**F**	**118.1**	Signal	**F**	**95.2**	Yes
319	Bradshaw Road & Collector WJ-10	Signal	**F**	**182.7**	Signal	**F**	**146.9**	Yes	Signal	C	26.9	Signal	C	22.5	No
325	Douglas Road & Kiefer Boulevard	Signal	**F**	**237.5**	Signal	**F**	**128.4**	Yes	Signal	**F**	**191.3**	Signal	**F**	**103.7**	Yes
329	Routier Ext & Kiefer Boulevard	Signal	**F**	**87.8**	-	-	-	Yes	Signal	E	71.6	-	-	-	No
331	Routier Ext/Routier Rd & Old Placerville Road	Signal	**F**	**164.0**	Signal	**F**	**127.4**	Yes	Signal	**F**	**117.3**	Signal	**F**	**108.8**	Yes
400	Collector JT-3 & Jackson Road	Signal	**F**	**81.2**	Signal	D	47.2	No	Signal	D	47.0	Signal	B	18.9	No

Note: Gray shading represents changes in traffic control that the project is responsible to provide.

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Table 6.13a

CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Impacted Intersections and County Standard Intersection Geometry

Intersection	AM Peak Hour							PM Peak Hour						
	CEQA Cumulative Plus All			County Standard Geometry CEQA Cumulative Plus FOUR PROJECTS			Alternative Mitigation	CEQA Cumulative Plus All			County Standard Geometry CEQA Cumulative Plus FOUR PROJECTS			Alternative Mitigation
	Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
(-): No changes to intersection geometry or operation.														

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Table 6.13b

CEQA Cumulative Plus FOUR PROJECTS County Standard and Ultimate Mitigations

	Intersection	AM Peak Hour						PM Peak Hour					
		County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS			Ultimate Mitigated CEQA Cumulative Plus FOUR PROJECTS			County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS			Ultimate Mitigated CEQA Cumulative Plus FOUR PROJECTS		
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)
3	Power Inn Road/Howe Avenue & Folsom Blvd	Signal	F	108.2	-	-	-	Signal	F	88.4	-	-	-
4	Power Inn Road & 14th Avenue	Signal	F	126.4	-	-	-	Signal	F	109.2	-	-	-
12	Watt Avenue & Folsom Blvd.	Signal	F	185.2	Signal	D	*39.4*	Signal	**E**	**57.6**	Signal	D	41.7
14	S. Watt Avenue & Kiefer Blvd.	Signal	F	83.2	Signal	SB Ramps A NB Ramps A	SB Ramps 6.5 NB Ramps 4.8	Signal	E	66.2	Signal	SB Ramps B NB Ramps B	SB Ramps 15.9 NB Ramps 12.7
16	S. Watt Avenue & Jackson Road	Signal	F	153.4	Signal	**F**	**130.1**	Signal	F	121.0	Signal	**F**	**102.6**
20	Elk Grove Florin Road/S. Watt Ave. & Florin Road	Signal	**F**	**157.3**	Signal	**F**	**103.5**	Signal	F	164.5	Signal	**F**	**101.9**
25	Hedge Avenue & Elder Creek Road	Signal	F	138.8	Signal	E	76.1	A	F	145.8	Signal	E	79.5
36	Bradshaw Road & Old Placerville Road	Signal	F	98.6	-	-	-	Signal	**E**	**76.4**	-	-	-
37	Bradshaw Road & Kiefer Boulevard	Signal	F	117.3	-	-	-	Signal	F	113.1	-	-	-
38	Bradshaw Road & Jackson Road	Signal	F	139.2	Grade Separate			Signal	F	67.8	Grade Separate		
42	Happy Lane & Old Placerville Road	Modify access control to allow only right-in and right-out on Happy Lane. Median will allow Westbound left-turns to Happy Lane. Alternative mitigation is to construct the 4-lane Routier extension from Old Placerville Rd to Kiefer Blvd..											
43	Happy Lane & Kiefer Boulevard	Signal	F	106.9	-	-	-	Signal	E	67.8	-	-	-
45	Excelsior Road & Jackson Road	Signal	F	106.9	-	-	-	Signal	F	144.6	-	-	-
51	Mather Field Road & Rockingham Drive	Signal	F	>300	-	-	-	Signal	F	170.3	-	-	-

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Table 6.13b

CEQA Cumulative Plus FOUR PROJECTS County Standard and Ultimate Mitigations

	Intersection	AM Peak Hour						PM Peak Hour					
		County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS			Ultimate Mitigated CEQA Cumulative Plus FOUR PROJECTS			County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS			Ultimate Mitigated CEQA Cumulative Plus FOUR PROJECTS		
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)
61	Eagles Nest Road & Florin Road	Signal	F	121.3	Signal	E	69.6	Signal	F	138.5	Signal	D	49.1
66	Sunrise Boulevard & International Drive/Monier Circle	Signal	F	118.6	-	-	-	Signal	E	76.7	-	-	-
67	Sunrise Boulevard & Douglas Road	Signal	F	189.8	-	-	-	Signal	F	90.9	-	-	-
72	Sheldon Lake Drive/Sunrise Boulevard & Grant Line Road	Signal	D	36.4	Signal	D	35.1	Signal	E	70.1	Signal	C	27.5
80	Grant Line Road & Jackson Road	Signal	F	119.0	Signal	F	87.6	Signal	F	101.1	Signal	D	52.7
93	Grant Line Rd & Dwy/Wilton Rd	Signal	E	59.8	Signal	D	52.6	Signal	F	82.1	Signal	C	27.9
95	Florin Perkins Road & 14th Avenue	Signal	E	67.8	-	-	-	Signal	D	46.9	-	-	-
96	Jackson Road & 14th Avenue	Signal	F	119.3	-	-	-	Signal	E	57.0	-	-	-
103	Rancho Cordova Pkwy & Douglas Road	Signal	E	57.2	Signal	D	39.5	Signal	E	76.1	Signal	E	68.7
310	Mayhew Road & Rock Creek Pkwy WB	Round	F	181.2	Signal	E	78.6	Round	F	106.4	Signal	E	73.7
311	Mayhew Road & Rock Creek Pkwy EB	Round	F	171.2				Round	F	215.2			
318	Bradshaw Road & Mayhew Road	Signal	F	115.8	Signal	F	85.0	Signal	F	95.2	Signal	F	80.4
319	Bradshaw Road & Collector WJ-10	Signal	F	146.9	Signal	D	40.7	Signal	C	22.5	Signal	B	17.0
325	Douglas Road & Kiefer Boulevard	Signal	F	128.4	-	-	-	Signal	F	103.7	-	-	-
329	Routier Ext & Kiefer Boulevard	Signal	F	87.8	Signal	D	48.4	Signal	E	71.6	Signal	E	63.2

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 6.13b

CEQA Cumulative Plus FOUR PROJECTS County Standard and Ultimate Mitigations

Intersection		AM Peak Hour						PM Peak Hour					
		County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS			Ultimate Mitigated CEQA Cumulative Plus FOUR PROJECTS			County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS			Ultimate Mitigated CEQA Cumulative Plus FOUR PROJECTS		
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)
331	Routier Ext/Routier Rd & Old Placerville Road	Signal	**F**	**127.4**	Signal	D	47.2	Signal	**F**	**108.8**	Signal	C	32.3

Note: Gray shading represents changes in traffic control that the project is responsible to provide.
(-): No changes to intersection geometry or operation.

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 6.14a

CEQA Cumulative Plus FOUR PROJECTS Intersection Impacts and Mitigations

	Intersection	Traffic Control		CEQA Cumulative Plus FOUR PROJECTS Lane Geometrics				CEQA County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS Lane Geometrics				LOS Impact with Mitgation?
		CEQA Cumulative Plus FOUR PROJECTS	Mitigated CEQA Cumulative Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
3	Power Inn Road/Howe Avenue & Folsom Blvd.	Signal	Signal									Yes
4	Power Inn Road & 14th Avenue	Signal	Signal									Yes
12	S. Watt Ave./Watt Avenue & Folsom Blvd.	Signal	Signal									Yes
14	S. Watt Avenue & Kiefer Blvd.	Signal	Signal									Yes
16	S. Watt Avenue & Jackson Road	Signal	Signal									Yes
17	S. Watt Avenue & Fruitridge Road	Signal	Signal									No
20	Elk Grove Florin Road/S. Watt Ave. & Florin Road	Signal	Signal									Yes
23	Hedge Avenue & Jackson Road	Signal	Signal									No
25	Hedge Avenue & Elder Creek Road	Signal	Signal									Yes
28	Mayhew Road & Kiefer Boulevard	Signal	Signal									No
29	Mayhew Road & Jackson Road	Signal	Signal									No
31	Waterman Road/Mayhew Road & Elder Creek Road	Signal	Signal									No
32	Woodring Drive & Zinfandel Drive	Two-way stop	Roundabout									No
36	Bradshaw Road & Old Placerville Road	Signal	Signal									Yes
37	Bradshaw Road & Kiefer Boulevard	Signal	Signal									Yes
38	Jackson Road & Bradshaw Road	Signal	Signal									Yes
39	Bradshaw Road & Elder Creek Road	Signal	Signal									No
40	Bradshaw Road & Florin Road	Signal	Signal									No
42	Happy Lane & Old Placerville Road	Two-way stop	Access Control					Happy Lane to become right-in and right-out only. Median will allow westbound left turns.				Yes

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 6.14a

CEQA Cumulative Plus FOUR PROJECTS Intersection Impacts and Mitigations

	Intersection	Traffic Control		CEQA Cumulative Plus FOUR PROJECTS Lane Geometrics				CEQA County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS Lane Geometrics				LOS Impact with Mitgation?
		CEQA Cumulative Plus FOUR PROJECTS	Mitigated CEQA Cumulative Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
43	Kiefer Boulevard & Happy Ln	Signal	Signal									Yes
45	Excelsior Road & Jackson Road	Signal	Signal									Yes
47	Excelsior Road & Florin Road	Signal	Signal									No
51	Mather Field Road & Rockingham Drive	Signal	Signal									Yes
58	Zinfandel Drive & Douglas Road	Signal	Signal									No
61	Eagles Nest Rd/Eagles Nest Road & Florin Road	Two-way stop	Signal									Yes
66	Sunrise Boulevard & International Drive/Monier Circle	Signal	Signal									Yes
67	Sunrise Boulevard & Douglas Road	Signal	Signal									Yes
69	Sunrise Boulevard & Kiefer Boulevard	Signal	Signal									No
70	Jackson Road & Sunrise Boulevard	Signal	Signal									No
72	Sheldon Lake Drive/Sunrise Boulevard & Grant Line Rd/Grant	Signal	Signal									Yes
80	Grant Line Road & Jackson Road	Signal	Signal									Yes
86	Power Inn Road & Florin Rd	Signal	Signal									No
91	Grant Line Rd & Eagles Nest Rd/Sloughhouse Rd	Signal	Signal									No
92	Grant Line Rd & Calvine Rd	Signal	Signal									No
93	Grant Line Rd & Driveway/Wilton Rd	Signal	Signal									Yes
95	Florin Perkins Road & 14th Avenue	Signal	Signal									Yes
96	14th Avenue & Jackson Road	Signal	Signal									Yes
103	Rancho Cordova Pkwy & Douglas Road	Signal	Signal									Yes

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 6.14a

CEQA Cumulative Plus FOUR PROJECTS Intersection Impacts and Mitigations

Intersection		Traffic Control		CEQA Cumulative Plus FOUR PROJECTS Lane Geometrics				CEQA County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS Lane Geometrics				LOS Impact with Mitgation?
		CEQA Cumulative Plus FOUR PROJECTS	Mitigated CEQA Cumulative Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
303	Rock Creek Pkwy & Jackson Road	Signal	Signal									No
308	Hedge Avenue & Rock Creek Pkwy Westbound	Roundabout	Roundabout									No
310	Mayhew Road & Rock Creek Pkwy Westbound	Roundabout	Roundabout									Yes
311	Mayhew Road & Rock Creek Pkwy Eastbound	Roundabout	Roundabout									Yes
318	Bradshaw Road & Mayhew Road	Signal	Signal									Yes
319	Bradshaw Road & Collector WJ-10	Signal	Signal									Yes
325	Douglas Road Extension & Kiefer Boulevard	Signal	Signal									Yes
329	Routier Ext & Kiefer Boulevard	Signal	Signal									Yes
331	Routier Ext/Routier Rd & Old Placerville Road	Signal	Signal									Yes
400	Collector JT-3 & Jackson Road	Signal	Signal									No

[1] High capacity intersections are defined in the Sacramento County General Plan and may include grade separations, additional turn lanes, and/or other features as deemed appropriate by the County.

[2] Alternative mitigations represent proposed mitigations beyond the General Plan or standard intersection geometry, excluding high capacity intersections, as proposed by the County of Sacramento.

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 6.14b

CEQA Cumulative Plus FOUR PROJECTS Intersection Impacts and Mitigations

	Intersection	Traffic Control		County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS Lane Geometrics				Ultimate Mitigated CEQA Cumulative Plus FOUR PROJECTS Lane Geometrics				LOS Impact with Mitgation?	High Capacity Intersection?[1]	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
		County Standard CEQA Cumulative Plus FOUR PROJECTS	Ultimate Mitigated CEQA Cumulative Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach				
3	Power Inn Road/Howe Avenue & Folsom Blvd.	Signal	Signal									Yes	No		Existing development
4	Power Inn Road & 14th Avenue	Signal	Signal									Yes	No		Existing development
12	S. Watt Ave./Watt Avenue & Folsom Blvd.	Signal	Signal									No	Yes	Grade separated NBT and SBT	
14	S. Watt Avenue & Kiefer Blvd.	Signal	Signal									No	Yes	Tight Diamond Interchange (SB Watt Ramps/Kiefer intersection shown)	
			Signal											Tight Diamond Interchange (NB Watt Ramps/Kiefer intersection shown)	
16	S. Watt Avenue & Jackson Road	Signal	Signal									No	Yes	Triple SBL, Free WBR	
20	Elk Grove Florin Road/S. Watt Ave. & Florin Road	Signal	Signal									No	No	Dual SBR, Triple EBL	
25	Hedge Avenue & Elder Creek Road	Signal	Signal									No	No		
36	Bradshaw Road & Old Placerville Road	Signal	Signal									Yes	No		Existing development
37	Bradshaw Road & Kiefer Boulevard	Signal	Signal									Yes	No	Carry 3 EBT and 3 WBT lanes through intersection	Maximum General Plan Lanes
38	Jackson Road & Bradshaw Road	Signal	Signal					Grade Separate				No	No		
42	Happy Lane & Old Placerville Road	Access Control	Access Control	Happy Lane to become right-in and right-out only. Median will allow westbound left turns.								Yes	No	Construct 4-lane Routier extension from Old Placerville Rd to Kiefer Blvd	Maximum General Plan Lanes
43	Kiefer Boulevard & Happy Ln	Signal	Signal									Yes	No		Maximum lanes
45	Excelsior Road & Jackson Road	Signal	Signal									Yes	No	NBR overlap	Maximum General Plan Lanes
51	Mather Field Road & Rockingham Drive	Signal	Signal									Yes	No		Existing development
61	Eagles Nest Rd/Eagles Nest Road & Florin Road	Signal	Signal									No	No		
66	Sunrise Boulevard & International Drive/Monier Circle	Signal	Signal									Yes	No		Maximum General Plan Lanes
67	Sunrise Boulevard & Douglas Road	Signal	Signal									Yes	No		Maximum General Plan Lanes
72	Sheldon Lake Drive/Sunrise Boulevard & Grant Line Rd/Grant	Signal	Signal									No	No	Dual SBR	

*Free right

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 6.14b

CEQA Cumulative Plus FOUR PROJECTS Intersection Impacts and Mitigations

	Intersection	Traffic Control		County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS Lane Geometrics				Ultimate Mitigated CEQA Cumulative Plus FOUR PROJECTS Lane Geometrics				LOS Impact with Mitgation?	High Capacity Intersection?[1]	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
		County Standard CEQA Cumulative Plus FOUR PROJECTS	Ultimate Mitigated CEQA Cumulative Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach				
80	Grant Line Road & Jackson Road	Signal	Signal									No	No	Dual SBR	
93	Grant Line Rd & Driveway/Wilton Rd	Signal	Signal									No	No		
95	Florin Perkins Road & 14th Avenue	Signal	Signal									Yes	No		Maximum lanes
96	14th Avenue & Jackson Road	Signal	Signal									Yes	No		Maximum lanes
103	Rancho Cordova Pkwy & Douglas Road	Signal	Signal									Yes	No	WBR Overlap	
310	Mayhew Road & Rock Creek Pkwy Westbound	Roundabout	Signal									No	No		
311	Mayhew Road & Rock Creek Pkwy Eastbound	Roundabout										No	No		
318	Bradshaw Road & Mayhew Road	Signal	Signal									Yes	No	HCI, Triple EBL and dual SBR	Maximum General Plan lanes
319	Bradshaw Road & Collector WJ-10	Signal	Signal									No	No	Dual SBL and Dual WBL	
325	Douglas Road Extension & Kiefer Boulevard	Signal	Signal									Yes	No		Maximum lanes
329	Routier Ext & Kiefer Boulevard	Signal	Signal									No	No		
331	Routier Ext/Routier Rd & Old Placerville Road	Signal	Signal									No	No	NBR overlap	

[1] High capacity intersections are defined in the Sacramento County General Plan and may include grade separations, additional turn lanes, and/or other features as deemed appropriate by the County.

[2] Alternative mitigations represent proposed mitigations beyond the General Plan or standard intersection geometry, excluding high capacity intersections, as proposed by the County of Sacramento.

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

6.5.4 CEQA Cumulative Plus FOUR PROJECTS Pedestrian and Bicycle Facility Mitigation

The FOUR PROJECTS applicants shall coordinate with Sacramento County to identify the necessary on- and off-site pedestrian and bicycle facilities to serve the proposed development. These facilities shall be incorporated into the FOUR PROJECTS and could include sidewalks, stop signs, standard pedestrian and school crossing warning signs, lane striping to provide a bicycle lane, bicycle parking, signs to identify pedestrian and bicycle paths, raised crosswalks, pedestrian signal heads, and all appropriate traffic calming measures as defined in the County's Neighborhood Traffic Management Program (NTMP). Sidewalks would be required as part of the frontage improvements along all new roadway construction in the FOUR PROJECTS vicinity in conformance with County design standards. Circulation and access to all proposed public spaces shall include sidewalks that meet Americans with Disabilities Act standards.

6.5.5 CEQA Cumulative Plus FOUR PROJECTS Transit System Mitigation

The applicants of the FOUR PROJECTS shall coordinate with Regional Transit (or other transit operators) to provide the additional transit facilities and services assumed in transportation analysis (see Section 3.1.2.3), or a cost-effective equivalent level of transit facilities and services.

The assumed transit routes and service frequency would be required at full development of the FOUR PROJECTS. The full level of transit service would not achieve adequate transit ridership during the early stages of development. Thus the ultimate transit service, like the roadway system serving the FOUR PROJECTS, must be phased with development of the FOUR PROJECTS.

6.5.6 CEQA Cumulative Plus FOUR PROJECTS Functionality Mitigation

Table 6.15 summarizes the results of the functionality analysis for the study area rural roadway segments with mitigation.

6.5.7 CEQA Cumulative Plus FOUR PROJECTS Mitigation Summary

Tables 6.16 through 6.21 summarize the roadway segments, intersections, and freeway facilities that would exhibit significant LOS impacts, along with the mitigation success for these impacts.

Table 6.15
CEQA Cumulative Plus FOUR PROJECTS Functionality Mitigations

ID	Roadway	Segment		CEQA Cumulative + FOUR PROJECTS				Mitigation	Impact after Mitigation?
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Functionality Impact? [2]		
15	Douglas Rd	Mather Blvd	Zinfandel Dr	4	Arterial M	33,390	Yes[3]	Widen to County standards [5]	No
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd	6	Arterial M	50,360	Yes[3]	Widen to County standards [5]	No
19	Eagles Nest Rd	Kiefer Blvd	Jackson Rd	4	Arterial M	13,130	Yes[3]	Widen to County standards [5]	No
20	Eagles Nest Rd	Jackson Rd	Florin Rd	2	Arterial M	9,110	Yes	Widen to County standards [5]	No
25	Elder Creek Rd	South Watt Ave	Hedge Ave	4	Arterial M	52,900	Yes[3]	Widen to County standards [5]	No
26	Elder Creek Rd	Hedge Ave	Mayhew Rd	4	Arterial M	33,660	Yes[3]	Widen to County standards [5]	No
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd	4	Arterial M	40,490	Yes[3]	Widen to County standards [5]	No
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd	3	Arterial M	30,740	Yes[3]	Widen to County standards [5]	No
30	Excelsior Rd	Kiefer Blvd	Jackson Rd	2	Arterial M	26,970	Yes	Widen to County standards [5]	No
31	Excelsior Rd	Jackson Rd	Elder Creek Rd	3	Arterial M	36,220	Yes[3]	Widen to County standards [5]	No
32	Excelsior Rd	Elder Creek Rd	Florin Rd	3	Arterial M	12,520	Yes[3]	Widen to County standards [5]	No
33	Excelsior Rd	Florin Rd	Gerber Rd	2	Arterial M	13,080	Yes	Widen to County standards [5]	No
34	Excelsior Rd	Gerber Rd	Calvine Rd	2	Arterial M	8,360	Yes	Widen to County standards [5]	No
39	Florin Rd	South Watt Ave	Hedge Ave	4	Arterial M	12,010	Yes[3]	Widen to County standards [5]	No
40	Florin Rd	Hedge Ave	Mayhew Rd	4	Arterial M	13,280	Yes[3]	Widen to County standards [5]	No
41	Florin Rd	Mayhew Rd	Bradshaw Rd	4	Arterial M	40,200	Yes[3]	Widen to County standards [5]	No
42	Florin Rd	Bradshaw Rd	Excelsior Rd	4	Arterial M	26,070	Yes[3]	Widen to County standards [5]	No
43	Florin Rd	Excelsior Rd	Sunrise Blvd	2	Arterial M	17,090	Yes	Widen to County standards [5]	No
48	Fruitridge Rd	South Watt Ave	Hedge Ave	3	Arterial M	24,240	Yes[3]	Widen to County standards [5]	No
49	Fruitridge Rd	Hedge Ave	Mayhew Rd	4	Arterial M	21,800	Yes[3]	Widen to County standards [5]	No
50	Grant Line Rd	White Rock Rd	Douglas Rd	4	Arterial M	41,130	Yes[3]	Widen to County standards [5]	No
58	Happy Ln	Old Placerville Rd	Kiefer Blvd	2	Arterial M	13,820	Yes	Widen to County standards [5]	No
59	Hedge Ave	Jackson Rd	Fruitridge Rd	2	Arterial M	11,760	Yes	Widen to County standards [5]	No
60	Hedge Ave	Fruitridge Rd	Elder Creek Rd	2	Arterial M	10,010	Yes	Widen to County standards [5]	No

Red text with light gray shading indicate project impacts.

Table 6.15
CEQA Cumulative Plus FOUR PROJECTS Functionality Mitigations

ID	Roadway	Segment		CEQA Cumulative + FOUR PROJECTS				Mitigation	Impact after Mitigation?
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Functionality Impact? [2]		
61	Hedge Ave	Elder Creek Rd	Florin Rd	2	Arterial M	22,460	Yes	Widen to County standards [5]	No
70	Jackson Rd	Bradshaw Rd	Excelsior Rd	6	Arterial M	59,380	Yes[3]	Widen to County standards [5]	No
71	Jackson Rd	Excelsior Rd	Eagles Nest Rd	4	Arterial M	62,220	Yes[3]	Widen to County standards [5]	No
77	Kiefer Blvd	Bradshaw Rd	Happy Ln	6	Arterial M	50,960	Yes[3]	Widen to County standards [5]	No
78	Kiefer Blvd	Zinfandel Dr	Sunrise Blvd	3	Arterial M	39,820	Yes[3]	Widen to County standards [5]	No
89	Mayhew Rd	Jackson Rd	Fruitridge Rd	4	Arterial M	47,790	Yes[3]	Widen to County standards [5]	No
116	White Rock Rd	Fitzgerald Rd	Grant Line Rd	4	Arterial M	55,810	Yes[3]	Widen to County standards [5]	No
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd	4	Arterial M	22,250	Yes[3]	Widen to County standards [5]	No

Note: Gray shading indicates changes in travel lanes or facility type that the project is responsible to provide. For all roadway segments to be widened, the project is responsible to build the entire roadway to County standards.

[1] Substandard rural roads are defined as rural, 2-lane roadway segments with travel lanes narrower than 12 feet and/or roadside shoulders narrower than 6 feet.

[2] Functionality impacts are triggered when a substandard rural road increases over a threshold of 6,000 ADT, or for a roadway already above 6,000 ADT, increases by more than 600 ADT.

[3] The potential for an impact exists should the project generate traffic volumes on the roadway exceeding 6,000 ADT, or increasing more than 600 ADT on a roadway already above 6,000 ADT, prior to the construction of roadway improvements.

[4] Excluding the roadway segment that is within the developed community of Independence at Mather.

[5] The functionality impact is mitigated by improving the roadway to County standards, including widening travel lanes to 12 feet and/or widening or providing paved shoulders to 6 feet.

Red text with light gray shading indicate project impacts.

Table 6.16
CEQA Cumulative Plus FOUR PROJECTS Summary of Impacted Roadway Segments

ID	Roadway	Segment	
		From	To
Level of Service Impact Fully Mitigated by General Plan Lanes			
23	Elder Creek Rd	Power Inn Rd	Florin-Perkins Rd
25	Elder Creek Rd	South Watt Ave	Hedge Ave
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd
28.1	Elder Creek Rd	Bradshaw Rd	Vineyard Rd
31.1	Excelsior Rd	Jackson Rd	Collector WJ-6
31.2	Excelsior Rd	Collector WJ-6	Elder Creek Rd
41	Florin Rd	Mayhew Rd	Bradshaw Rd
42.2	Florin Rd	Vineyard Rd	Excelsior Rd
47	Fruitridge Rd	Florin Perkins Rd	South Watt Ave
48	Fruitridge Rd	South Watt Ave	Hedge Ave
51.1	Grant Line Rd	Douglas Rd	Chrysanthy Blvd
55.2	Grant Line Rd	Elk Grove City Limit	Sheldon Rd
71.2	Jackson Rd	Collector JT-3	Tree View Ln
71.3	Jackson Rd	Tree View Ln	Collector JT-4
72.1	Jackson Rd	Eagles Nest Rd	Rockbridge Dr
72.2	Jackson Rd	Rockbridge Dr	Sunrise Blvd
73	Jackson Rd	Sunrise Blvd	Grant Line Rd
89.1	Mayhew Rd	Jackson Rd	Rock Creek Pkwy
89.2	Mayhew Rd	Rock Creek Pkwy	Fruitridge Rd
105	Sunrise Blvd	Douglas Rd	Kiefer Blvd
106	Sunrise Blvd	Kiefer Blvd	Jackson Rd
132	Kiefer Blvd	Americanos Blvd	Grant Line Rd
304	Mayhew Rd	Routier Ext	Bradshaw Rd
307	Mayhew Rd	Collector WJ-13	Elder Creek Rd
405	Collector JT-3	Collector JT-5	Jackson Rd
Level of Service Impact Not Fully Mitigated by General Plan Lanes			
2	Bradshaw Rd	US 50	Lincoln Village Dr
3	Bradshaw Rd	Lincoln Village Dr	Old Placerville Rd
4	Bradshaw Rd	Old Placerville Rd	Goethe Rd
5.1	Bradshaw Rd	Goethe Rd	Collector WJ-8
5.2	Bradshaw Rd	Collector WJ-8	Kiefer Blvd
6.2	Bradshaw Rd	Collector WJ-9	Mayhew Rd
6.3	Bradshaw Rd	Mayhew Rd	Jackson Rd
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd
37	Florin Rd	Power Inn Rd	Florin-Perkins Rd
44	Folsom Blvd	Howe Ave	Jackson Rd

Note: Refer to Table 6.12 for detailed description of impacts and mitigations.

Table 6.16
CEQA Cumulative Plus FOUR PROJECTS Summary of Impacted Roadway Segments

ID	Roadway	Segment	
		From	To
51.2	Grant Line Rd	Chrysanthy Blvd	Kiefer Blvd
52.1	Grant Line Rd	Kiefer Blvd	Rancho Cordova Pkwy
56	Grant Line Rd	Sheldon Rd	Wilton Rd
57	Grant Line Rd	Wilton Rd	Bond Rd
58.2	Happy Lane	Routier Ext	Kiefer Boulevard
62	Howe Ave	US 50	Folsom Blvd
66.1	Jackson Rd	Florin Perkins Rd	14th Ave
66.2	Jackson Rd	14th Ave	Rock Creek Pkwy
66.3	Jackson Rd	Rock Creek Pkwy	Aspen 1 Dwy
66.4	Jackson Rd	Aspen 1 Dwy	South Watt Ave
67	Jackson Rd	South Watt Ave	Hedge Ave
68.1	Jackson Rd	Hedge Ave	Collector WJ-3
68.2	Jackson Rd	Collector WJ-3	Mayhew Rd
69	Jackson Rd	Mayhew Rd	Bradshaw Rd
70.1	Jackson Rd	Bradshaw Rd	Collector WJ-4
70.2	Jackson Rd	Collector WJ-4	Rock Creek Pkwy
71.1	Jackson Rd	Excelsior Rd	Collector JT-3
76	Kiefer Blvd	Mayhew Rd	Bradshaw Rd
78.4	Kiefer Blvd	E Collector MS-1	Sunrise Blvd
79	Kiefer Blvd	Sunrise Blvd	Rancho Cordova Pkwy
92	Old Placerville Rd	Happy Ln	Routier Rd
93	Old Placerville Rd	Routier Rd	Rockingham Dr
95	Rockingham Dr	Old Placerville Rd	Mather Field Rd
96	South Watt Ave	Folsom Blvd	Kiefer Blvd
97	South Watt Ave	Kiefer Blvd	Jackson Rd
100	South Watt Ave	Elder Creek Rd	Florin Rd
104.3	Sunrise Blvd	Rio Del Oro Pkwy	Douglas Rd
110	Watt Ave	US 50	Folsom Blvd
117	White Rock Rd	Grant Line Rd	Prairie City Rd
135	Rancho Cordova Pkwy	White Rock Rd	International Dr
136	Rancho Cordova Pkwy	International Dr	Rio Del Oro Pkwy
200	Kiefer Blvd	Tree View Ln	Eagles Nest Rd
301	Douglas Rd	Rock Creek Pkwy	Kiefer Blvd
302	Kiefer Blvd	Happy Ln	Douglas Rd
305	Mayhew Rd	Bradshaw Rd	Jackson Rd
312	Rock Creek Pkwy East	Collector WJ-16	Jackson Road
317	Routier Ext	Old Placerville Road	Happy Lane

Note: Refer to Table 6.12 for detailed description of impacts and mitigations.

Table 6.17

CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Summary of Impacted Intersections

	Intersection	Alternative Mitigation
Level of Service Impact Fully Mitigated by General Plan Lanes		
17	S. Watt Avenue & Fruitridge Road	
20	Elk Grove Florin Road/S. Watt Ave. & Florin Road	**
23	Hedge Avenue & Jackson Road	
25	Hedge Avenue & Elder Creek Road	**
28	Mayhew Road & Kiefer Boulevard	
29	Mayhew Road & Jackson Road	
31	Mayhew Road & Elder Creek Road	
32	Woodring Drive & Zinfandel Drive	
39	Bradshaw Road & Elder Creek Road	
40	Bradshaw Road & Florin Road	
47	Excelsior Road & Florin Road	
58	Zinfandel Drive & Douglas Road	
69	Sunrise Boulevard & Kiefer Boulevard	
70	Sunrise Boulevard & Jackson Road	
72	Sheldon Lake Drive/Sunrise Boulevard & Grant Line Road	**

Table 6.17

CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Summary of Impacted Intersections

	Intersection	Alternative Mitigation
86	Power Inn Road & Florin Rd	
91	Grant Line Rd & Eagles Nest Rd/Sloughhouse Rd	
92	Grant Line Rd & Calvine Rd	
303	Rock Creek Pkwy & Jackson Road	
308	Hedge Avenue & Rock Creek Pkwy WB	
400	Collector JT-3 & Jackson Road	
	Level of Service Impact Not Fully Mitigated by General Plan Lanes But Designated High Capacity Intersection	
12	Watt Avenue & Folsom Blvd.	**
14	S. Watt Avenue & Kiefer Blvd.	**
16	S. Watt Avenue & Jackson Road	**
	Level of Service Impact Not Fully Mitigated by General Plan Lanes	
3	Power Inn Road/Howe Avenue & Folsom Blvd	
4	Power Inn Road & 14th Avenue	
36	Bradshaw Road & Old Placerville Road	
37	Bradshaw Road & Kiefer Boulevard	*
38	Bradshaw Road & Jackson Road	**

Table 6.17

CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Summary of Impacted Intersections

	Intersection	Alternative Mitigation
42	Happy Lane & Old Placerville Road	
43	Happy Lane & Kiefer Boulevard	**
45	Excelsior Road & Jackson Road	*
51	Mather Field Road & Rockingham Drive	
61	Eagles Nest Road & Florin Road	**
66	Sunrise Boulevard & International Drive/Monier Circle	
67	Sunrise Boulevard & Douglas Road	
80	Grant Line Road & Jackson Road	**
93	Grant Line Rd & Dwy/Wilton Rd	**
95	Florin Perkins Road & 14th Avenue	
96	Jackson Road & 14th Avenue	
103	Rancho Cordova Pkwy & Douglas Road	**
310	Mayhew Road & Rock Creek Pkwy WB	**
311	Mayhew Road & Rock Creek Pkwy EB	**
318	Bradshaw Road & Mayhew Road	*
319	Bradshaw Road & Collector WJ-10	**

Table 6.17

CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Summary of Impacted Intersections

	Intersection	Alternative Mitigation
325	Douglas Road & Kiefer Boulevard	
329	Routier Ext & Kiefer Boulevard	*
331	Routier Ext/Routier Rd & Old Placerville Road	**

[1] Alternative mitigations represent proposed mitigations beyond the General Plan, excluding designated high capacity intersections, as proposed by the County of Sacramento.

* denotes alternative mitigations that improve operations but do not fully mitigate the impact.
** denotes alternative mitigations that fully mitigate the impact.

Table 6.18

CEQA Cumulative Plus FOUR PROJECTS (Alternative 2)
Summary of Impacted Freeway Basic Segments

Direction	Location
Level of Service Impact Not Mitigated	
Eastbound US-50	Stockton Boulevard to 59th Street

Source: *DKS Associates, 2018.*

Table 6.19

CEQA Cumulative Plus FOUR PROJECTS (Alternative 2)
Summary of Impacted Freeway Merge/Diverge/Weave Segments

Direction	Location	Junction Type
Level of Service Impact Not Mitigated		
Westbound US-50	Southbound Hazel Avenue Slip Entrance	Weave
	Rancho Cordova Parkway Exit	

Source: *DKS Associates, 2018.*

Table 6.20

CEQA Cumulative Plus FOUR PROJECTS (Alternative 2)
Summary of Impacted Freeway Ramp Termini

Direction	US 50 Exit Ramp
Queuing Impact Not Mitigated	
Eastbound US-50	Howe Avenue
	Zinfandel Drive
Westbound US-50	Rancho Cordova Parkway

Source: *DKS Associates, 2018.*

Table 6.21
CEQA Cumulative Plus FOUR PROJECTS (Alt. 2) Functionality Impact Summary

ID	Roadway	Segment	
		From	To
Functionality Impact Fully Mitigated			
15	Douglas Rd	Mather Blvd	Zinfandel Dr
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd
19	Eagles Nest Rd	Kiefer Blvd	Jackson Rd
20	Eagles Nest Rd	Jackson Rd	Florin Rd
25	Elder Creek Rd	South Watt Ave	Hedge Ave
26	Elder Creek Rd	Hedge Ave	Mayhew Rd
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd
30	Excelsior Rd	Kiefer Blvd	Jackson Rd
31	Excelsior Rd	Jackson Rd	Elder Creek Rd
32	Excelsior Rd	Elder Creek Rd	Florin Rd
33	Excelsior Rd	Florin Rd	Gerber Rd
34	Excelsior Rd	Gerber Rd	Calvine Rd
39	Florin Rd	South Watt Ave	Hedge Ave
40	Florin Rd	Hedge Ave	Mayhew Rd
41	Florin Rd	Mayhew Rd	Bradshaw Rd
42	Florin Rd	Bradshaw Rd	Excelsior Rd
43	Florin Rd	Excelsior Rd	Sunrise Blvd
48	Fruitridge Rd	South Watt Ave	Hedge Ave
49	Fruitridge Rd	Hedge Ave	Mayhew Rd
50	Grant Line Rd	White Rock Rd	Douglas Rd
58	Happy Ln	Old Placerville Rd	Kiefer Blvd
59	Hedge Ave	Jackson Rd	Fruitridge Rd
60	Hedge Ave	Fruitridge Rd	Elder Creek Rd
61	Hedge Ave	Elder Creek Rd	Florin Rd
70	Jackson Rd	Bradshaw Rd	Excelsior Rd

Table 6.21
CEQA Cumulative Plus FOUR PROJECTS (Alt. 2) Functionality Impact Summary

ID	Roadway	Segment	
		From	To
71	Jackson Rd	Excelsior Rd	Eagles Nest Rd
77	Kiefer Blvd	Bradshaw Rd	Happy Ln
78	Kiefer Blvd	Zinfandel Dr	Sunrise Blvd
89	Mayhew Rd	Jackson Rd	Fruitridge Rd
116	White Rock Rd	Fitzgerald Rd	Grant Line Rd
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd

7. CEQA CUMULATIVE PLUS JACKSON TOWNSHIP (ALTERNATIVE 2) SCENARIO

7.1 JACKSON TOWNSHIP PROJECT DESCRIPTION AND METHODOLOGY

7.1.1 Project Description

As illustrated previously in Figure 1.1, the Jackson Township project is located in unincorporated Sacramento County, generally east of the City of Sacramento and south of the City of Rancho Cordova and Mather Airport. It is bounded on the south by Jackson Road (SR 16) and on the west by Excelsior Road. The north boundary is near the future Kiefer Boulevard, while the east boundary is west of Eagles Nest Road.

7.1.2 Methodology

The analysis of the CEQA Cumulative Plus Jackson Township Project scenario is based upon the analysis of the CEQA Cumulative Plus FOUR PROJECTS scenario discussed in Section 6. The travel model was utilized to estimate the portion of the FOUR PROJECTS traffic that is associated with the Jackson Township project. With this information, it was possible to identify whether the Jackson Township project, on its own, would trigger significant impacts. It should be noted that, even at locations where the Jackson Township project on its own would not trigger a significant impact, the Jackson Township project contributes to the cumulative impacts associated with the CEQA Cumulative Plus FOUR PROJECTS scenario.

7.1.1 CEQA Cumulative Land Use

Section 6.1.1 discusses land use associated with CEQA Cumulative conditions.

7.1.2 Transportation Network

Section 6.1.2 discusses the transportation network associated with the CEQA Cumulative conditions, including the transportation network improvements associated with the FOUR PROJECTS.

7.1.3 Jackson Township Project Trip Generation

The trip generation of the Jackson Township project was estimated by the SACSIM model, which has been utilized to prepare transportation forecasts for this analysis. **Table 7.1** summarizes the person trip generation. The Jackson Township project would generate over 15,000 daily work person trip ends, and over 133,000 daily person trip ends for all trip purposes.

The total trip generation of the Jackson Township project is somewhat higher under the CEQA Cumulative scenario than with existing conditions. The SACSIM model will vary the trips generated by retail and service uses depending on the amount of development that is near those uses. This result is expected as commercial development with much housing and/or employment

nearby will be more successful (and generate more trips) than the same commercial development located in an area with less nearby population.

Table 7.1: Estimated Daily Person Trip Generation (CEQA Cumulative Plus FOUR PROJECTS Alternative 2 Scenario)

Jackson Township Specific Plan

Project	Trip Purpose	Daily Person Trip Ends
Jackson Township	Work Trips	15,296
	Non-Work Trips	117,799
	All Trip Purposes	133,095

Source: *DKS Associates, 2018.*

Table 7.2 summarizes the estimated mode choice for the Jackson Township Project. Over 86 percent of all person trips are expected to be accommodated by automobile. Transit will serve about 2.0 percent of all trips, while walk and bike modes will accommodate about 11.2 percent of all trips.

Table 7.3 summarizes the vehicular (auto) trip generation of the Jackson Township project. The Jackson Township project is estimated to generate over 84,000 daily vehicle trip ends. About 14,300 of the daily vehicle trip ends will be associated with trips with both an origin and destination within the Jackson Township project, about 17 percent of the trip ends. Those internal trip ends represent about 7,150 daily vehicle trips (one-half the number of internal trip ends). The Jackson Township project will generate about 69,900 external vehicle trips that have an origin or destination inside the Jackson Township project but the other end of the trip is outside the Jackson Township project. Table 7.3 also shows the vehicle trips generated during the a.m. and p.m. peak hours.

7.1.4 Jackson Township Project Trip Distribution

The distribution of trips associated with development on the Jackson Township project site was derived utilizing SACSIM, incorporating the proposed land use and access locations associated with the Jackson Township project site. Trip distribution varies by land use and time period. **Figure 7.1** illustrates the overall trip distribution of daily Jackson Township project trips with the CEQA Cumulative scenario.

7.2 OPERATIONS ANALYSIS AND IMPACTS

7.2.1 CEQA Cumulative Plus Jackson Township Project Roadway Segment Impacts

Table 7.4 summarizes the results of the operations analysis for the study area roadway segments. Only those segments where an impact would be triggered by the Jackson Township project are shown. The table includes the number of lanes assumed with the implementation of the

FOUR PROJECTS. The shaded table cells under the "Travel Lanes" and "Facility Type" headings illustrate new roadways or widened roadways. The last column of the table shows the project(s) responsible for the increase in the number of roadway lanes. The shaded table cells under the "Level of Service" heading indicate those locations with an LOS impact.

7.2.2 CEQA Cumulative Plus Jackson Township Project Intersection Impacts

Table 7.5 and 7.6 summarize the results of the operations analysis for the study area intersections. Only those intersections where an impact would be triggered by the Jackson Township project are shown. The tables include the implementation of intersection changes associated with the FOUR PROJECTS. Table 7.6 illustrates the type of traffic control and number of lanes by type on each study area intersection approach. Shaded table cells indicate those locations where changes in traffic control and / or number of approach lanes by type would be fully funded by the project(s) shown in the last column. Shaded table cells in Table 7.5 illustrate those locations with an LOS impact. Detailed analysis information is included in the technical appendix.

Signal warrant analysis was conducted for all unsignalized intersections along Jackson Road, and other unsignalized intersections in close proximity to the project. The project is considered to have a significant impact at an unsignalized location if both the impact criteria in Table 1.6 are met, and one or more of the signal warrants specified in the California Manual on Uniform Traffic Control Devices (CAMUTCD) are met. The following unsignalized intersections exhibit significant impacts and meet one or more traffic signal warrants:

- Eagles Nest Road and Florin Road

Table 7.2: Mode Split (CEQA Cumulative Plus FOUR PROJECTS Alt. 2 Scenario)

Jackson Township Specific Plan

Project	Mode	Percentage of Person Trips by Trip Purpose		
		Work Trips	Non-Work Trips	All Trip Purposes
Jackson Township	Auto - SOV	81.4%	42.6%	47.1%
	Auto - HOV	9.2%	43.7%	39.7%
	Transit	4.8%	1.7%	2.0%
	Walk	3.3%	11.0%	10.1%
	Bike	1.3%	1.0%	1.1%

Source: *DKS Associates, 2018.*

Table 7.3: Estimated Daily Vehicle Trip Generation (CEQA CUMULATIVE Plus FOUR PROJECTS Alt. 2 Scenario)

Jackson Township Specific Plan

Trip Type		AM Peak Hour	PM Peak Hour	Daily
Total Vehicle Trip Ends		7,321	11,123	84,170
Percent Internal Trip Ends[1]		15.7%	18.5%	17.0%
Vehicle trips	Internal to Project	574	1,029	7,155
	External to Project	6,173	9,066	69,860
	Total	6,747	10,094	77,015

[1.] Both trip ends within the project.

Source: *DKS Associates, 2018.*

FIGURE 7.1
CEQA CUM PLUS FOUR PROJECTS
JT TRIP DISTRIBUTION
(ALTERNATIVE 2)

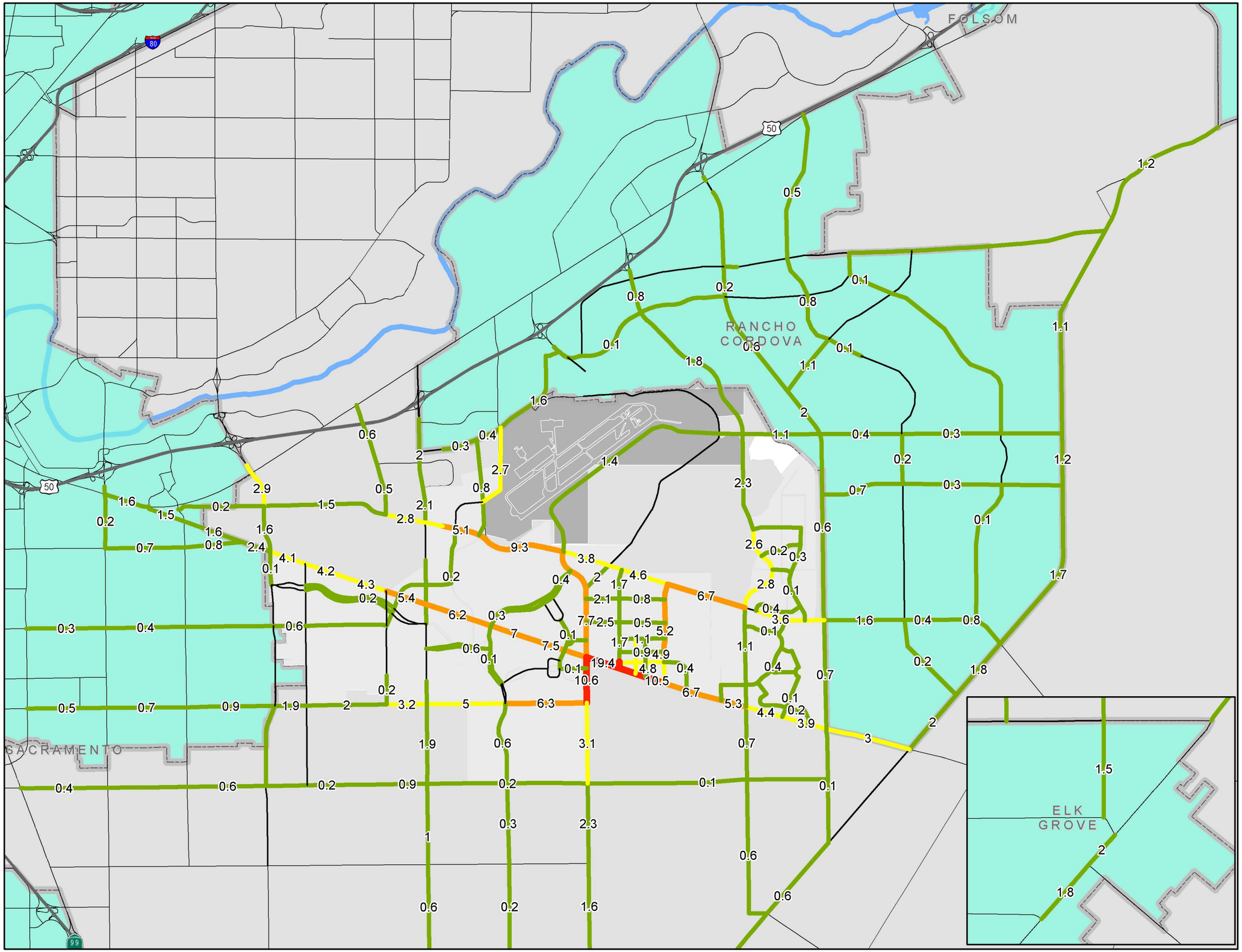


Table 7.4
CEQA Cumulative (Alternative 2) Roadway Segment Levels of Service - Impacts Triggered by Jackson Township Project

ID	Roadway	Segment		CEQA Cumulative No Project					CEQA Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
23	Elder Creek Rd	Power Inn Rd	Florin-Perkins Rd	2	Arterial M	25,170	1.40	**F**	2	Arterial M	28,360	1.58	**F**	
25	Elder Creek Rd	South Watt Ave	Hedge Ave	4	Arterial M	40,860	1.14	**F**	4	Arterial M	52,900	1.47	**F**	
31.1	Excelsior Rd	Jackson Rd	Collector WJ-6	2	Arterial M	11,960	0.66	B	3	Arterial M	36,910	2.05	**F**	West Jackson
31.2	Excelsior Rd	Collector WJ-6	Elder Creek Rd	2	Arterial M	11,960	0.66	B	3	Arterial M	36,220	2.01	**F**	West Jackson
66.2	Jackson Rd	14th Ave	Rock Creek Pkwy	4	Arterial M	40,320	1.12	**F**	4	Arterial M	61,980	1.72	**F**	
66.3	Jackson Rd	Rock Creek Pkwy	Aspen 1 Dwy	4	Arterial M	34,630	0.96	E	4	Arterial M	57,690	1.60	**F**	
67	Jackson Rd	South Watt Ave	Hedge Ave	4	Arterial M	38,240	1.06	**F**	4	Arterial M	66,380	1.84	**F**	
70.1	Jackson Rd	Bradshaw Rd	Collector WJ-4	2	Rural Hwy	23,120	1.01	**F**	6	Arterial M	59,380	1.10	**F**	West Jackson
70.2	Jackson Rd	Collector WJ-4	Happy Ln	2	Rural Hwy	23,190	1.01	**F**	6	Arterial M	59,660	1.10	**F**	West Jackson
71.1	Jackson Rd	Excelsior Rd	Collector JT-3	2	Rural Hwy	23,020	1.01	**F**	4	Arterial M	62,220	1.73	**F**	Jackson Township
71.2	Jackson Rd	Collector JT-3	Tree View Ln	2	Rural Hwy	23,020	1.01	**F**	4	Arterial M	46,480	1.29	**F**	Jackson Township
71.3	Jackson Rd	Tree View Ln	Collector JT-4	2	Rural Hwy	22,990	1.00	**F**	4	Arterial M	41,360	1.15	**F**	Jackson Township
73	Jackson Rd	Sunrise Blvd	Grant Line Rd	4	Arterial M	31,730	0.88	D	4	Arterial M	45,290	1.26	**F**	
95	Rockingham Dr	Old Placerville Rd	Mather Field Rd	4	Arterial M	31,970	0.89	D	4	Arterial M	40,280	1.12	**F**	

Note: Gray shading indicates changes in travel lanes or facility type that the project is responsible to provide.

[1] The following classifications are used to determine daily roadway capacity:
Arterial L - Arterial, Low Access Control
Arterial M - Arterial, Moderate Access Control
Arterial H - Arterial, High Access Control
Rural Hwy - Rural 2-lane Highway
Rural S - Rural 2-lane Road, 24'-36' of pavement, Paved Shoulders
Rural NS - Rural 2-lane Road, 24'-36' of pavement, No Shoulders
Res Collector F - Residential Collector with Frontage
Res Collector NF - Residential Collector with No Frontage

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 7.5

CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Intersection Levels of Service - Impacts Triggered by Jackson Township Project

	Intersection	AM Peak Hour							PM Peak Hour						
		CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS			LOS Impact	CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
45	Excelsior Road & Jackson Road	Signal	E	59.9	Signal	F	330.8	Yes	Signal	D	39.0	Signal	F	269.1	Yes
51	Mather Field Road & Rockingham Drive	Signal	F	156.5	Signal	F	>300	Yes	Signal	F	119.4	Signal	F	170.3	Yes
61	Eagles Nest Road & Florin Road	Two-way stop			Two-way stop			Yes	Two-way stop			Two-way stop			Yes
	Northbound		*F*	*>300*		*F*	*>300*			*F*	*>300*		*F*	*>300*	
	Southbound		*F*	*>300*		*F*	*>300*			*F*	*>300*		*F*	*>300*	
	Eastbound Left Turn		*B*	*10.2*		*B*	*11.3*			*A*	*8.5*		*A*	*9.3*	
	Westbound Left Turn		*A*	*0.0*		*A*	*0.0*			*A*	*9.4*		*A*	*8.7*	

Note: Gray shading represents changes in traffic control that the project is responsible to provide.

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 7.6

CEQA Cumulative (Alternative 2) Intersection Geometrics - Impacts Triggered by Jackson Township

	Intersection	Traffic Control		Super Cumulative No Project Lane Geometrics				Super Cumulative Plus FOUR PROJECTS Lane Geometrics				Project(s) Responsible for Change
		Existing	Existing Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
45	Excelsior Road & Jackson Road	Signal	Signal									West Jackson; Jackson Township
51	Mather Field Road & Rockingham Drive	Signal	Signal									
61	Eagles Nest Rd/Eagles Nest Road & Florin Road	Two-way stop	Signal									

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

7.2.3 CEQA Cumulative Plus Jackson Township Project U.S. 50 Freeway Impacts

Based upon the Caltrans' thresholds of significance, any volume contribution to a significant impact of the CEQA Cumulative Plus FOUR PROJECTS scenario is considered significant. Therefore, the impacts of the CEQA Cumulative Plus Jackson Township Project scenario are identical to those of the CEQA Cumulative Plus FOUR PROJECTS scenario.

7.2.3.1 Freeway Basic Segments

Table 6.4 summarizes a.m. and p.m. peak hour US 50 freeway mainline operations. Details of the analysis are included in the technical appendix. None of the impacts would be triggered by the Jackson Township project alone.

7.2.3.2 Freeway Merge/Diverge/Weave Segments

Table 6.5 summarizes a.m. and p.m. peak hour freeway operations at ramp junctions and weaving areas. Details of the analysis are included in the technical appendix. None of the impacts would be triggered by the Jackson Township project alone.

7.2.3.3 Freeway Ramp Intersection Queuing

Tables 6.6 and 6.7 summarizes a.m. and p.m. peak hour freeway ramp intersection queuing. None of the impacts would be triggered by the Jackson Township project alone.

7.2.4 CEQA Cumulative Plus Jackson Township Project Pedestrian and Bicycle Facility Impacts

The Jackson Township project would not remove any existing or planned pedestrian facility. The Jackson Township project would not remove any existing bicycle facility, but would modify facilities that are planned in the Bikeway Master Plan. The Jackson Township project would add pedestrian and bicycle demands within the Jackson Township project site and to and from nearby land uses. As illustrated in Figure 3.2, the Jackson Township project has proposed changes to the Bikeway Master Plan. Because the Jackson Township project would add demand for pedestrian and bicycle facilities that may not be available in the site vicinity, the impact of the Jackson Township project on pedestrian and bicycle circulation is potentially significant.

7.2.5 CEQA Cumulative Plus Jackson Township Project Transit System Impacts

Public transit would not be provided to the site of the Jackson Township project under CEQA Cumulative scenario without development of the Jackson Township project. In the preparation of this analysis, a transit system to serve the FOUR PROJECTS was developed (see Section 3.1.2.3).

However, the timing and implementation of the transit system are uncertain at this time. The Jackson Township project would increase demands for public transit facilities. Therefore, the impact of the Jackson Township project on the transit system is potentially significant.

7.2.6 CEQA Cumulative Plus Jackson Township Project Functionality Impacts

Table 7.7 summarizes the results of the functionality analysis. Only those segments where an impact would be triggered by the Jackson Township project are shown. The table includes the number of lanes assumed with the implementation of the FOUR PROJECTS, which in many cases is greater than the number of lanes in the existing condition. The shaded table cells under the "Travel Lanes" heading illustrates new roadways and widened roadways that are assumed part of the FOUR PROJECTS. The "Substandard?" heading indicates whether or not a roadway meets the County standards of 12-foot lanes and 6-foot shoulders. If the FOUR PROJECTS make improvements to a roadway segment such as widening, they would be required to reconstruct the entire substandard roadway segment to County standards. The shaded table cells under the "Functionality Impact?" heading indicate those locations with a functionality impact.

As stated above, the traffic analysis assumed that the FOUR PROJECTS would construct a number of travel lanes on roadway segments that are internal to or on the boundary of the FOUR PROJECTS, and the entire roadway segment would be reconstructed to County standards at that time. The timing of implementation of such additional traffic lanes on these internal or boundary roadway segments will affect whether or not impacts would exist at some time prior to full build out of the FOUR PROJECTS.

Table 7.7
CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Functionality Impacts Triggered by Jackson Township Project

ID	Roadway	Segment		Jurisdiction	Existing Substandard Roadways				CEQA Cumulative + FOUR PROJECTS			
		From	To		Travel Lanes	Pavement (ft)	Substandard? [1]	Existing Volume	Travel Lanes	Facility Type[1]	Forecasted Volume	Functionality Impact? [2]
15	Douglas Rd	Mather Blvd	Zinfandel Dr	County	2	23	Yes	6,635	4	Arterial M	33,390	Yes[3]
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd	Rancho Cordova/County	2	23	Yes	8,369	6	Arterial M	50,360	Yes[3]
25	Elder Creek Rd	South Watt Ave	Hedge Ave	County	2	23	Yes	5,576	4	Arterial M	52,900	Yes[3]
26	Elder Creek Rd	Hedge Ave	Mayhew Rd	County	2	23	Yes	5,797	4	Arterial M	33,660	Yes[3]
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd	County	2	23	Yes	5,355	4	Arterial M	40,490	Yes[3]
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd	County	2	23	Yes	2,158	3	Arterial M	30,740	Yes[3]
30.2	Excelsior Rd	Douglas Rd	Collector WJ-1/ Collector JT-1	County	2		Yes	3,716	4	Arterial M	26,970	Yes[3]
30.3	Excelsior Rd	Collector WJ-1/ Collector JT-1	Collector WJ-2/ Collector JT-2	County	2		Yes	3,716	4	Arterial M	25,900	Yes[3]
30.4	Excelsior Rd	Collector WJ-2/ Collector JT-2	Jackson Rd	County	2		Yes	3,716	4	Arterial M	25,400	Yes[3]
31	Excelsior Rd	Jackson Rd	Elder Creek Rd	County	2	<21	Yes	5,075	3	Arterial M	36,220	Yes[3]
32	Excelsior Rd	Elder Creek Rd	Florin Rd	County	2	<21	Yes	4,203	3	Arterial M	12,520	Yes[3]
33	Excelsior Rd	Florin Rd	Gerber Rd	County	2	<21	Yes	5,423	2	Arterial M	13,080	Yes
40	Florin Rd	Hedge Ave	Mayhew Rd	County	2	22	Yes	6,312	4	Arterial M	13,280	Yes[3]
41	Florin Rd	Mayhew Rd	Bradshaw Rd	County	2	22	Yes	6,317	4	Arterial M	40,200	Yes[3]
48	Fruitridge Rd	South Watt Ave	Hedge Ave	City of Sacramento/ County	2	22	Yes	2,890	3	Arterial M	24,240	Yes[3]
50	Grant Line Rd	White Rock Rd	Douglas Rd	Rancho Cordova/County	2	22	Yes	7,189	4	Arterial M	41,130	Yes[3]
70	Jackson Rd	Bradshaw Rd	Excelsior Rd	County	2	26	Yes	13,030	6	Arterial M	59,380	Yes[3]
71	Jackson Rd	Excelsior Rd	Eagles Nest Rd	County	2	26	Yes	10,478	4	Arterial M	62,220	Yes[3]
77	Kiefer Blvd	Bradshaw Rd	Happy Ln	County	2	22	Yes	4,618	6	Arterial M	50,960	Yes[3]
78	Kiefer Blvd	Zinfandel Dr	Sunrise Blvd	County	2	22	Yes	656	3	Arterial M	39,820	Yes[3]
116.3	White Rock Rd	Americanos Blvd	Grant Line Rd	Rancho Cordova/County	2		Yes	2,490	4	Arterial M	16,530	Yes[3]
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd	County	2	<21	Yes	2,848	4	Arterial M	22,250	Yes[3]

Red text with light gray shading indicate project impacts.

Table 7.7
CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Functionality Impacts Triggered by Jackson Township Project

ID	Roadway	Segment		Jurisdiction	Existing Substandard Roadways				CEQA Cumulative + FOUR PROJECTS			
		From	To		Travel Lanes	Pavement (ft)	Substandard? [1]	Existing Volume	Travel Lanes	Facility Type[1]	Forecasted Volume	Functionality Impact? [2]

Note: Gray shading indicates changes in travel lanes or facility type that the project is responsible to provide. For all roadway segments to be widened, the project is responsible to build the entire roadway to County standards.

[1] Substandard rural roads are defined as rural, 2-lane roadway segments with travel lanes narrower than 12 feet and/or roadside shoulders narrower than 6 feet.

[2] Functionality impacts are triggered when a substandard rural road increases over a threshold of 6,000 ADT, or for a roadway already above 6,000 ADT, increases by more than 600 ADT.

[3] The potential for an impact exists should the project generate traffic volumes on the roadway exceeding 6,000 ADT, or increasing more than 600 ADT on a roadway already above 6,000 ADT, prior to the construction of roadway improvements.

[4] Excluding the roadway segment that is within the developed community of Independence at Mather.

[5] The functionality impact is mitigated by improving the roadway to County standards, including widening travel lanes to 12 feet and/or widening or providing paved shoulders to 6 feet.

Red text with light gray shading indicate project impacts.

7.3 MITIGATION

7.3.1 CEQA Cumulative Plus Jackson Township Project Roadway Segment Mitigation

Table 7.8 summarizes the results of the operations analysis for the study area roadway segments with mitigation. Where feasible, the number of roadway lanes was increased to mitigate the impact. However, the increased number of lanes could not exceed the maximum General Plan designations of the appropriate jurisdictions. The shaded table cells under the "Travel Lanes" and "Facility Type" headings illustrate widened roadways for mitigation purposes, which would be the responsibility of the FOUR PROJECTS to fund. The Jackson Township project would contribute a fair share. The shaded table cells under the "Level of Service" heading indicate those locations that would continue to have LOS impacts after mitigation. The table also includes the constraint that precluded full mitigation of the LOS impact.

The "LOS Impact with Mitigation?" column shows whether there is still an LOS impact after the mitigation measure is applied. In other words, this column shows whether a mitigation measure successfully mitigates the impact or not. In several locations where the improvements allowed under the General Plan would not mitigate an LOS impact, the County has proposed alternative mitigation measures, which are shown in the "Alternative Mitigation" column. These alternative mitigation measures will either fully mitigate the impact or substantially reduce the level of impact.

Table 7.8
CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Roadway Segment Mitigations - Impacts Triggered by Jackson Township Project

ID	Roadway	Segment		CEQA Cumulative + FOUR PROJECTS					Mitigated CEQA Cumulative + FOUR PROJECTS						
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Volume / Capacity Ratio	Level of Service	LOS Impact with Mitigation?	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
23	Elder Creek Rd	Power Inn Rd	Florin-Perkins Rd	2	Arterial M	28,360	1.58	**F**	4	Arterial M	0.79	C	No		
25	Elder Creek Rd	South Watt Ave	Hedge Ave	4	Arterial M	52,900	1.47	**F**	6	Arterial M	0.98	**E**	No		
31.1	Excelsior Rd	Jackson Rd	Collector WJ-6	3	Arterial M	36,910	2.05	**F**	6	Arterial M	0.68	B	No		
31.2	Excelsior Rd	Collector WJ-6	Elder Creek Rd	3	Arterial M	36,220	2.01	**F**	6	Arterial M	0.67	B	No		
66.2	Jackson Rd	14th Ave	Rock Creek Pkwy	4	Arterial M	61,980	1.72	**F**	4	Arterial M	1.72	**F**	Yes		Maximum General Plan lanes
66.3	Jackson Rd	Rock Creek Pkwy	Aspen 1 Dwy	4	Arterial M	57,690	1.60	**F**	4	Arterial M	1.60	**F**	Yes		Maximum General Plan lanes
67	Jackson Rd	South Watt Ave	Hedge Ave	4	Arterial M	66,380	1.84	**F**	6	Arterial M	1.23	**F**	Yes		Maximum General Plan lanes
70.1	Jackson Rd	Bradshaw Rd	Collector WJ-4	6	Arterial M	59,380	1.10	**F**	6	Arterial M	1.10	**F**	Yes		Maximum General Plan lanes
70.2	Jackson Rd	Collector WJ-4	Happy Ln	6	Arterial M	59,660	1.10	**F**	6	Arterial M	1.10	**F**	Yes		Maximum General Plan lanes
71.1	Jackson Rd	Excelsior Rd	Collector JT-3	4	Arterial M	62,220	1.73	**F**	6	Arterial M	1.15	**F**	Yes		Maximum General Plan lanes
71.2	Jackson Rd	Collector JT-3	Tree View Ln	4	Arterial M	46,480	1.29	**F**	6	Arterial M	0.86	D	No		
71.3	Jackson Rd	Tree View Ln	Collector JT-4	4	Arterial M	41,360	1.15	**F**	6	Arterial M	0.77	C	No		
73	Jackson Rd	Sunrise Blvd	Grant Line Rd	4	Arterial M	45,290	1.26	**F**	6	Arterial M	0.84	D	No		
95	Rockingham Dr	Old Placerville Rd	Mather Field Rd	4	Arterial M	40,280	1.12	**F**	4	Arterial M	1.12	**F**	Yes		Maximum General Plan lanes

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 7.8
CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Roadway Segment Mitigations - Impacts Triggered by Jackson Township Project

ID	Roadway	Segment		CEQA Cumulative + FOUR PROJECTS					Mitigated CEQA Cumulative + FOUR PROJECTS						
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Volume / Capacity Ratio	Level of Service	LOS Impact with Mitigation?	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible

Note: Gray shading represents changes in travel lanes or facility type that the project is responsible to provide.

[1] The following classifications are used to determine daily roadway capacity:
Arterial L - Arterial, Low Access Control
Arterial M - Arterial, Moderate Access Control
Arterial H - Arterial, High Access Control
Rural Hwy - Rural 2-lane Highway
Rural S - Rural 2-lane Road, 24'-36' of pavement, Paved Shoulders
Rural NS - Rural 2-lane Road, 24'-36' of pavement, No Shoulders
Res Collector F - Residential Collector with Frontage
Res Collector NF - Residential Collector with No Frontage

[2] Alternative mitigations represent proposed mitigations beyond the General Plan, as proposed by the County of Sacramento.

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

7.3.2 CEQA Cumulative Plus Jackson Township Project Intersection Mitigation

Tables 7.9a and 7.10a summarize the results of the operations analysis for the study area intersections with mitigation. However, the increased number of lanes on each approach does not exceed the County's standard number of approach lanes. **Tables 7.9b and 7.10b** summarize the results of the operations analysis for the study area intersections with the ultimate mitigation, which may exceed the County's standard number of approach lanes. Shaded table cells indicate those locations where changes in traffic control and / or number of approach lanes by type have been made to mitigate impacts, which would be the responsibility of the FOUR PROJECTS to fund. The Jackson Township project would contribute a fair share. The shaded table cells under the "Level of Service" heading indicate those locations with an LOS impact after mitigation. Table 7.10a and Table 7.10b also identifies those intersections that would continue to have LOS impacts after mitigation, along with the constraint that precluded full mitigation. Detailed analysis information is included in the technical appendix.

The "LOS Impact with Mitigation?" column shows whether there is still an LOS impact after the mitigation measure is applied. In other words, this column shows whether a mitigation measure successfully mitigates the impact or not. In several locations where the LOS impact could not be mitigated by implementing the County's standard number of approach lanes, the County has proposed alternative mitigation measures, which are shown in the "Alternative Mitigation" column. These generally include providing additional turn lanes, carrying an additional through lane past the intersection, or designating the intersection as a High Capacity Intersection. These alternative mitigation measures will either fully mitigate the impact or substantially reduce the level of impact.

High Capacity Intersections

Grade separated intersections are proposed along Grant Line Road, in order to meet the Connector JPA's level of service policy. These grade separations would be constructed at Prairie City Road (which is also a designated High Capacity Intersection) and Sunrise Boulevard. Since each of these intersections have unique travel movements, volumes and existing context sensitive conditions (potential environmental issues, right-of-way, physical constraints, etc.), the special treatments utilized at each location will need to be studied to select the treatments that mitigate the LOS impact, while avoiding or minimizing other impacts.

7.3.3 CEQA Cumulative Plus Jackson Township Project Pedestrian and Bicycle Facility Mitigation

The Jackson Township project applicant shall coordinate with Sacramento County to identify the necessary on- and off-site pedestrian and bicycle facilities to serve the proposed development. These facilities shall be incorporated into the Jackson Township project and could include sidewalks, stop signs, standard pedestrian and school crossing warning signs, lane striping to provide a bicycle lane, bicycle parking, signs to identify pedestrian and bicycle paths, raised crosswalks, pedestrian signal heads, and all appropriate traffic calming measures as defined in the County's Neighborhood Traffic Management Program (NTMP). Sidewalks would be required as part of the frontage improvements along all new roadway construction in the Jackson

Township project vicinity in conformance with County design standards. Circulation and access to all proposed public spaces shall include sidewalks that meet Americans with Disabilities Act standards.

7.3.4 CEQA Cumulative Plus Jackson Township Project Transit System Mitigation

The applicant of the Jackson Township project shall coordinate with Regional Transit (or other transit operators) to provide the additional transit facilities and services assumed in transportation analysis (see Section 3.1.2.3), or a cost-effective equivalent level of transit facilities and services.

The assumed transit routes and service frequency would be required at full development of the Jackson Township project. The full level of transit service would not achieve adequate transit ridership during the early stages of development. Thus the ultimate transit service, like the roadway system serving the Jackson Township project, must be phased with development of the Jackson Township project.

7.3.5 CEQA Cumulative Plus Jackson Township Project Functionality Mitigation

Table 7.11 summarizes the results of the functionality analysis for the rural roadway segments with mitigation.

Table 7.9a

CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Impacted Intersections and County Standard Mitigations - Impacts Triggered by Jackson Township Project

	Intersection	AM Peak Hour													
		CEQA Cumulative Plus All			County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS			Alternative Mitigation Needed	CEQA Cumulative Plus All			County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS			Alternative Mitigation Needed
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
45	Excelsior Road & Jackson Road	Signal	F	330.8	Signal	F	106.9	Yes	Signal	F	269.1	Signal	F	144.6	Yes
51	Mather Field Road & Rockingham Drive	Signal	F	>300				Yes	Signal	F	170.3				Yes
61	Eagles Nest Road & Florin Road	Two-way stop			Signal	F	121.3	Yes	Two-way stop			Signal	F	138.5	Yes
	Northbound		*F*	*>300*						*F*	*>300*				
	Southbound		*F*	*>300*						*F*	*>300*				
	Eastbound Left Turn		*B*	*11*						*A*	*9.3*				
	Westbound Left Turn		*A*	*0*						*A*	*8.7*				

Note: Gray shading represents changes in traffic control that the project is responsible to provide.

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 7.9b

CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) County Standard and Ultimate Mitigations - Impacts Triggered by Jackson Township Project

	Intersection	AM Peak Hour											
		County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS			Ultimate Mitigated CEQA Cumulative Plus FOUR PROJECTS			County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS			Ultimate Mitigated CEQA Cumulative Plus FOUR PROJECTS		
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)
45	Excelsior Road & Jackson Road	Signal	F	106.9				Signal	F	144.6			
51	Mather Field Road & Rockingham Drive	Signal	F	>300				Signal	F	170.3			
61	Eagles Nest Road & Florin Road	Signal	F	121.3	Signal	E	69.6	Signal	F	138.5	Signal	D	49.1

Note: Gray shading represents changes in traffic control that the project is responsible to provide.

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 7.10a

CEQA Cumulative Plus FOUR PROJECTS (Alt. 2) Intersection Impacts and Mitigations - Impacts Triggered by Jackson Township

Intersection		Traffic Control		Super Cumulative Plus FOUR PROJECTS Lane Geometrics				County Standard Mitigated Super Cumulative Plus FOUR PROJECTS Lane Geometrics				LOS Impact with Mitgation?
		Super Cumulative Plus FOUR PROJECTS	Mitigated Super Cumulative Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
45	Excelsior Road & Jackson Road	Signal	Signal									Yes
51	Mather Field Road & Rockingham Drive	Signal	Signal									Yes
61	Eagles Nest Rd/Eagles Nest Road & Florin Road	Two-way stop	Signal									Yes

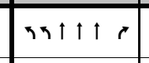
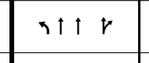
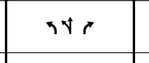
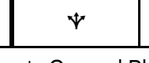
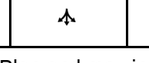
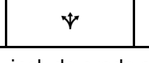
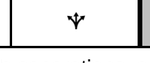
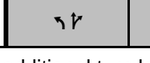
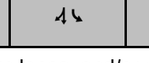
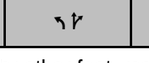
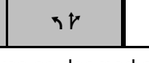
[1] High capacity intersections are defined in the Sacramento County General Plan and may include grade separations, additional turn lanes, and/or other features as deemed appropriate by the County.

[2] Alternative mitigations represent proposed mitigations beyond the General Plan or standard intersection geometry, excluding high capacity intersections, as proposed by the County of Sacramento.

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 7.10b

CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Intersection Impacts and Mitigations - Impacts Triggered by Jackson Township

Intersection		Traffic Control		County Standard Mitigated Super Cumulative Plus FOUR PROJECTS Lane Geometrics				Ultimate Mitigated Super Cumulative Plus FOUR PROJECTS Lane Geometrics				LOS Impact with Mitgation?	High Capacity Intersection?[1]	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
		Super Cumulative Plus FOUR PROJECTS	Mitigated Super Cumulative Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach				
45	Excelsior Road & Jackson Road	Signal	Signal									Yes	No	NBR overlap	Maximum General Plan Lanes
51	Mather Field Road & Rockingham Drive	Signal	Signal									Yes	No		Existing development
61	Eagles Nest Rd/Eagles Nest Road & Florin Road	Signal	Signal									No	No		

[1] High capacity intersections are defined in the Sacramento County General Plan and may include grade separations, additional turn lanes, and/or other features as deemed appropriate by the County.

[2] Alternative mitigations represent proposed mitigations beyond the General Plan or standard intersection geometry, excluding high capacity intersections, as proposed by the County of Sacramento.

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 7.11
CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Functionality Mitigations - Impacts Triggered by Jackson Township Project

ID	Roadway	Segment		CEQA Cumulative + FOUR PROJECTS				Mitigation	Impact after Mitigation?
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Functionality Impact? [2]		
15	Douglas Rd	Mather Blvd	Zinfandel Dr	4	Arterial M	33,390	Yes[3]	Widen to County standards [5]	No
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd	6	Arterial M	50,360	Yes[3]	Widen to County standards [5]	No
25	Elder Creek Rd	South Watt Ave	Hedge Ave	4	Arterial M	52,900	Yes[3]	Widen to County standards [5]	No
26	Elder Creek Rd	Hedge Ave	Mayhew Rd	4	Arterial M	33,660	Yes[3]	Widen to County standards [5]	No
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd	4	Arterial M	40,490	Yes[3]	Widen to County standards [5]	No
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd	3	Arterial M	30,740	Yes[3]	Widen to County standards [5]	No
30.2	Excelsior Rd	Douglas Rd	Collector WJ-1/ Collector JT-1	4	Arterial M	26,970	Yes[3]	Widen to County standards [5]	No
30.3	Excelsior Rd	Collector WJ-1/ Collector JT-1	Collector WJ-2/ Collector JT-2	4	Arterial M	25,900	Yes[3]	Widen to County standards [5]	No
30.4	Excelsior Rd	Collector WJ-2/ Collector JT-2	Jackson Rd	4	Arterial M	25,400	Yes[3]	Widen to County standards [5]	No
31	Excelsior Rd	Jackson Rd	Elder Creek Rd	3	Arterial M	36,220	Yes[3]	Widen to County standards [5]	No
32	Excelsior Rd	Elder Creek Rd	Florin Rd	3	Arterial M	12,520	Yes[3]	Widen to County standards [5]	No
33	Excelsior Rd	Florin Rd	Gerber Rd	2	Arterial M	13,080	Yes	Widen to County standards [5]	No
40	Florin Rd	Hedge Ave	Mayhew Rd	4	Arterial M	13,280	Yes[3]	Widen to County standards [5]	No
41	Florin Rd	Mayhew Rd	Bradshaw Rd	4	Arterial M	40,200	Yes[3]	Widen to County standards [5]	No
48	Fruitridge Rd	South Watt Ave	Hedge Ave	3	Arterial M	24,240	Yes[3]	Widen to County standards [5]	No
50	Grant Line Rd	White Rock Rd	Douglas Rd	4	Arterial M	41,130	Yes[3]	Widen to County standards [5]	No
70	Jackson Rd	Bradshaw Rd	Excelsior Rd	6	Arterial M	59,380	Yes[3]	Widen to County standards [5]	No
71	Jackson Rd	Excelsior Rd	Eagles Nest Rd	4	Arterial M	62,220	Yes[3]	Widen to County standards [5]	No
77	Kiefer Blvd	Bradshaw Rd	Happy Ln	6	Arterial M	50,960	Yes[3]	Widen to County standards [5]	No
78	Kiefer Blvd	Zinfandel Dr	Sunrise Blvd	3	Arterial M	39,820	Yes[3]	Widen to County standards [5]	No
116.3	White Rock Rd	Americanos Blvd	Grant Line Rd	4	Arterial M	16,530	Yes[3]	Widen to County standards [5]	No
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd	4	Arterial M	22,250	Yes[3]	Widen to County standards [5]	No

Red text with light gray shading indicate project impacts.

Table 7.11
CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) Functionality Mitigations - Impacts Triggered by Jackson Township Project

ID	Roadway	Segment		CEQA Cumulative + FOUR PROJECTS				Mitigation	Impact after Mitigation?
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Functionality Impact? [2]		

Note: Gray shading indicates changes in travel lanes or facility type that the project is responsible to provide. For all roadway segments to be widened, the project is responsible to build the entire roadway to County standards.

[1] Substandard rural roads are defined as rural, 2-lane roadway segments with travel lanes narrower than 12 feet and/or roadside shoulders narrower than 6 feet.

[2] Functionality impacts are triggered when a substandard rural road increases over a threshold of 6,000 ADT, or for a roadway already above 6,000 ADT, increases by more than 600 ADT.

[3] The potential for an impact exists should the project generate traffic volumes on the roadway exceeding 6,000 ADT, or increasing more than 600 ADT on a roadway already above 6,000 ADT, prior to the construction of roadway improvements.

[4] Excluding the roadway segment that is within the developed community of Independence at Mather.

[5] The functionality impact is mitigated by improving the roadway to County standards, including widening travel lanes to 12 feet and/or widening or providing paved shoulders to 6 feet.

Red text with light gray shading indicate project impacts.

7.3.6 CEQA Cumulative Plus Jackson Township Project Mitigation Summary

Tables 7.12 and 7.13 summarize the mitigation success for the roadway segments and intersections that exhibit significant LOS impacts. **Table 7.14** summarizes the mitigation success for the rural roadway segments that exhibit functionality impacts. Tables 7.13 through 7.15 summarize the mitigation success for the freeway system facilities that exhibit significant impacts.

Table 7.12
CEQA Cumulative Plus FOUR PROJECTS (Alternative 2)
Summary of Impacted Roadway Segments Triggered by Jackson Township Project

ID	Roadway	Segment	
		From	To
Level of Service Impact Fully Mitigated by General Plan Lanes			
23	Elder Creek Rd	Power Inn Rd	Florin-Perkins Rd
25	Elder Creek Rd	South Watt Ave	Hedge Ave
31.1	Excelsior Rd	Jackson Rd	Collector WJ-6
31.2	Excelsior Rd	Collector WJ-6	Elder Creek Rd
71.2	Jackson Rd	Collector JT-3	Tree View Ln
71.3	Jackson Rd	Tree View Ln	Collector JT-4
73	Jackson Rd	Sunrise Blvd	Grant Line Rd
Level of Service Impact Not Fully Mitigated by General Plan Lanes			
66.2	Jackson Rd	14th Ave	Rock Creek Pkwy
66.3	Jackson Rd	Rock Creek Pkwy	Aspen 1 Dwy
67	Jackson Rd	South Watt Ave	Hedge Ave
70.1	Jackson Rd	Bradshaw Rd	Collector WJ-4
70.2	Jackson Rd	Collector WJ-4	Happy Ln
71.1	Jackson Rd	Excelsior Rd	Collector JT-3
95	Rockingham Dr	Old Placerville Rd	Mather Field Rd

Note: Refer to Table 7.8 for detailed description of impacts and mitigations.

Table 7.13

CEQA Cumulative Plus FOUR PROJECTS (Alternative 2) -
Summary of Intersection Impacts Triggered by Jackson Township

	Intersection	Alternative Mitigation
Level of Service Impact Fully Mitigated by General Plan Lanes		
61	Eagles Nest Road & Florin Road	**
Level of Service Impact Not Fully Mitigated by General Plan Lanes		
45	Excelsior Road & Jackson Road	*
51	Mather Field Road & Rockingham Drive	

[1] Alternative mitigations represent proposed mitigations beyond the General Plan, excluding designated high capacity intersections, as proposed by the County of Sacramento.

* denotes alternative mitigations that improve operations but do not fully mitigate the impact.
** denotes alternative mitigations that fully mitigate the impact.

Table 7.14
CEQA Cumulative Plus FOUR PROJECTS (Alternative 2)
Summary of Functionality Impacts Triggered by Jackson Township Project

ID	Roadway	Segment	
		From	To
Functionality Impact Fully Mitigated			
15	Douglas Rd	Mather Blvd	Zinfandel Dr
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd
25	Elder Creek Rd	South Watt Ave	Hedge Ave
26	Elder Creek Rd	Hedge Ave	Mayhew Rd
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd
30.2	Excelsior Rd	Douglas Rd	Collector WJ-1/ Collector JT-1
30.3	Excelsior Rd	Collector WJ-1/ Collector JT-1	Collector WJ-2/ Collector JT-2
30.4	Excelsior Rd	Collector WJ-2/ Collector JT-2	Jackson Rd
31	Excelsior Rd	Jackson Rd	Elder Creek Rd
32	Excelsior Rd	Elder Creek Rd	Florin Rd
33	Excelsior Rd	Florin Rd	Gerber Rd
40	Florin Rd	Hedge Ave	Mayhew Rd
41	Florin Rd	Mayhew Rd	Bradshaw Rd
48	Fruitridge Rd	South Watt Ave	Hedge Ave
50	Grant Line Rd	White Rock Rd	Douglas Rd
70	Jackson Rd	Bradshaw Rd	Excelsior Rd
71	Jackson Rd	Excelsior Rd	Eagles Nest Rd
77	Kiefer Blvd	Bradshaw Rd	Happy Ln
78	Kiefer Blvd	Zinfandel Dr	Sunrise Blvd
116.3	White Rock Rd	Americanos Blvd	Grant Line Rd
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd

Table 7.14
CEQA Cumulative Plus FOUR PROJECTS (Alternative 2)
Summary of Functionality Impacts Triggered by Jackson Township Project

ID	Roadway	Segment	
		From	To

Note: Gray shading indicates changes in travel lanes or facility type that the project is responsible to provide. For all roadway segments to be widened, the project is responsible to build the entire roadway to County standards.

[1] Substandard rural roads are defined as rural, 2-lane roadway segments with travel lanes narrower than 12 feet and/or roadside shoulders narrower than 6 feet.

[2] Functionality impacts are triggered when a substandard rural road increases over a threshold of 6,000 ADT, or for a roadway already above 6,000 ADT, increases by more than 600 ADT.

[3] The potential for an impact exists should the project generate traffic volumes on the roadway exceeding 6,000 ADT, or increasing more than 600 ADT on a roadway already above 6,000 ADT, prior to the construction of roadway improvements.

[4] Excluding the roadway segment that is within the developed community of Independence at Mather.

[5] The functionality impact is mitigated by improving the roadway to County standards, including widening travel lanes to 12 feet and/or widening or providing paved shoulders to 6 feet.

8. EXISTING PLUS JACKSON TOWNSHIP (PROPOSED PROJECT)

8.1 JACKSON TOWNSHIP PROPOSED PROJECT DESCRIPTION

As illustrated previously in Figure 1.1, the Jackson Township project is located in unincorporated Sacramento County, generally east of the City of Sacramento and south of the City of Rancho Cordova and Mather Airport. It is bounded on the south by Jackson Road (SR 16) and on the west by Excelsior Road. The north boundary is near the future Kiefer Boulevard, while the east boundary is west of Eagles Nest Road.

8.1.1 Land Use

Table 8.1 summarizes the Jackson Township project land use.

The SACSIM model (used to estimate travel demand by travel mode) requires estimates of the number and demographics of people who would live in each household as well as key social/economic characteristics of each household. SACOG helped estimate the required household demographics based on the number housing units by density category and detailed local Census data compiled by housing types.

SACSIM also requires employment by type for each parcel in the Jackson Township project. The applicant provided number of acres and square feet by non-residential category on each parcel. Employment estimates were then estimated using average square feet per employee and per student. The total employment in the Jackson Township project was estimated to be about 5,740. The model also requires the estimated enrollment at each school within the Jackson Township project. The total enrollment for grades K-12 was estimated at about 6,000 students. Some of those students would come from housing units outside the Jackson Township project.

8.1.2 Transportation Network

8.1.2.1 Roadway Segments and Intersections

Figure 8.1 illustrates the Jackson Township project transportation network. The Jackson Township project would widen and / or complete many roadways that cross or border the site, and would include new roadways to serve the proposed land use. Sections 3.4.1 and 3.4.2 include information regarding the roadway segment and intersection improvements that are considered part of the Jackson Township project.

8.1.2.2 Pedestrian and Bicycle Facilities

Figure 8.2 illustrates the proposed bikeway plan of the Jackson Township project. The roadways within the Jackson Township project would meet County standards, which would provide sidewalks and on- street (Class II) bike lanes on all collector, arterial and thoroughfare roadways. The Jackson Township project also provides several off-street (Class I) multi-purpose trails.

Table 8.1: Land Use Summary for the Jackson Township Specific Plan						
		Residential			Non-Residential	
Land Use Category	Acres	Density Range	Ave Density	Dwelling Units	Floor Area Ratio	Estimated Square Feet
Low Density	355.7	1.0 – 10.9	6.0	2134		
Medium Density	136.3	11.0 – 19.9	13.0	1,772		
High Density	85.5	20.0 – 30.0	25.0	2,137		
High Density Bonus Units				76		
General Commercial	59.3				0.25	645,700
Community Commercial	17.6				0.25	191,600
Mixed Use	19.6			100	0.50	427,000
Office	33.6				0.50	731,800
Park	78.3					
Open Space	300.6					
Elementary School	30.0					
High School/Middle School	70.0					
Other Public/Quasi-Public	5.0					
Primary Roadways	90.2					
Agriculture (Ag Res)	109.3			545		
Total	**1,391.0**			**6,764**		**1,996,100**
Source: *Project Applicant*						

FIGURE 8.1
EXISTING PLUS JACKSON TOWNSHIP (PROPOSED PROJECT) ROADWAY NETWORK

Legend

- 2 Lanes
- 3 Lanes
- 4 Lanes
- 5 Lanes
- 6 Lanes
- 7 Lanes
- Cities
- Mather Airport

FIGURE 8.2
PROPOSED BIKEWAY MASTER PLAN
JACKSON TOWNSHIP
(PROPOSED PROJECT)

Legend

- Bicycle Paths (Class I)
- Bicycle Lanes (Class II)
- Cities
- Mather Airport

8.1.2.3 Transit System

Consistent with Sacramento County's General Plan policy LU-120, the Jackson Township project incorporates higher density land uses and mixed uses along transportation corridors to help support transit use. However, as described in Section 2.2, existing transit service is very limited near the Jackson Township project. The transit provider for the area, Sacramento Regional Transit (RT), has developed a long-range transit plan that anticipates three additional high frequency transit lines in the general area by the year 2035. However, even with this additional transit network, the Jackson Township project would likely not meet the County's General Plan policy.

To comply with the County's General Plan Policy LU-120, a separate planning effort involving staff from Sacramento County, RT, DKS, and the applicants of the FOUR PROJECTS was conducted to define an appropriate transit network and frequency that could serve the proposed development in the Jackson Corridor consistent with the intent of the County's policies.

An important consideration in the development of a transit network for the Jackson Corridor is that there are four major development projects proposed in the Jackson Corridor (FOUR PROJECTS) The transit planning effort needed to define standalone transit systems for each of the FOUR PROJECTS that would not only serve the transit needs of each of the FOUR PROJECTS independently, but would also serve as cohesive and complementary transit system units that could operate efficiently together should more than one of the FOUR PROJECTS be approved for development.

A series of transit networks and service frequencies were developed and tested using the SACSIM model with the objective of optimizing transit ridership and the number of boardings. Utilizing RT's performance criteria for evaluating the effectiveness of the various transit lines and service frequencies, an optimum transit network and frequency was developed for the Jackson Corridor.

The planning effort resulted in four transit lines that would serve the FOUR PROJECTS in the Jackson Corridor at a frequency of 15 minutes during the peak commute hours (approximately 6-9 AM and 3-6 PM) and 30 minutes during off-peak service hours (approximately 9AM-3PM and 6PM-8PM) on weekdays. **Figure 8.3** illustrates the proposed transit system for the Jackson Township project, which represents a portion of the ultimate transit system that would serve the FOUR PROJECTS. The combined transit system for the FOUR PROJECTS is discussed and illustrated in Section 4.1.2.3.

The proposed transit system for the Jackson Township project has been assumed as an attribute of the Jackson Township project and has been included in the traffic modeling for this traffic analysis. The assumed transit routes and service frequency would be required at full development of the Jackson Township project. The full level of transit service would not achieve adequate transit ridership during the early stages of development. Thus the ultimate transit service, like the roadway system serving the Jackson Township project, must be phased with development of the Jackson Township project.

FIGURE 8.3
PROJECT TRANSIT NETWORK
EXISTING PLUS JACKSON TOWNSHIP
(PROPOSED PROJECT)

Legend

- Jackson Express Route
- Kiefer Jackson Local Route
- West Jackson Local Route A
- West Jackson Local Route B
- Cities
- Mather Airport

8.2 TRIP GENERATION

The SACSIM model that has been utilized for the transportation forecasts in this analysis estimated trip generation of the Jackson Township project. **Table 8.2** summarizes the person trip generation. The Jackson Township project would generate over 15,000 daily work person trip ends, and about 115,000 daily person trip ends for all trip purposes.

Table 8.3 summarizes the estimated mode choice for the Existing plus Jackson Township project scenario. About 84.1 percent of all person trips are expected to be accommodated by automobile. Transit will serve about 1.2 percent of all trips, while walk and bike modes will accommodate about 14.7 percent of all trips. The mode choice assumes full implementation of the project's pedestrian and bicycle systems.

Table 8.4 summarizes the vehicular (auto) trip generation of the Jackson Township project. The Jackson Township project is estimated to generate over 72,500 daily vehicle trip ends. It should be noted that more than one person trip may be accommodated by a vehicle trip (e.g. carpooling). Over 20,500 of the daily vehicle trip ends will be associated with trips with both an origin and destination within the Jackson Township project, over 28 percent of the trip ends. The internal trip ends represent over 10,000 daily vehicle trips (one-half the number of internal trip ends). The Jackson Township project will generate over 52,000 external vehicle trips that have an origin or destination inside the Jackson Township project but the other end of the trip is outside the Jackson Township project. Table 8.4 also shows the vehicle trips generated during the a.m. and p.m. peak hours.

8.3 TRIP DISTRIBUTION

The distribution of trips associated with development on the Jackson Township project site was derived utilizing SACSIM, incorporating the proposed land use and access locations associated with the Jackson Township project site. Trip distribution varies by land use and time period. **Figure 8.4** illustrates the overall trip distribution of daily Jackson Township project trips with the Existing Plus Jackson Township project scenario. The highest percentages of Jackson Township project traffic are accommodated on Jackson Road and Excelsior Road.

8.4 OPERATIONS ANALYSIS AND IMPACTS

For purposes of this analysis, full development of the Jackson Township project is assumed to occur "instantaneously." In this manner, the traffic and impacts associated with the Jackson Township project can be directly compared to known and measured conditions. Existing scenario impacts are determined by comparing the traffic operating conditions associated with the Jackson Township project with the traffic operating conditions associated with the existing (without development) conditions, and comparing the change to the thresholds of significance. **Figure 8.5** illustrates the resultant traffic operating conditions.

Table 8.2: Estimated Daily Person Trip Generation (Existing Plus Proposed Project Scenario)
Jackson Township Specific Plan

Trip Purpose	Daily Person Trip Ends
Work Trips	15,882
Non-Work Trips	99,078
All Trip Purposes	114,960

Source: *DKS Associates, 2018.*

Table 8.3: Mode Split (Existing Plus Proposed Project Scenario)
Jackson Township Specific Plan

Mode	Percentage of Person Trips by Trip Purpose		
	Work Trips	Non-Work Trips	All Trip Purposes
Auto - SOV	84.9%	43.1%	48.9%
Auto - HOV	9.9%	39.3%	35.2%
Transit	2.4%	1.0%	1.2%
Walk	2.1%	15.7%	13.8%
Bike	0.6%	1.0%	0.9%

Source: *DKS Associates, 2018.*

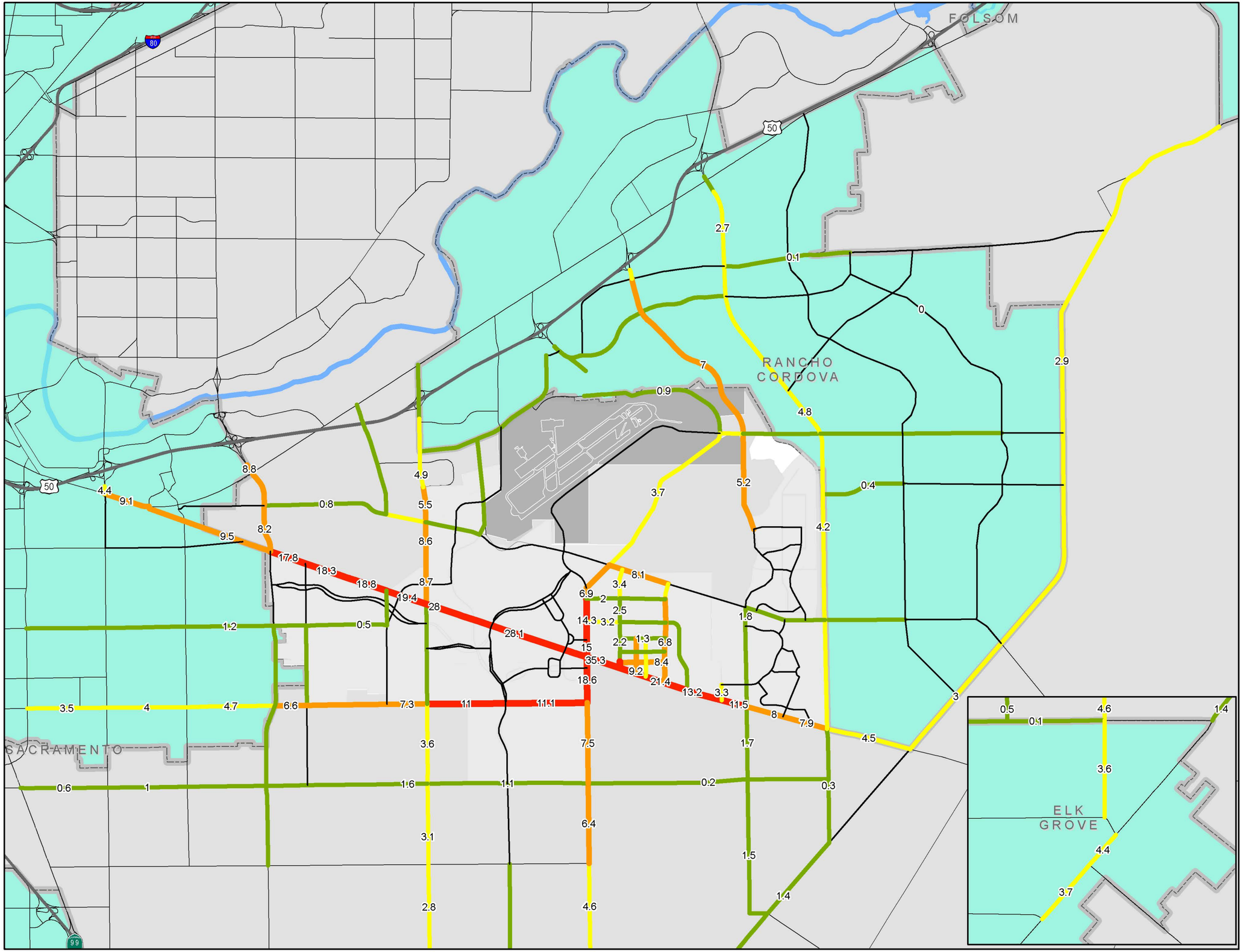
Table 8.4: Estimated Daily Vehicle Trip Generation (Existing Plus Proposed Project Scenario)
Jackson Township Specific Plan

Trip Type		AM Peak Hour	PM Peak Hour	Daily
Total Vehicle Trip Ends		6,762	6,615	72,665
Percent Internal Trip Ends[1]		25.3%	29.1%	28.3%
Vehicle Trips	Internal to Project	854	964	10,281
	External to Project	5,055	4,687	52,103
	Total	5,909	5,651	62,384

[1.] Both trip ends within the project.

Source: *DKS Associates, 2018.*

FIGURE 8.4
EXISTING PLUS JACKSON TOWNSHIP (PROPOSED PROJECT) TRIP DISTRIBUTION



Legend

Existing Conditions

- 0%
- 0.1% to 2.5%
- 2.6% to 5.0%
- 5.1% to 10.0%
- 10.0% and up
- Freeways
- Other Major Roadways
- Cities
- Mather Airport

DKS

FIGURE 8.5
EXISTING PLUS JACKSON TOWNSHIP (PROPOSED PROJECT) ROADWAY SEGMENT AND INTERSECTION LOS AND IMPACTS

FOLSOM

RANCHO CORDOVA

SACRAMENTO

ELK GROVE

Legend

Intersections (AM Peak Hour)

- LOS A-D
- LOS E
- LOS F

Intersections (PM Peak Hour)

- LOS A-D
- LOS E
- LOS F
- Mitigable Intersection Impact
- Unavoidable Intersection impact

- LOS A-D
- LOS E
- LOS F
- Unavoidable Segment Impact
- Mitigable Segment Impact
- Cities
- Mather Airport

DKS

8.4.1 Existing Plus Jackson Township Project Roadway Segment Impacts

Table 8.5 summarizes the results of the operations analysis for the study area roadway segments. The table includes the number of lanes assumed with the implementation of the Jackson Township project, which in many cases is greater than the number of lanes in the existing condition. The shaded table cells under the "Travel Lanes" and "Facility Type" headings illustrate new roadways and widened roadways that are assumed part of the Jackson Township project. The shaded table cells under the "Level of Service" heading indicate those locations with an LOS impact.

As stated above, the traffic analysis assumed that the Jackson Township project would construct a number of travel lanes on roadway segments that are internal to or on the boundary of the Jackson Township project, which would be greater than the number of lanes in the existing condition. The timing of implementation of such additional traffic lanes on these internal or boundary roadway segments will affect whether or not impacts would exist at some time prior to full build out of the Jackson Township project.

8.4.2 Existing Plus Jackson Township Project Intersection Impacts

Tables 8.6 and 8.7 summarize the results of the operations analysis for the study area intersections. The tables include the implementation of intersection changes associated with the Jackson Township project. Table 8.7 illustrates the type of traffic control and number of lanes by type on each study area intersection approach. Shaded table cells indicate those locations where changes in traffic control and / or number of approach lanes by type were assumed to be implemented by the Jackson Township project. Shaded table cells in Table 8.6 illustrate those locations with an LOS impact. Detailed analysis information is included in the technical appendix.

As stated above, the traffic analysis assumed that the Jackson Township project would construct a number of changes to many of the intersections that are internal to or on the boundary of the Jackson Township project, which would be an improvement over the existing condition. The timing of implementation of such intersection improvements on these internal or boundary roadway segments will affect whether or not impacts would exist at some time prior to full build out of the Jackson Township project.

Signal warrant analysis was conducted for all unsignalized intersections along Jackson Road, and other unsignalized intersections in close proximity to the project. The project is considered to have a significant impact at an unsignalized location if both the impact criteria in Table 1.6 are met, and one or more of the signal warrants specified in the California Manual on Uniform Traffic Control Devices (CAMUTCD) are met. The following unsignalized intersections exhibit significant impacts and meet one or more traffic signal warrants:

- Mayhew Road and Jackson Road
- Happy Lane and Old Placerville Road
- Excelsior Road and Elder Creek Road
- Excelsior Road and Florin Road

- Mather Boulevard and Douglas Road
- Eagles Nest Road and Jackson Road
- Excelsior Road and Calvine Road

Table 8.5
Existing Plus Jackson Township Project (Proposed Project) Roadway Segment Levels of Service

ID	Roadway	Segment		Existing					Existing + Jackson Township Project				
		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service
1	Bradshaw Rd	Folsom Blvd	US 50	6	Arterial M	20,592	0.38	A	6	Arterial M	20,680	0.38	A
2	Bradshaw Rd	US 50	Lincoln Village Dr	6	Arterial M	52,590	0.97	**E**	6	Arterial M	54,170	1.00	**F**
3	Bradshaw Rd	Lincoln Village Dr	Old Placerville Rd	6	Arterial M	42,787	0.79	C	6	Arterial M	44,300	0.82	D
4	Bradshaw Rd	Old Placerville Rd	Goethe Rd	6	Arterial M	38,984	0.72	C	6	Arterial M	40,500	0.75	C
5	Bradshaw Rd	Goethe Rd	Kiefer Blvd	4	Arterial M	28,651	0.80	C	4	Arterial M	30,270	0.84	D
6	Bradshaw Rd	Kiefer Blvd	Jackson Rd	4	Arterial M	30,726	0.85	D	4	Arterial M	35,630	0.99	E
7	Bradshaw Rd	Jackson Rd	Elder Creek Rd	4	Arterial M	22,871	0.64	B	4	Arterial M	21,980	0.61	B
8	Bradshaw Rd	Elder Creek Rd	Florin Rd	4	Arterial M	22,265	0.62	B	4	Arterial M	24,110	0.67	B
9	Bradshaw Rd	Florin Rd	Gerber Rd	4	Arterial M	22,883	0.64	B	4	Arterial M	24,240	0.67	B
10	Bradshaw Rd	Gerber Rd	Calvine Rd	4	Arterial M	16,984	0.47	A	4	Arterial M	18,660	0.52	A
11	Calvine Rd	Waterman Rd	Bradshaw Rd	4	Arterial M	16,015	0.44	A	4	Arterial M	16,510	0.46	A
12	Calvine Rd	Bradshaw Rd	Vineyard Rd	4	Arterial M	12,395	0.34	A	4	Arterial M	13,860	0.39	A
13	Calvine Rd	Vineyard Rd	Excelsior Rd	2	Arterial M	6,036	0.34	A	2	Arterial M	7,530	0.42	A
14	Chrysanthy Blvd	Sunrise Blvd	Rancho Cordova Pkwy	4	Arterial M	3,411	0.09	A	4	Arterial M	3,610	0.10	A
15	Douglas Rd	Mather Blvd	Zinfandel Dr	2	Arterial M	6,635	0.37	A	2	Arterial M	7,390	0.41	A
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd	2	Arterial M	8,369	0.46	A	2	Arterial M	9,210	0.51	A
17	Douglas Rd	Sunrise Blvd	Rancho Cordova Pkwy	5	Arterial M	3,674	0.10	A	5	Arterial M	4,180	0.12	A
18	Douglas Rd	Rancho Cordova Pkwy	Grant Line Rd	2	Arterial M	3,674	0.20	A	2	Arterial M	3,930	0.22	A
19	Eagles Nest Rd	Kiefer Blvd	Jackson Rd	2	Arterial M	740	0.04	A	2	Arterial M	1,850	0.10	A
20	Eagles Nest Rd	Jackson Rd	Florin Rd	2	Arterial M	517	0.03	A	2	Arterial M	1850	0.10	A
21	Eagles Nest Rd	Florin Rd	Grant Line Rd	2	Arterial M	189	0.01	A	2	Arterial M	1410	0.08	A
22	Elder Creek Rd	65th St	Power Inn Rd	4	Arterial M	17,891	0.50	A	4	Arterial M	19,680	0.55	A
23	Elder Creek Rd	Power Inn Rd	Florin-Perkins Rd	2	Arterial M	15,734	0.87	D	2	Arterial M	17,400	0.97	**E**
24	Elder Creek Rd	Florin Perkins Rd	South Watt Ave	2	Arterial M	11,092	0.62	B	2	Arterial M	13,650	0.76	C
25	Elder Creek Rd	South Watt Ave	Hedge Ave	2	Arterial M	5,576	0.31	A	2	Arterial M	9,060	0.50	A
26	Elder Creek Rd	Hedge Ave	Mayhew Rd	2	Arterial M	5,797	0.32	A	2	Arterial M	9,390	0.52	A
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd	2	Arterial M	5,355	0.30	A	2	Arterial M	9,400	0.52	A
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd	2	Arterial M	2,158	0.12	A	2	Arterial M	10,340	0.57	A
29	Elk Grove-Florin Rd	Florin Rd	Gerber Rd	2	Arterial M	22,960	1.28	**F**	2	Arterial M	23,240	1.29	**F**
30.1	Excelsior Rd	Kiefer Blvd	Douglas Rd	2	Arterial M	3,716	0.21	A	2	Arterial M	7,280	0.40	A
30.2	Excelsior Rd	Douglas Rd	Collector WJ-1/ Collector JT-1	2	Arterial M	3,716	0.21	A	3	Arterial M	7,400	0.41	A

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 8.5
Existing Plus Jackson Township Project (Proposed Project) Roadway Segment Levels of Service

ID	Roadway	Segment		Existing					Existing + Jackson Township Project				
		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service
30.3	Excelsior Rd	Collector WJ-1/ Collector JT-1	Collector WJ-2/ Collector JT-2	2	Arterial M	3,716	0.21	A	3	Arterial M	13,300	0.74	C
30.4	Excelsior Rd	Collector WJ-2/ Collector JT-2	Jackson Rd	2	Arterial M	3,716	0.21	A	3	Arterial M	15,060	0.84	D
31	Excelsior Rd	Jackson Rd	Elder Creek Rd	2	Arterial M	5,075	0.28	A	2	Arterial M	16,560	0.92	E
32	Excelsior Rd	Elder Creek Rd	Florin Rd	2	Arterial M	4,203	0.23	A	2	Arterial M	7,220	0.40	A
33	Excelsior Rd	Florin Rd	Gerber Rd	2	Arterial M	5,423	0.30	A	2	Arterial M	7,580	0.42	A
34	Excelsior Rd	Gerber Rd	Calvine Rd	2	Arterial M	4,229	0.23	A	2	Arterial M	5,220	0.29	A
35	Excelsior Rd	Calvine Rd	Sheldon Rd	2	Arterial M	4,473	0.25	A	2	Arterial M	6,480	0.36	A
36	Florin Rd	Stockton Blvd	Power Inn Rd	4	Arterial M	27,495	0.76	C	4	Arterial M	28,690	0.80	C
37	Florin Rd	Power Inn Rd	Florin-Perkins Rd	4	Arterial M	21,595	0.60	A	4	Arterial M	23,490	0.65	B
38	Florin Rd	Florin-Perkins Rd	So Watt Ave/ Elk Grove Florin Rd	4	Arterial M	14,163	0.39	A	4	Arterial M	16,250	0.45	A
39	Florin Rd	South Watt Ave	Hedge Ave	2	Arterial M	7,718	0.43	A	2	Arterial M	9,910	0.55	A
40	Florin Rd	Hedge Ave	Mayhew Rd	2	Arterial M	6,312	0.35	A	2	Arterial M	9,010	0.50	A
41	Florin Rd	Mayhew Rd	Bradshaw Rd	2	Arterial M	6,317	0.35	A	2	Arterial M	9,080	0.50	A
42	Florin Rd	Bradshaw Rd	Excelsior Rd	2	Arterial M	3,478	0.19	A	2	Arterial M	5,910	0.33	A
43	Florin Rd	Excelsior Rd	Sunrise Blvd	2	Arterial M	3,835	0.21	A	2	Arterial M	4,690	0.26	A
44	Folsom Blvd	Howe Ave	Jackson Rd	4	Arterial M	37,516	1.04	**F**	4	Arterial M	40,090	1.11	**F**
45	Fruitridge Rd	65th St	Power Inn Rd	4	Arterial M	16,634	0.46	A	4	Arterial M	16,630	0.46	A
46	Fruitridge Rd	Power Inn Rd	Florin Perkins Rd	4	Arterial M	15,214	0.42	A	4	Arterial M	16,550	0.46	A
47	Fruitridge Rd	Florin Perkins Rd	South Watt Ave	2	Arterial M	10,280	0.57	A	2	Arterial M	11,160	0.62	B
48	Fruitridge Rd	South Watt Ave	Hedge Ave	2	Arterial M	2,890	0.16	A	2	Arterial M	2,940	0.16	A
49	Fruitridge Rd	Hedge Ave	Mayhew Rd	2	Arterial M	1,790	0.10	A	2	Arterial M	1,440	0.08	A
50	Grant Line Rd	White Rock Rd	Douglas Rd	2	Rural NS	7,189	0.42	D	2	Rural NS	8,310	0.49	D
51	Grant Line Rd	Douglas Rd	Kiefer Blvd	2	Rural S	6,143	0.31	C	2	Rural S	7,460	0.37	D
52	Grant Line Rd	Kiefer Blvd	Jackson Rd	2	Rural S	5,758	0.29	C	2	Rural S	6,950	0.35	C
53	Grant Line Rd	Jackson Rd	Sunrise Blvd	2	Rural S	14,720	0.74	E	2	Rural S	14,430	0.72	E
54	Grant Line Rd	Sunrise Blvd	Calvine Rd	2	Rural S	14,812	0.74	E	2	Rural S	15,420	0.77	E
55.1	Grant Line Rd	Calvine Rd	Elk Grove City Limit	2	Rural S	13,140	0.66	**E**	2	Rural S	13,570	0.68	**E**
55.2	Grant Line Rd	Elk Grove City Limit	Sheldon Rd	2	Rural S	13,140	0.66	**E**	2	Rural S	13,520	0.68	**E**
56	Grant Line Rd	Sheldon Rd	Wilton Rd	2	Rural S	17,459	0.87	**E**	2	Rural S	19,560	0.98	**E**

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 8.5
Existing Plus Jackson Township Project (Proposed Project) Roadway Segment Levels of Service

ID	Roadway	Segment		Existing					Existing + Jackson Township Project				
		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service
57	Grant Line Rd	Wilton Rd	Bond Rd	2	Rural S	16,064	0.80	**E**	2	Rural S	18,070	0.90	**E**
58	Happy Ln	Old Placerville Rd	Kiefer Blvd	2	Rural S	4,635	0.23	C	2	Rural S	6,700	0.34	C
59	Hedge Ave	Jackson Rd	Fruitridge Rd	2	Arterial M	3,061	0.17	A	2	Arterial M	2,640	0.15	A
60	Hedge Ave	Fruitridge Rd	Elder Creek Rd	2	Arterial M	3,737	0.21	A	2	Arterial M	3,960	0.22	A
61	Hedge Ave	Elder Creek Rd	Florin Rd	2	Arterial M	2,722	0.15	A	2	Arterial M	3,010	0.17	A
62	Howe Ave	US 50	Folsom Blvd	6	Arterial M	53,849	1.00	E	6	Arterial M	55,120	1.02	**F**
63	International Dr	Mather Field Rd	Zinfandel Dr	6	Arterial M	17,500	0.32	A	6	Arterial M	17,910	0.33	A
64	International Dr	Zinfandel Dr	Sunrise Blvd	6	Arterial M	8,802	0.16	A	6	Arterial M	9,480	0.18	A
65	Jackson Rd	Folsom Blvd	Florin Perkins Rd	2	Arterial M	12,358	0.69	B	2	Arterial M	13,570	0.75	C
66	Jackson Rd	Florin Perkins Rd	South Watt Ave	2	Arterial M	10,414	0.58	A	2	Arterial M	13,450	0.75	C
67	Jackson Rd	South Watt Ave	Hedge Ave	2	Arterial M	17,060	0.95	E	2	Arterial M	23,280	1.29	**F**
68	Jackson Rd	Hedge Ave	Mayhew Rd	2	Arterial M	12,616	0.70	C	2	Arterial M	19,660	1.09	**F**
69	Jackson Rd	Mayhew Rd	Bradshaw Rd	2	Arterial M	14,996	0.83	D	2	Arterial M	21,730	1.21	**F**
70	Jackson Rd	Bradshaw Rd	Excelsior Rd	2	Arterial M	13,030	0.72	C	2	Arterial M	26,090	1.45	**F**
71.1	Jackson Rd	Excelsior Rd	Collector JT-3	2	Rural Hwy	10,478	0.46	D	4	Arterial M	32,180	0.89	D
71.2	Jackson Rd	Collector JT-3	Tree View Ln	2	Rural Hwy	10,478	0.46	D	4	Arterial M	20,200	0.56	A
71.3	Jackson Rd	Tree View Ln	Collector JT-4	2	Rural Hwy	10,478	0.46	D	4	Arterial M	15,530	0.43	A
71.4	Jackson Rd	Collector JT-4	Eagles Nest Rd	2	Rural Hwy	10,478	0.46	D	2	Rural Hwy	15,040	0.66	E
72	Jackson Rd	Eagles Nest Rd	Sunrise Blvd	2	Rural Hwy	9,976	0.44	D	2	Rural Hwy	12,130	0.53	D
73	Jackson Rd	Sunrise Blvd	Grant Line Rd	2	Rural Hwy	13,306	0.58	D	2	Rural Hwy	14,680	0.64	**E**
74	Kiefer Blvd	Florin Perkins Rd	South Watt Ave	2	Arterial M	4,616	0.26	A	2	Arterial M	4,860	0.27	A
75	Kiefer Blvd	South Watt Ave	Mayhew Rd	4	Arterial M	18,668	0.52	A	4	Arterial M	20,090	0.56	A
76	Kiefer Blvd	Mayhew Rd	Bradshaw Rd	4	Arterial M	9,274	0.26	A	4	Arterial M	12,350	0.34	A
77	Kiefer Blvd	Bradshaw Rd	Happy Ln	2	Arterial M	4,618	0.26	A	2	Arterial M	5,620	0.31	A
78	Kiefer Blvd	Zinfandel Dr	Sunrise Blvd	2	Arterial M	656	0.04	A	2	Arterial M	1790	0.10	A
79	Kiefer Blvd	Sunrise Blvd	Rancho Cordova Pkwy	2	Arterial M	2,786	0.15	A	2	Arterial M	2,780	0.15	A
80	Mather Blvd / Norden Ave	Von Karman St	Bleckely St	4	Arterial M	4,373	0.12	A	4	Arterial M	5,730	0.16	A
81	Mather Blvd	Bleckely St	Femoyer St	4	Arterial M	4,373	0.12	A	4	Arterial M	5,730	0.16	A
82	Mather Blvd	Femoyer St	Douglas Rd	2	Arterial M	4,373	0.24	A	2	Arterial M	5,730	0.32	A

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Table 8.5
Existing Plus Jackson Township Project (Proposed Project) Roadway Segment Levels of Service

ID	Roadway	Segment		Existing					Existing + Jackson Township Project				
		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service
83	Mather Blvd-Excelsior Rd	Douglas Rd	Kiefer Blvd	2	Res Collector F	6,751	0.84	E	2	Res Collector F	8,760	1.10	**F**
84	Mather Field Rd	US 50	Rockingham Dr	6	Arterial M	37,755	0.70	B	6	Arterial M	38,850	0.72	C
85	Mather Field Rd	Rockingham Dr	International Dr	6	Arterial M	37,520	0.69	B	6	Arterial M	38,120	0.71	C
86	Mather Field Rd	International Dr	Peter A McCuen Blvd	4	Arterial M	14,857	0.41	A	4	Arterial M	15,230	0.42	A
87	Mayhew Rd	Folsom Blvd	Goethe Rd	2	Arterial M	6,977	0.39	A	2	Arterial M	8,140	0.45	A
88	Mayhew Rd	Goethe Rd	Kiefer Blvd	2	Arterial L	6,593	0.44	A	2	Arterial L	7,920	0.53	A
89	Mayhew Rd	Jackson Rd	Fruitridge Rd	2	Arterial L	1,616	0.11	A	2	Arterial L	1,260	0.08	A
90	Old Placerville Rd	Bradshaw Rd	Granby Dr	4	Arterial M	15,800	0.44	A	4	Arterial M	16,920	0.47	A
91	Old Placerville Rd	Granby Dr	Happy Ln	2	Arterial M	13,573	0.75	C	2	Arterial M	14,340	0.80	C
92	Old Placerville Rd	Happy Ln	Routier Rd	2	Arterial M	10,710	0.60	A	2	Arterial M	12,110	0.67	B
93	Old Placerville Rd	Routier Rd	Rockingham Dr	4	Arterial M	10,710	0.30	A	4	Arterial M	11,390	0.32	A
94	Power Inn Rd	Folsom Blvd	14th Ave	6	Arterial M	36,175	0.67	B	6	Arterial M	36,330	0.67	B
95	Rockingham Dr	Old Placerville Rd	Mather Field Rd	4	Arterial M	19,881	0.55	A	4	Arterial M	20,650	0.57	A
96	South Watt Ave	Folsom Blvd	Kiefer Blvd	6	Arterial M	40,920	0.76	C	6	Arterial M	44,220	0.82	D
97	South Watt Ave	Kiefer Blvd	Jackson Rd	5	Arterial M	32,415	0.90	E	5	Arterial M	35,480	0.99	E
98	South Watt Ave	Jackson Rd	Fruitridge Rd	2	Arterial M	25,832	1.44	**F**	2	Arterial M	25,930	1.44	**F**
99	South Watt Ave	Fruitridge Rd	Elder Creek Rd	2	Arterial M	21,567	1.20	**F**	2	Arterial M	21,820	1.21	**F**
100	South Watt Ave	Elder Creek Rd	Florin Rd	2	Arterial M	19,069	1.06	**F**	2	Arterial M	19,210	1.07	**F**
101	Sunrise Blvd	US 50	Folsom Blvd	7	Arterial M	54,500	1.01	**F**	7	Arterial M	54,700	1.01	**F**
102	Sunrise Blvd	Folsom Blvd	Trade Center Dr	6	Arterial M	49,500	0.92	**E**	6	Arterial M	50,090	0.93	**E**
103	Sunrise Blvd	Trade Center Dr	White Rock Rd	6	Arterial M	34,571	0.64	B	6	Arterial M	35,720	0.66	B
104.1	Sunrise Blvd	White Rock Rd	International Dr	6	Arterial M	25,811	0.48	A	6	Arterial M	27,070	0.50	A
104.2	Sunrise Blvd	International Dr	Rio Del Oro Pkwy	6	Arterial M	28,400	0.53	A	6	Arterial M	31,270	0.58	A
104.3	Sunrise Blvd	Rio Del Oro Pkwy	Douglas Rd	6	Arterial M	25,811	0.48	A	6	Arterial M	29,350	0.54	A
105	Sunrise Blvd	Douglas Rd	Kiefer Blvd	5	Arterial M	21,878	0.61	B	5	Arterial M	24,690	0.69	B
106	Sunrise Blvd	Kiefer Blvd	Jackson Rd	2	Arterial M	16,894	0.94	**E**	2	Arterial M	19,180	1.07	**F**
107	Sunrise Blvd	Jackson Rd	Florin Rd	2	Rural S	11,181	0.56	D	2	Rural S	11,360	0.57	D
108	Sunrise Blvd	Florin Rd	Grant Line Rd	2	Rural S	7,752	0.39	D	2	Rural S	7,440	0.37	D
109	Vineyard Rd	Gerber Rd	Calvine Rd	2	Arterial M	5,515	0.31	A	2	Arterial M	5,820	0.32	A
110	Watt Ave	US 50	Folsom Blvd	6	Arterial H	65,242	1.09	**F**	6	Arterial H	67,710	1.13	**F**
111	White Rock Rd	International Rd	Quality Dr	2	Arterial M	3,962	0.22	A	2	Arterial M	4,030	0.22	A
112	White Rock Rd	Quality Dr	Zinfandel Dr	4	Arterial M	11,200	0.31	A	4	Arterial M	10,780	0.30	A

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Table 8.5
Existing Plus Jackson Township Project (Proposed Project) Roadway Segment Levels of Service

ID	Roadway	Segment		Existing					Existing + Jackson Township Project				
		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service
113	White Rock Rd	Zinfandel Dr	Kilgore Rd	6	Arterial M	14,756	0.27	A	6	Arterial M	14,730	0.27	A
114	White Rock Rd	Kilgore Rd	Sunrise Blvd	5	Arterial M	14,756	0.41	A	5	Arterial M	14,940	0.42	A
115	White Rock Rd	Sunrise Blvd	Fitzgerald Rd	4	Arterial M	15,433	0.43	A	4	Arterial M	15,360	0.43	A
116	White Rock Rd	Fitzgerald Rd	Grant Line Rd	2	Rural NS	2,490	0.15	B	2	Rural NS	2,230	0.13	B
117	White Rock Rd	Grant Line Rd	Prairie City Rd	4	Arterial M	9,400	0.26	A	4	Arterial M	10,290	0.29	A
118	Zinfandel Dr	US 50	White Rock Rd	7	Arterial M	45,228	0.84	D	7	Arterial M	47,500	0.88	D
119	Zinfandel Dr	White Rock Rd	International Rd	6	Arterial M	17,923	0.33	A	6	Arterial M	21,200	0.39	A
120	Zinfandel Dr	International Rd	Baroque Dr	6	Arterial M	7,595	0.14	A	6	Arterial M	11,870	0.22	A
121	Zinfandel Dr	Baroque Dr	City Limit	4	Arterial M	7,595	0.21	A	4	Arterial M	11,870	0.33	A
122	Zinfandel Dr	City Limit	Douglas Rd	2	Arterial M	7,595	0.42	A	2	Arterial M	11,870	0.66	B
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd	2	Arterial M	2,848	0.16	A	2	Arterial M	6,870	0.38	A
400	Collector JT-1	Excelsior Rd	Collector JT-3						2	Res Collector F	2,890	0.36	B
401	Collector JT-1	Collector JT-3	Tree View Ln						2	Res Collector F	1,050	0.13	A
402	Collector JT-3	Kiefer Blvd	Collector JT-1						2	Res Collector F	1,220	0.15	A
403	Collector JT-3	Collector JT-1	Collector JT-6						2	Res Collector F	1,640	0.21	B
404	Collector JT-3	Collector JT-6	Collector JT-5						2	Res Collector F	1,640	0.21	B
405	Collector JT-3	Collector JT-5	Jackson Rd						4	Arterial M	15,990	0.44	A
406	Collector JT-4	Jackson Rd	Bridgewater Dr						2	Arterial M	190	0.01	A
407	Collector JT-5	Collector JT-3	Tree View Ln						2	Res Collector NF	8,270	0.83	D
408	Collector JT-6	Excelsior Rd	Collector JT-3						2	Res Collector F	3,140	0.39	B
409	Collector JT-6	Collector JT-3	Tree View Ln						2	Res Collector F	1,100	0.14	A
410	Kiefer Blvd	Excelsior Rd	Tree View Ln						3	Arterial M	5,090	0.28	A
411	Tree View Ln	Kiefer Blvd	Collector JT-1						4	Arterial M	2,610	0.07	A
412	Tree View Ln	Collector JT-1	Collector JT-6						4	Arterial M	5,330	0.15	A
413	Tree View Ln	Collector JT-6	Collector JT-5						4	Arterial M	5,440	0.15	A
414	Tree View Ln	Collector JT-5	Jackson Rd						4	Arterial M	7,670	0.21	A

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Table 8.5
Existing Plus Jackson Township Project (Proposed Project) Roadway Segment Levels of Service

ID	Roadway	Segment		Existing					Existing + Jackson Township Project				
		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service
415	Collector JT-7	Collector JT-3	Tree View Ln						2	Arterial M	980	0.05	A
416	Collector JT-8	Collector JT-3	Tree View Ln						2	Arterial M	1,070	0.06	A
417	Collector JT-9	Jackson Rd	Collector JT-8						2	Arterial M	3,250	0.18	A
418	Collector JT-10	Jackson Rd	Collector JT-8						2	Arterial M	1,670	0.09	A
419	Collector JT-6	Tree View Ln	Jackson Rd						2	Res Collector F	2,190	0.27	B

Note: Gray shading indicates changes in travel lanes or facility type that the project is responsible to provide.

[1] The following classifications are used to determine daily roadway capacity:
Arterial L - Arterial, Low Access Control
Arterial M - Arterial, Moderate Access Control
Arterial H - Arterial, High Access Control
Rural Hwy - Rural 2-lane Highway
Rural S - Rural 2-lane Road, 24'-36' of pavement, Paved Shoulders
Rural NS - Rural 2-lane Road, 24'-36' of pavement, No Shoulders
Res Collector F - Residential Collector with Frontage
Res Collector NF - Residential Collector with No Frontage

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Table 8.6

Existing Plus Jackson Township Project (Proposed Project) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus Jackson Township Project			LOS Impact	Existing			Existing Plus Jackson Township Project			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
1	Howe Avenue & College Town Drive/US 50 WB Ramps	Signal	D	36.6	Signal	B	19.0	No	Signal	D	44.4	Signal	C	27.8	No
2	Howe Avenue & US 50 EB Ramps	Signal	B	16.9	Signal	B	11.0	No	Signal	C	20.5	Signal	A	9.1	No
3	Power Inn Road/Howe Avenue & Folsom Blvd	Signal	D	39.1	Signal	C	34.7	No	Signal	D	55.0	Signal	D	43.3	No
4	Power Inn Road & 14th Avenue	Signal	C	31.5	Signal	B	15.6	No	Signal	D	39.6	Signal	C	20.8	No
5	Power Inn Road & Fruitridge Road	Signal	D	43.4	Signal	D	43.8	No	Signal	C	33.5	Signal	C	26.5	No
6	Jackson Road/Notre Dame Dr. & Folsom Blvd.	Signal	D	36.8	Signal	C	23.0	No	Signal	C	32.1	Signal	B	16.2	No
7	Florin Perkins Road/Julliard Dr. & Folsom Boulevard	Signal	D	39.0	Signal	C	27.3	No	Signal	E	55.6	Signal	C	27.5	No
8	Florin Perkins Road & Kiefer Blvd.	Two-way stop	A	2.8	Two-way stop	A	2.8	No	Two-way stop	A	3.2	Two-way stop	A	3.4	No
	Westbound Left Turn		*C*	*20.1*		*C*	*24.2*			*C*	*23.3*		*D*	*28.6*	
	Westbound Right Turn		*B*	*13.3*		*C*	*15.1*			*B*	*12.6*		*B*	*13.6*	
	Southbound Left Turn		*A*	*10.0*		*B*	*10.7*			*B*	*10.9*		*B*	*12.0*	
9	Florin Perkins Road & Jackson Road	Signal	D	51.5	Signal	B	17.4	No	Signal	D	54.1	Signal	C	27.2	No
10	Florin Perkins Road & Fruitridge Road	Signal	C	25.1	Signal	C	20.6	No	Signal	C	25.4	Signal	C	20.3	No
11	Florin Perkins Road & Elder Creek Road	Signal	C	25.7	Signal	B	18.6	No	Signal	C	26.2	Signal	C	20.2	No
12	Watt Avenue & Folsom Blvd.	Signal	E	66.2	Signal	E	72.6	No	Signal	E	71.9	Signal	E	65.9	No
13	S. Watt Ave. & Reith Ct/Manlove Road	Signal	B	19.6	Signal	B	12.6	No	Signal	D	54.1	Signal	B	11.4	No
14	S. Watt Avenue & Kiefer Blvd.	Signal	E	56.0	Signal	E	69.1	No	Signal	E	75.9	Signal	D	45.2	No

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Table 8.6

Existing Plus Jackson Township Project (Proposed Project) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus Jackson Township Project			LOS Impact	Existing			Existing Plus Jackson Township Project			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
15	S. Watt Avenue & Canberra Dr.	Signal	B	11.5	Signal	A	7.3	No	Signal	A	9.7	Signal	A	6.1	No
16	S. Watt Avenue & Jackson Road	Signal	E	62.5	Signal	E	73.0	No	Signal	E	66.4	Signal	E	64.3	No
17	S. Watt Avenue & Fruitridge Road	Signal	D	38.1	Signal	C	21.2	No	Signal	D	41.7	Signal	C	21.4	No
18	S. Watt Avenue & Elder Creek Road	Signal	E	62.7	Signal	E	80.0	Yes	Signal	E	68.8	Signal	E	79.1	Yes
20	Elk Grove Florin Road/S. Watt Ave. & Florin Road	Signal	D	54.7	Signal	C	28.5	No	Signal	D	51.8	Signal	D	38.4	No
21	Elk Grove Florin Road & Gerber Road	Signal	D	49.1	Signal	D	37.0	No	Signal	E	64.6	Signal	E	62.6	No
23	Hedge Avenue & Jackson Road	Signal	D	35.1	Signal	C	24.2	No	Signal	D	37.3	Signal	B	13.9	No
24	Hedge Avenue & Fruitridge Road	All-way stop	B	13.6	All-way stop	C	21.2	No	All-way stop	A	9.4	All-way stop	A	9.2	No
25	Hedge Avenue & Elder Creek Road	All-way stop	C	15.9	All-way stop	F	62.2	Yes	All-way stop	B	11.6	All-way stop	C	23.1	No
26	Hedge Avenue & Tokay Lane	Two-way stop	A	0.4	Two-way stop	A	0.3	No	Two-way stop	A	0.2	Two-way stop	A	0.2	No
	Northbound Left Turn		*A*	*0.0*		A	0.0			*A*	*0.0*		*A*	*0.0*	
	Southbound Left Turn		*A*	*8.0*		*A*	*8.3*			*A*	*7.3*		*A*	*7.3*	
	Eastbound		*B*	*12.2*		*B*	*13.2*			*B*	*10.2*		*B*	*11.1*	
	Westbound		*B*	*11.1*		*B*	*12.0*			*A*	*9.6*		*B*	*10.0*	
27	Hedge Avenue & Florin Road	All-way stop	B	12.9	All-way stop	C	17.8	No	All-way stop	B	11.1	All-way stop	C	17.1	No
28	Mayhew Road & Kiefer Boulevard	Signal	D	48.6	Signal	C	23.8	No	Signal	D	51.1	Signal	B	19.3	No

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Table 8.6

Existing Plus Jackson Township Project (Proposed Project) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus Jackson Township Project			LOS Impact	Existing			Existing Plus Jackson Township Project			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
29	Mayhew Road & Jackson Road	Two-way stop	A	1.8	Two-way stop	A	1.8	Yes	Two-way stop	A	1.9	Two-way stop	A	0.8	No
	Northbound Through - Left Turn		*D*	*27.6*		*F*	*50.0*			*D*	*34.0*		*E*	*48.9*	
	Northbound Right Turn		*B*	*11.8*		*C*	*18.0*			*C*	*15.0*		*C*	*15.3*	
	Southbound		*C*	*18.3*		*D*	*30.3*			*C*	*24.9*		*D*	*32.7*	
	Eastbound Left Turn		*A*	*8.9*		*A*	*9.3*			*A*	*8.4*		*A*	*9.3*	
	Westbound Left Turn		*A*	*8.3*		*A*	*9.4*			*A*	*9.3*		*A*	*9.3*	
30	Mayhew Road & Fruitridge Road	Two-way stop	A	6.2	Two-way stop	A	7.1	No	Two-way stop	A	5.1	Two-way stop	A	6.6	No
	Northbound Left Turn		*A*	*0.0*		*A*	*0.0*			*A*	*7.4*		*A*	*7.3*	
	Eastbound		*A*	*9.2*		*A*	*9.2*			*A*	*9.2*		*A*	*8.8*	
31	Mayhew Road & Elder Creek Road	Two-way stop	A	0.2	Two-way stop	A	0.1	No	Two-way stop	A	0.3	Two-way stop	A	0.2	No
	Northbound		*B*	*11.9*		*B*	*14.3*			*B*	*10.9*		B	13.1	
	Southbound		*B*	*11.1*		*B*	*13.1*			*A*	*9.8*		*B*	*11.3*	
	Eastbound Left Turn		*A*	*8.3*		*A*	*9.0*			*A*	*7.6*		*A*	*8.0*	
	Westbound Left Turn		*A*	*7.5*		*A*	*7.7*			*A*	*0.0*		*A*	*0.0*	
32	Woodring Drive & Zinfandel Drive	Two-way stop	A	5.9	Two-way stop	A	8.7	No	Two-way stop	A	3.0	Two-way stop	A	4.3	No
	Eastbound		*A*	*9.3*		*B*	*12.9*			*A*	*9.3*		*B*	*11.9*	
	Northbound Left Turn		*A*	*0.0*		*A*	*0.0*			*A*	*0.0*		*A*	*0.0*	
33	Bradshaw Road & Folsom Blvd.	Signal	E	56.7	Signal	C	22.5	No	Signal	D	49.9	Signal	B	19.8	No
34	Bradshaw Road & US 50 WB Ramps	Signal	B	15.9	Signal	A	5.6	No	Signal	B	15.2	Signal	A	6.0	No
35	Bradshaw Road & US 50 EB Ramps	Signal	C	24.4	Signal	B	12.8	No	Signal	B	16.0	Signal	B	10.2	No
36	Bradshaw Road & Old Placerville Road	Signal	D	45.9	Signal	C	33.1	No	Signal	D	52.0	Signal	C	34.2	No
37	Bradshaw Road & Kiefer Boulevard	Signal	D	45.7	Signal	C	20.8	No	Signal	E	66.2	Signal	E	69.5	No

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Table 8.6

Existing Plus Jackson Township Project (Proposed Project) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus Jackson Township Project			LOS Impact	Existing			Existing Plus Jackson Township Project			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
38	Bradshaw Road & Jackson Road	Signal	E	73.1	Signal	F	158.7	Yes	Signal	E	59.4	Signal	E	77.3	No
39	Bradshaw Road & Elder Creek Road	Signal	D	36.8	Signal	E	55.2	No	Signal	D	36.1	Signal	D	41.7	No
40	Bradshaw Road & Florin Road	Signal	D	38.1	Signal	D	38.8	No	Signal	D	53.6	Signal	D	43.6	No
41	Bradshaw Road & Gerber Road	Signal	E	72.2	Signal	E	66.7	No	Signal	D	49.9	Signal	C	31.2	No
42	Happy Lane & Old Placerville Road	Two-way stop	A	7.3	Two-way stop	B	11.8	Yes	Two-way stop	A	4.7	Two-way stop	B	12.8	Yes
	Northbound Left Turn		*F*	*64.8*		*F*	*215.4*			*F*	*95.9*		*F*	*>300*	
	Northbound Right Turn		*D*	*30.6*		*D*	*31.3*			*C*	*15.4*		*C*	*19.9*	
	Westbound Left Turn		*B*	*10.2*		*B*	*10.6*			*B*	*10.1*		*B*	*10.7*	
44	Excelsior Road & Kiefer Boulevard	West Jackson/Jackson Township Project Int.			Signal	B	18.5	No	West Jackson/Jackson Township Project Int.			Signal	B	10.4	No
45	Excelsior Road & Jackson Road	Signal	D	36.7	Signal	F	171.2	Yes	Signal	D	40.3	Signal	F	134.9	Yes
46	Excelsior Road & Elder Creek Road	Two-way stop	A	3.5	Two-way stop	F	62.0	Yes	Two-way stop	A	2.7	Two-way stop	F	101.5	Yes
	Northbound Left Turn		*A*	*7.5*		*A*	*8.1*			*A*	*8.0*		*A*	*8.8*	
	Eastbound		*C*	*18.6*		*F*	*>300*			*B*	*12.3*		*F*	*>300*	
47	Excelsior Road & Florin Road	All-way stop	C	24.9	All-way stop	F	173.9	Yes	All-way stop	B	12.5	All-way stop	F	72.7	Yes
48	Excelsior Road & Gerber Road/Birch Ranch Drive	All-way stop	B	14.0	All-way stop	E	44.1	No	All-way stop	B	10.6	All-way stop	C	19.7	No
49	Mather Field Road & US 50 WB Ramps	Signal	C	24.7	Signal	A	8.7	No	Signal	A	9.4	Signal	A	5.2	No
50	Mather Field Road & US 50 EB Ramps	Signal	C	27.7	Signal	B	16.4	No	Signal	B	13.4	Signal	A	7.0	No
51	Mather Field Road & Rockingham Drive	Signal	E	56.4	Signal	D	41.6	No	Signal	D	54.7	Signal	D	39.7	No

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 8.6

Existing Plus Jackson Township Project (Proposed Project) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus Jackson Township Project			LOS Impact	Existing			Existing Plus Jackson Township Project			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
52	Mather Boulevard & Douglas Road	All-way stop	E	39.3	All-way stop	F	80.1	Yes	All-way stop	C	15.5	All-way stop	C	17.0	No
53	Zinfandel Drive & US 50 WB Ramps	Signal	B	16.4	Signal	A	8.6	No	Signal	D	51.7	Signal	D	35.3	No
54	Zinfandel Drive & US 50 EB Ramps/Gold Center Drive	Signal	D	40.0	Signal	D	45.2	No	Signal	E	60.1	Signal	E	61.4	No
55	Zinfandel Drive & White Rock Road	Signal	D	47.7	Signal	C	23.5	No	Signal	D	54.7	Signal	D	39.7	No
56	Zinfandel Drive & Data Drive	Signal	D	49.3	Signal	B	15.6	No	Signal	D	52.9	Signal	C	20.0	No
57	Zinfandel Drive & International Dr	Signal	C	34.0	Signal	B	18.9	No	Signal	D	48.5	Signal	C	20.9	No
58	Zinfandel Drive & Douglas Road	Signal	E	55.5	Signal	C	28.2	No	Signal	D	54.2	Signal	B	17.6	No
60	Eagles Nest Road & Jackson Road	Two-way stop	A	2.3	Two-way stop	F	83.6	Yes	Two-way stop	A	3.6	Two-way stop	C	23.3	Yes
	Northbound		*C*	*22.0*		*F*	*>300*			*C*	*23.8*		*F*	*271.8*	
	Southbound		*B*	*13.9*		*C*	*15.7*			*C*	*22.0*		*E*	*41.0*	
	Eastbound Left Turn		*A*	*8.8*		*B*	*10.3*			*A*	*7.9*		*A*	*8.0*	
	Westbound Left Turn		*A*	*7.9*		*A*	*8.1*			*A*	*8.7*		*A*	*8.9*	
61	Eagles Nest Road & Florin Road	Two-way stop	A	2.3	Two-way stop	A	5.6	No	Two-way stop	A	2.6	Two-way stop	A	4.8	No
	Northbound		*B*	*12.7*		*C*	*15.3*			*B*	*12.1*		*B*	*13.2*	
	Southbound		*B*	*10.0*		*B*	*13.3*			*B*	*10.5*		*B*	*12.6*	
	Eastbound Left Turn		*A*	*7.7*		*A*	*7.8*			*A*	*7.7*		*A*	*7.8*	
	Westbound Left Turn		*A*	*0.0*		*A*	*0.0*			*A*	*7.6*		*A*	*7.6*	
62	Sunrise Boulevard & US 50 WB Ramps	Signal	D	44.7	Signal	C	30.8	No	Signal	B	19.7	Signal	A	9.1	No
63	Sunrise Boulevard & US 50 EB Ramps	Signal	B	16.9	Signal	A	9.4	No	Signal	B	17.6	Signal	A	9.8	No

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 8.6

Existing Plus Jackson Township Project (Proposed Project) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus Jackson Township Project			LOS Impact	Existing			Existing Plus Jackson Township Project			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
64	Sunrise Boulevard & Folsom Boulevard	Signal	D	54.4	Signal	C	26.7	No	Signal	D	48.6	Signal	C	33.9	No
65	Sunrise Boulevard & White Rock Road	Signal	D	47.8	Signal	C	31.4	No	Signal	D	51.6	Signal	D	35.8	No
66	Sunrise Boulevard & International Drive/Monier Circle	Signal	D	47.8	Signal	B	16.6	No	Signal	D	45.8	Signal	C	20.4	No
67	Sunrise Boulevard & Douglas Road	Signal	D	51.7	Signal	C	27.2	No	Signal	D	46.5	Signal	C	22.1	No
68	Sunrise Boulevard & Chrysanthy Boulevard	Signal	C	27.0	Signal	C	23.8	No	Signal	C	21.0	Signal	A	7.9	No
69	Sunrise Boulevard & Kiefer Boulevard	Signal	D	53.6	Signal	C	27.9	No	Signal	C	27.0	Signal	B	13.2	No
70	Sunrise Boulevard & Jackson Road	Signal	E	57.0	Signal	D	52.3	No	Signal	D	47.2	Signal	C	31.7	No
71	Sunrise Boulevard & Florin Road	Signal	B	11.3	Signal	A	8.8	No	Signal	D	48.3	Signal	B	18.2	No
72	Sheldon Lake Drive/Sunrise Boulevard & Grant Line Road	Signal	D	43.2	Signal	B	19.6	No	Signal	D	40.7	Signal	E	66.4	No
73	Hazel Avenue & Tributary Point Drive/US 50 WB Off-ramp	Signal	C	31.2	Signal	C	25.7	No	Signal	D	41.4	Signal	B	16.6	No
74	Hazel Avenue & US 50 EB Ramps	Signal	C	20.6	Signal	A	8.3	No	Signal	C	29.9	Signal	A	5.4	No
75	Hazel Avenue & Folsom Boulevard	Signal	D	51.7	Signal	C	22.9	No	Signal	D	46.7	Signal	D	45.0	No
76	Prairie City Road & White Rock Road	Signal	B	19.2	Signal	B	12.3	No	Signal	B	15.0	Signal	B	10.0	No
77	Grant Line Road & White Rock Road	Signal	B	10.9	Signal	A	7.3	No	Signal	B	11.2	Signal	A	7.4	No
78	Grant Line Road & Douglas Road	All-way stop	C	15.2	Signal	B	11.0	No	All-way stop	B	12.3	Signal	A	8.7	No

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 8.6

Existing Plus Jackson Township Project (Proposed Project) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus Jackson Township Project			LOS Impact	Existing			Existing Plus Jackson Township Project			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
79	Grant Line Road & Kiefer Boulevard	All-way stop	B	11.4	All-way stop	B	12.8	No	All-way stop	B	10.5	All-way stop	B	12.0	No
80	Grant Line Road & Jackson Road	Signal	E	74.0	Signal	F	80.8	Yes	Signal	E	78.9	Signal	E	68.2	No
81	Watt Avenue & US-50 EB Ramps	Signal	B	13.0	Signal	B	12.7	No	Signal	B	14.9	Signal	B	13.8	No
82	Watt Avenue & US-50 WB Ramps	Signal	C	32.9	Signal	C	32.4	No	Signal	C	28.6	Signal	C	29.4	No
83	Mayhew Rd & Folsom Blvd.	Signal	B	19.8	Signal	B	12.1	No	Signal	C	20.1	Signal	B	13.2	No
84	65th Street Expy & Fruitridge Road	Signal	C	31.2	Signal	C	27.6	No	Signal	D	35.3	Signal	C	28.0	No
85	Power Inn Road & Elder Creek Road	Signal	D	35.2	Signal	C	28.2	No	Signal	D	36.3	Signal	D	35.6	No
86	Power Inn Road & Florin Rd	Signal	D	36.3	Signal	D	38.0	No	Signal	D	45.9	Signal	D	44.5	No
87	Florin Perkins Road & Florin Rd	Signal	D	36.7	Signal	C	34.5	No	Signal	C	32.5	Signal	C	29.0	No
88	Bradshaw Rd & Calvine Rd	Signal	C	30.5	Signal	C	24.3	No	Signal	D	36.9	Signal	C	27.9	No
89	Vineyard Rd & Calvine Rd	Signal	C	30.8	Signal	B	17.5	No	Signal	C	34.9	Signal	B	17.8	No
90	Excelsior Road & Calvine Rd	All-way stop	C	16.6	All-way stop	E	43.9	Yes	All-way stop	B	13.0	All-way stop	C	20.3	No
91	Grant Line Rd & Eagles Nest Rd/Sloughhouse Rd	Signal	D	51.7	Signal	B	14.5	No	Signal	D	46.5	Signal	C	24.4	No
92	Grant Line Rd & Calvine Rd	Signal	C	21.4	Signal	B	16.9	No	Signal	C	24.0	Signal	B	16.5	No
93	Grant Line Rd & Dwy/Wilton Rd	Signal	E	65.9	Signal	E	67.4	No	Signal	E	64.8	Signal	D	50.9	No

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 8.6

Existing Plus Jackson Township Project (Proposed Project) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus Jackson Township Project			LOS Impact	Existing			Existing Plus Jackson Township Project			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
94	Grant Line Rd & Bond Rd/Wrangler Dr	Signal	C	33.3	Signal	B	12.8	No	Signal	D	46.4	Signal	B	15.7	No
200	Excelsior Road & Collector WJ-1/Collector JT-1	West Jackson/Jackson Township Project Int.			Signal	B	12.4	No	West Jackson/Jackson Township Project Int.			Signal	B	11.8	No
201	Excelsior Road & Collector WJ-2/Collector JT-2	West Jackson/Jackson Township Project Int.			Signal	B	11.0	No	West Jackson/Jackson Township Project Int.			Signal	A	7.8	No
400	Collector JT-3 & Jackson Road	Jackson Township Project Int.			Signal	B	19.0	No	Jackson Township Project Int.			Signal	B	15.9	No
401	Tree View Lane & Jackson Road	Jackson Township Project Int.			Signal	B	11.4	No	Jackson Township Project Int.			Signal	B	10.3	No
402	Collector JT-4 & Jackson Road	Jackson Township Project Int.			Signal	A	6.1	No	Jackson Township Project Int.			Signal	B	10.3	No
403	Tree View Lane & Collector JT-5	Jackson Township Project Int.			Signal	B	13.5	No	Jackson Township Project Int.			Signal	B	12.8	No
404	Tree View Lane & Collector JT-6	Jackson Township Project Int.			Signal	A	3.9	No	Jackson Township Project Int.			Signal	A	5.1	No
405	Tree View Lane & Collector JT-1	Jackson Township Project Int.			Signal	B	17.0	No	Jackson Township Project Int.			Signal	B	14.6	No
406	Tree View Lane & Kiefer Boulevard	Jackson Township Project Int.			Signal	A	6.4	No	Jackson Township Project Int.			Signal	A	6.5	No

Note: Gray shading represents changes in traffic control that the project is responsible to provide.

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 8.7

Existing and Existing Plus Jackson Township Project (Proposed Project) Intersection Geometrics

	Intersection	Traffic Control		Existing Lane Geometrics				Existing Plus Jackson Township Project Lane Geometrics			
		Existing	Existing Plus Project	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach
1	Howe Avenue & College Town Drive/US 50 WB Ramps	Signal	Signal	↑↑↑ r	↲↓↓↓↓	↰ rr	↰↰↰ ↱r	↑↑↑ r	↲↓↓↓↓	↰ rr	↰↰↰ ↱r
2	Howe Avenue & US 50 EB Ramps	Signal	Signal	↑↑↑ r	↲↓↓↓	↰↰rr		↑↑↑ r	↲↓↓↓	↰↰rr	
3	Power Inn Road/Howe Avenue & Folsom Blvd	Signal	Signal	↰↰↑↑↑ r	↲↓↓↓↰↰	↰↰↑ ↱	↰↰↑↑ rr	↰↰↑↑↑ r	↲↓↓↓↰↰	↰↰↑ ↱	↰↰↑↑ rr
4	Power Inn Road & 14th Avenue	Signal	Signal	↰↰↑↑ ↱	↲↓↓↰	↰↰ r	↟	↰↰↑↑ ↱	↲↓↓↰	↰↰ r	↟
5	Power Inn Road & Fruitridge Road	Signal	Signal	↰↰↑↱	↲↓↓↰↰	↰↑ ↱	↰↑↑ r	↰↰↑↱	↲↓↓↰↰	↰↑ ↱	↰↑↑ r
6	Jackson Road/Notre Dame Dr. & Folsom Blvd.	Signal	Signal	↰↰ r	↲↱	↰↑↑ r	↰↑↑ r	↰↰ r	↲↱	↰↑↑ r	↰↑↑ r
7	Florin Perkins Road/Julliard Dr. & Folsom Boulevard	Signal	Signal	↰↰ r	↲↱	↰↑↑ r	↰↑ ↱	↰↰ r	↲↱	↰↑↑ r	↰↑ ↱
8	Florin Perkins Road & Kiefer Blvd.	Two-way stop	Two-way stop	↑↱	↓↓↰		↰r	↑↱	↓↓↰		↰r
9	Florin Perkins Road & Jackson Road	Signal	Signal	↰↑↑ r	↲↓↰	↰↑ rr	↰↑ ↱	↰↑↑ r	↲↓↰	↰↑ rr	↰↑ ↱
10	Florin Perkins Road & Fruitridge Road	Signal	Signal	↰↑↑ r	↲↓↓↰	↰↑↑ r	↰↑ ↱	↰↑↑ r	↲↓↓↰	↰↑↑ r	↰↑ ↱
11	Florin Perkins Road & Elder Creek Road	Signal	Signal	↰↑↑ r	↲↓↓↰	↰↑↑ r	↰↑↑ r	↰↑↑ r	↲↓↓↰	↰↑↑ r	↰↑↑ r
12	Watt Avenue & Folsom Blvd.	Signal	Signal	↰↰↑↑↑ r	↲↓↓↓↰↰	↰↰↑↑ r	↰↰↑↑ r	↰↰↑↑↑ r	↲↓↓↓↰↰	↰↰↑↑ r	↰↰↑↑ r
13	S. Watt Ave. & Reith Ct/Manlove Road	Signal	Signal	↰↑↑↑ r	↲↓↓↰	↟	↰↱r	↰↑↑↑ r	↲↓↓↰	↟	↰↱r
14	S. Watt Avenue & Kiefer Blvd.	Signal	Signal	↰↰↑↑ ↱	↲↓↓↰↰	↰↰↑↑ r	↰↰↑↑ r	↰↰↑↑ ↱	↲↓↓↰↰	↰↰↑↑ r	↰↰↑↑ r
15	S. Watt Avenue & Canberra Dr.	Signal	Signal	↑↑ ↱	↓↓↰		↰r	↑↑ ↱	↓↓↰		↰r
16	S. Watt Avenue & Jackson Road	Signal	Signal	↰↑↑ r	↲↓↓↰	↰↱	↰↑ r	↰↑↑ r	↲↓↓↰	↰↱	↰↑ r
17	S. Watt Avenue & Fruitridge Road	Signal	Signal	↰↑↱	↲↓↓↰	↰↑ r	↰↱	↰↑↱	↲↓↓↰	↰↑ r	↰↱
18	S. Watt Avenue & Elder Creek Road	Signal	Signal	↰↑r	↲↓↰	↰ r	↰↑ r	↰↑r	↲↓↰	↰ r	↰↑ r
20	Elk Grove Florin Road/S. Watt Ave. & Florin Road	Signal	Signal	↰↑↱	↲↓↰	↰↑ ↱	↰↑↑ r	↰↑↱	↲↓↰	↰↑ ↱	↰↑↑ r
21	Elk Grove Florin Road & Gerber Road	Signal	Signal	↰↰↑↱	↲↓↓↰↰	↰↰↑↑ r	↰↰↑↑ r	↰↰↑↱	↲↓↓↰↰	↰↰↑↑ r	↰↰↑↑ r
23	Hedge Avenue & Jackson Road	Signal	Signal	↰↱	↲↰	↰↑ r	↰↑ r	↰↱	↲↰	↰↑ r	↰↑ r
24	Hedge Avenue & Fruitridge Road	All-way stop	All-way stop	↟	↟	↟	↟	↟	↟	↟	↟
25	Hedge Avenue & Elder Creek Road	All-way stop	All-way stop	↟	↟	↟	↟	↟	↟	↟	↟
26	Hedge Avenue & Tokay Lane	Two-way stop	Two-way stop	↟	↟	↟	↟	↟	↟	↟	↟
27	Hedge Avenue & Florin Road	All-way stop	All-way stop	↟	↟	↟	↟	↟	↟	↟	↟
28	Mayhew Road & Kiefer Boulevard	Signal	Signal	↰↑r	↲↓↰	↰↑ ↱	↰↑ ↱	↰↑r	↲↓↰	↰↑ ↱	↰↑ ↱
29	Mayhew Road & Jackson Road	Two-way stop	Two-way stop	↰ r	↟	↰↑ r	↰↱	↰ r	↟	↰↑ r	↰↱
30	Mayhew Road & Fruitridge Road	Two-way stop	Two-way stop	↰	↰	↱		↰	↰	↱	

Note: Gray shading represents changes in traffic control or approach lanes that the project is responsible to provide.

Table 8.7

Existing and Existing Plus Jackson Township Project (Proposed Project) Intersection Geometrics

	Intersection	Traffic Control		Existing Lane Geometrics				Existing Plus Jackson Township Project Lane Geometrics			
		Existing	Existing Plus Project	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach
31	Mayhew Road & Elder Creek Road	Two-way stop	Two-way stop								
32	Zinfandel Drive & Woodring Drive	Two-way stop	Two-way stop								
33	Bradshaw Road & Folsom Blvd.	Signal	Signal								
34	Bradshaw Road & US 50 WB Ramps	Signal	Signal								
35	Bradshaw Road & US 50 EB Ramps	Signal	Signal								
36	Bradshaw Road & Old Placerville Road	Signal	Signal								
37	Bradshaw Road & Kiefer Boulevard	Signal	Signal								
38	Bradshaw Road & Jackson Road	Signal	Signal								
39	Bradshaw Road & Elder Creek Road	Signal	Signal								
40	Bradshaw Road & Florin Road	Signal	Signal								
41	Bradshaw Road & Gerber Road	Signal	Signal								
42	Happy Lane & Old Placerville Road	Two-way stop	Two-way stop								
44	Excelsior Road & Kiefer Boulevard		Signal								
45	Excelsior Road & Jackson Road	Signal	Signal								
46	Excelsior Road & Elder Creek Road	Two-way stop	Two-way stop								
47	Excelsior Road & Florin Road	All-way stop	All-way stop								
48	Excelsior Road & Gerber Road/Birch Ranch Drive	All-way stop	All-way stop								
49	Mather Field Road & US 50 WB Ramps	Signal	Signal								
50	Mather Field Road & US 50 EB Ramps	Signal	Signal								
51	Mather Field Road & Rockingham Drive	Signal	Signal								
52	Mather Boulevard & Douglas Road	All-way stop	All-way stop								
53	Zinfandel Drive & US 50 WB Ramps	Signal	Signal								
54	Zinfandel Drive & US 50 EB Ramps/Gold Center Drive	Signal	Signal								
55	Zinfandel Drive & White Rock Road	Signal	Signal								
56	Zinfandel Drive & Data Drive	Signal	Signal								
57	Zinfandel Drive & International Dr	Signal	Signal								
58	Zinfandel Drive & Douglas Road	Signal	Signal								
59	Eagles Nest Road/Zinfandel Drive & Kiefer Boulevard										

Note: Gray shading represents changes in traffic control or approach lanes that the project is responsible to provide.

Table 8.7

Existing and Existing Plus Jackson Township Project (Proposed Project) Intersection Geometrics

	Intersection	Traffic Control		Existing Lane Geometrics				Existing Plus Jackson Township Project Lane Geometrics			
		Existing	Existing Plus Project	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach
60	Eagles Nest Road & Jackson Road	Two-way stop	Two-way stop								
61	Eagles Nest Road & Florin Road	Two-way stop	Two-way stop								
62	Sunrise Boulevard & US 50 WB Ramps	Signal	Signal								
63	Sunrise Boulevard & US 50 EB Ramps	Signal	Signal								
64	Sunrise Boulevard & Folsom Boulevard	Signal	Signal								
65	Sunrise Boulevard & White Rock Road	Signal	Signal								
66	Sunrise Boulevard & International Drive/Monier Circle	Signal	Signal								
67	Sunrise Boulevard & Douglas Road	Signal	Signal								
68	Sunrise Boulevard & Chrysanthy Boulevard	Signal	Signal								
69	Sunrise Boulevard & Kiefer Boulevard	Signal	Signal								
70	Sunrise Boulevard & Jackson Road	Signal	Signal								
71	Sunrise Boulevard & Florin Road	Signal	Signal								
72	Sheldon Lake Drive/Sunrise Boulevard & Grant Line Road	Signal	Signal								
73	Hazel Avenue & Tributary Point Drive/US 50 WB Off-ramp	Signal	Signal								
74	Hazel Avenue & US 50 EB Ramps	Signal	Signal								
75	Hazel Avenue & Folsom Boulevard	Signal	Signal								
76	Prairie City Road & White Rock Road	Signal	Signal								
77	Grant Line Road & White Rock Road	Signal	Signal								
78	Grant Line Road & Douglas Road	All-way stop	Signal[1]								
79	Grant Line Road & Kiefer Boulevard	All-way stop	All-way stop								
80	Grant Line Road & Jackson Road	Signal	Signal								
81	Watt Avenue & US-50 EB Ramps	Signal	Signal								
82	Watt Avenue & US-50 WB Ramps	Signal	Signal								
83	Mayhew Rd & Folsom Blvd.	Signal	Signal								
84	65th Street Expy & Fruitridge Road	Signal	Signal								
85	Power Inn Road & Elder Creek Road	Signal	Signal								
86	Power Inn Road & Florin Rd	Signal	Signal								
87	Florin Perkins Road & Florin Rd	Signal	Signal								

Note: Gray shading represents changes in traffic control or approach lanes that the project is responsible to provide.

Table 8.7

Existing and Existing Plus Jackson Township Project (Proposed Project) Intersection Geometrics

Intersection		Traffic Control		Existing Lane Geometrics				Existing Plus Jackson Township Project Lane Geometrics			
		Existing	Existing Plus Project	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach
88	Bradshaw Rd & Calvine Rd	Signal	Signal								
89	Vineyard Rd & Calvine Rd	Signal	Signal								
90	Excelsior Road & Calvine Rd	All-way stop	All-way stop								
91	Grant Line Rd & Eagles Nest Rd/Sloughhouse Rd	Signal	Signal								
92	Grant Line Rd & Calvine Rd	Signal	Signal								
93	Grant Line Rd & Dwy/Wilton Rd	Signal	Signal								
94	Grant Line Rd & Bond Rd/Wrangler Dr	Signal	Signal								
200	Excelsior Road & Collector WJ-1/Collector JT-1		Signal								
201	Excelsior Road & Collector WJ-2/Collector JT-2		Signal								
400	Collector JT-3 & Jackson Road		Signal								
401	Tree View Lane & Jackson Road		Signal								
402	Collector JT-4 & Jackson Road		Signal								
403	Tree View Lane & Collector JT-5		Signal								
404	Tree View Lane & Collector JT-6		Signal								
405	Tree View Lane & Collector JT-1		Signal								
406	Tree View Lane & Kiefer Boulevard		Signal								
407	HS/MS Dwy & Kiefer Boulevard		Signal								

Note: Gray shading represents changes in traffic control or approach lanes that the project is responsible to provide.

8.4.3 Existing Plus Jackson Township Project U.S. 50 Freeway Impacts

8.4.3.1 Freeway Basic Segments

Table 8.8 summarizes a.m. and p.m. peak hour US 50 freeway mainline operations. Details of the analysis are included in the technical appendix. No locations exhibit significant impacts, based on Caltrans' threshold of significance (5% V/C increase).

8.4.3.2 Freeway Merge / Diverge / Weave Segments

Table 8.9 summarizes a.m. and p.m. peak hour freeway operations at ramp junctions and weaving areas. Details of the analysis are included in the technical appendix. The following locations exhibit significant impacts:

- Westbound
    - Watt Avenue to Howe Avenue weave - p.m. peak hour

8.4.3.3 Freeway Ramp Intersection Queuing

Table 8.10 summarizes a.m. and p.m. peak hour freeway ramp intersection queuing. No locations exhibit a significant impact.

8.4.4 Existing Plus Jackson Township Project Pedestrian and Bicycle Facility Impacts

The Jackson Township project would not remove any existing or planned pedestrian facility. The Jackson Township project would not remove any existing bicycle facility, but would modify facilities that are planned in the Bikeway Master Plan. The Jackson Township project would add pedestrian and bicycle demands within the Jackson Township project site and to and from nearby land uses. As illustrated in Figure 8.2, the Jackson Township project has proposed changes to the Bikeway Master Plan. Because the Jackson Township project would add demand for pedestrian and bicycle facilities that may not be available in the site vicinity, the impact of the Jackson Township project on pedestrian and bicycle circulation is potentially significant.

Table 8.8: Existing Plus Jackson Township (Proposed Project) Project Peak Hour Freeway Basic Segment Level of Service									
Direc-tion	**Location**	**Existing**				**Existing Plus Jackson Township Project**			
		AM Peak Hour		**PM Peak Hour**		**AM Peak Hour**		**PM Peak Hour**	
		Volume	**LOS**	**Volume**	**LOS**	**Volume**	**LOS**	**Volume**	**LOS**
East-bound US 50	SR 99 / SR 51 to Stockton Boulevard	7,068	C	6,415	C	7,137	C	6,501	C
	Stockton Boulevard to 59th Street	7,470	**F**	7,228	**F**	7,553	**F**	7,307	**F**
	59th Street to 65th Street	6,767	D	6,641	D	6,851	D	6,711	D
	65th Street to Howe Avenue	7,962	D	7,562	D	8,042	D	7,632	D
	Howe Avenue to Watt Avenue	7,405	D	7,602	D	7,434	D	7,718	D
	Watt Avenue to Bradshaw Road	7,935	D	7,176	C	7,954	D	7,284	C
	Bradshaw Rd to Mather Field Rd	7,725	**F**	7,366	C	7,690	**F**	7,378	C
	Mather Field Rd to Zinfandel Drive	7,275	C	7,224	C	7,258	C	7,238	C
	Zinfandel Drive to Sunrise Blvd	5,121	C	6,649	**F**	5,205	C	6,681	**F**
	Sunrise Boulevard to Hazel Avenue	4,985	C	5,323	**F**	5,054	C	5,341	**F**
West-bound US 50	Hazel Avenue to Sunrise Boulevard	6,068	D	4,370	C	6,114	D	4,411	C
	Sunrise Blvd to Zinfandel Drive	7,502	D	4,762	C	7,521	D	4,823	C
	Zinfandel Drive to Mather Field Rd	7,548	C	5,765	B	7,572	C	5,728	B
	Mather Field Rd to Bradshaw Road	7,859	**F**	6,939	D	7,870	**F**	6,877	D
	Bradshaw Road to Watt Avenue	7,550	**F**	6,466	D	7,564	**F**	6,554	D
	Watt Avenue to Howe Avenue	7,376	**F**	5,106	**F**	7,343	**F**	5,177	**F**
	Howe Avenue to 65th Street	8,157	**F**	7,407	**F**	8,186	**F**	7,470	**F**
	65th Street to 59th Street	8,278	**F**	7,358	**F**	8,304	**F**	7,426	**F**
	59th Street to Stockton Boulevard	9,115	D	7,945	**F**	9,154	D	8,017	**F**
	Stockton Boulevard to SR 99 / SR 51	8,546	D	8,136	**F**	8,573	D	8,186	**F**

Bold values denote level of service "F" conditions. **Red shaded** values indicate project impacts.

Source: *DKS Associates, 2018.*

Table 8.9: Existing Plus Jackson Township (Proposed Project) Project Peak Hour Freeway Merge/Diverge/Weave Segment Level of Service

Direc-tion	Location	Junction Type	Existing				Existing Plus Jackson Township Project			
			A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
			Ramp Volume	LOS	Ramp Volume	LOS	Ramp Volume	LOS	Ramp Volume	LOS
East-bound US 50	Northbound 65th Street Slip Entrance	Weave	765	D	653	C	771	D	637	C
	Howe Avenue / Hornet Drive Exit		1,631		1,417		1,684		1,353	
	Southbound Howe Avenue Loop Entrance	One-Lane Merge	484	C	881	C	485	C	853	C
	Northbound Howe Avenue Slip Entrance	One-Lane Merge	419	C	431	C	435	C	426	C
	Watt Avenue Exit	Two-Lane Diverge	1,317	B	1,634	B	1,330	B	1,629	B
	Watt Avenue Entrance	One-Lane Merge	2,134	**F**	1,724	D	2,134	**F**	1,721	D
	Bradshaw Road Exit	Two-Lane Diverge	1,520	B	1,228	B	1,538	B	1,294	B
	Southbound Bradshaw Road Loop Entrance	One-Lane Merge	220	C	422	C	228	C	397	C
	Northbound Bradshaw Road Slip Entrance	One-Lane Merge	971	C	918	C	921	C	920	C
	Mather Field Road Exit	Two-Lane Diverge	1,266	B	1,062	A	1,266	B	1,092	A
	Southbound Mather Field Road Loop Entrance	One-Lane Merge	125	C	101	B	133	C	100	B

	Northbound Mather Field Road Slip Entrance	Weave	317	**F**	816	C	325	**F**	841	C
	Zinfandel Drive Exit		2,932		1,452		2,938		1,472	
	Southbound Zinfandel Drive Loop Entrance	One-Lane Merge	182	B	129	C	177	B	128	C
	Northbound Zinfandel Drive Slip Entrance	One-Lane Merge	348	B	540	C	471	B	574	C
	Sunrise Boulevard Exit	Major Diverge	1,773	C	1,959	D	1,799	C	1,975	D
	Sunrise Boulevard Entrance	One-Lane Merge	992	C	889	D	1,002	C	892	D
	Hazel Avenue Exit	Two-Lane Diverge	933	B	1,541	C	961	B	1,544	C
	Hazel Avenue Entrance	Weave	804	C	945	C	799	C	947	C
	Aerojet Road Exit		241		55		241		51	
West-bound US 50	Hazel Avenue Exit	Two-Lane Diverge	631	A	869	A	653	A	874	A
	Northbound Hazel Avenue Loop Entrance	One-Lane Merge	160	B	600	B	164	B	601	B
	Southbound Hazel Avenue Slip Entrance	One-Lane Merge	1,550	B	800	B	1,574	B	820	B
	Sunrise Boulevard Exit	One-Lane Diverge	749	E	758	D	745	E	763	D
	Sunrise Blvd Entrance	Lane Addition	2,183	**F**	1,656	D	2,189	**F**	1,672	D
	Zinfandel Drive Exit	One-Lane Diverge	1,034	E	608	C	1,037	E	680	C
	Northbound Zinfandel Drive Loop Entrance	Lane Addition	585	B	1,197	B	606	B	1,173	B
	Southbound Zinfandel Drive Slip Entrance	One-Lane Merge	442	C	561	B	445	C	557	B
	Mather Field Road Exit	One-Lane Drop	1,093	C	556	A	1,119	C	588	A

Northbound Mather Field Road Loop Entrance	One-Lane Merge	515	B	861	B	514	B	895	B
Southbound Mather Field Road Slip Entrance	One-Lane Merge	387	B	380	B	386	B	358	B
Bradshaw Road Exit	Two-Lane Diverge	1,236	B	1,327	B	1,276	B	1,278	B
Northbound Bradshaw Road Loop Entrance	One-Lane Merge	914	D	910	C	967	D	962	C
Southbound Bradshaw Road Slip Entrance	One-Lane Merge	338	D	590	C	333	D	645	C
Watt Avenue Exit	Major Diverge	1,373	D	1,188	C	1,345	D	1,205	C
Northbound Watt Avenue Entrance	One-Lane Merge	820	D	943	C	782	D	938	C
Southbound Watt Avenue Slip Entrance	Lane Addition / Weave	1,232	C	1,317	D	1,195	C	1,322	**F**
Howe Avenue Exit	Major Diverge / Weave	1,531	D	1,419		1,530	D	1,462	
Northbound Howe Avenue Loop Entrance	One-Lane Merge	654	D	602	C	659	D	621	C
Southbound Howe Avenue Slip Entrance	One-Lane Merge	574	C	574	C	572	C	566	C

Bold values denote level of service "F" conditions.
Red shaded values indicate project impacts.
Source: *DKS Associates, 2018.*

Table 8.10: Existing Plus Jackson Township (Proposed Project) Project Peak Hour Freeway Ramp Termini Queuing

Direction	US 50 Exit Ramp	Available Storage Length (feet / lane)			Maximum Queue Length (feet / lane)					
					AM Peak Hour			PM Peak Hour		
		L	T	R	L	T	R	L	T	R
Eastbound US-50	Howe Avenue	765	-	765	89	-	250	119	-	127
	Watt Avenue	1,500	-	1,500	163	-	228	252	-	242
	Bradshaw Road	1,250	-	1,250	87	-	303	75	-	215
	Mather Field Road	1,385	-	1,385	104	-	327	115	-	70
	Zinfandel Drive	1,025	1,025	1,025	196	707	651	443	368	176
	Sunrise Boulevard	1,695	-	1,695	136	-	90	175	-	52
	Hazel Avenue	1,310	-	1,310	163	-	38	130	-	6
Westbound US-50	Hazel Avenue	1,995		1,995	262		44	149		202
	Sunrise Boulevard	1,540	-	1,540	60	-	64	110	-	146
	Zinfandel Drive	1,065	-	1,065	165	-	50	76	-	86
	Mather Field Road	1,335	-	1,335	248	-	184	102	-	48
	Bradshaw Road	1,330	-	1,330	89	-	48	119	-	13
	Watt Avenue	1,480	-	1,480	167	-	524	92	-	430
	Howe Avenue	1,355	1,355	1,355	126	412	87	167	412	187

Red shaded values indicate project impacts.

L = left turn movement, T = through movement, R = right turn movement

Source: *DKS Associates, 2018.*

8.4.5 Existing Plus Jackson Township Project Transit System Impacts

Public transit is not currently provided to the Jackson Township project site. In the preparation of this analysis, a conceptual transit system to serve the Jackson Township project and adjacent future projects was developed (see Section 8.1.2.3). The additional transit service was assumed to be funded by the Jackson Township project. However, the timing and implementation of the transit system are uncertain at this time. The Jackson Township project would increase demands for public transit facilities. Therefore, the impact of the Jackson Township project on the transit system is potentially significant.

8.4.6 Existing Plus Jackson Township Functionality Impacts

Table 8.11 summarizes the results of the rural roadway segment functionality analysis. **Figure 8.6** illustrates the resultant functionality impacts. The table includes the number of lanes assumed with the implementation of the Jackson Township project, which in many cases is greater than the number of lanes in the existing condition. The shaded table cells under the "Travel Lanes" heading illustrates new roadways and widened roadways that are assumed part of the Jackson Township project. The "Substandard?" heading indicates whether or not a roadway meets the County standards of 12-foot lanes and 6-foot shoulders. If the project makes improvements to a roadway segment such as widening, it would be required to reconstruct the entire substandard roadway segment to County standards. The shaded table cells under the "Functionality Impact?" heading indicate those locations with a functionality impact.

As stated above, the traffic analysis assumed that the Jackson Township project would construct a number of travel lanes on roadway segments that are internal to or on the boundary of the Jackson Township project, and the entire roadway segment would be reconstructed to County standards at that time. The timing of implementation of such additional traffic lanes on these internal or boundary roadway segments will affect whether or not impacts would exist at some time prior to full build out of the Jackson Township project.

Table 8.11
Existing Plus Jackson Township Project (Proposed Project) Functionality Impacts

ID	Roadway	Segment		Jurisdiction	Existing Substandard Roadways				Existing + Jackson Township Project (Proposed Project)			
		From	To		Travel Lanes	Pavement (ft)	Substandard? [1]	Existing Volume	Travel Lanes	Substandard? [1]	Forecasted Volume	Functionality Impact? [2]
15	Douglas Rd	Mather Blvd	Zinfandel Dr	County	2	23	Yes	6,635	2	Yes	7,390	Yes
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd	Rancho Cordova/County	2	23	Yes	8,369	2	Yes	9,210	Yes
19	Eagles Nest Rd	Kiefer Blvd	Jackson Rd	County	2	20	Yes	740	2	Yes	1,850	No
20	Eagles Nest Rd	Jackson Rd	Florin Rd	County	2	<21	Yes	517	2	Yes	1,850	No
21	Eagles Nest Rd	Florin Rd	Grant Line Rd	County	2	<21	Yes	189	2	Yes	1,410	No
25	Elder Creek Rd	South Watt Ave	Hedge Ave	County	2	23	Yes	5,576	2	Yes	9,060	Yes
26	Elder Creek Rd	Hedge Ave	Mayhew Rd	County	2	23	Yes	5,797	2	Yes	9,390	Yes
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd	County	2	23	Yes	5,355	2	Yes	9,400	Yes
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd	County	2	23	Yes	2,158	2	Yes	10,340	Yes
30	Excelsior Rd	Kiefer Blvd	Jackson Rd	County	2	22	Yes	3,716	2	Yes	15,060	Yes
31	Excelsior Rd	Jackson Rd	Elder Creek Rd	County	2	<21	Yes	5,075	2	Yes	16,560	Yes
32	Excelsior Rd	Elder Creek Rd	Florin Rd	County	2	<21	Yes	4,203	2	Yes	7,220	Yes
33	Excelsior Rd	Florin Rd	Gerber Rd	County	2	<21	Yes	5,423	2	Yes	7,580	Yes
34	Excelsior Rd	Gerber Rd	Calvine Rd	County	2	<21	Yes	4,229	2	Yes	5,220	No
39	Florin Rd	South Watt Ave	Hedge Ave	County	2	22	Yes	7,718	2	Yes	9,910	Yes
40	Florin Rd	Hedge Ave	Mayhew Rd	County	2	22	Yes	6,312	2	Yes	9,010	Yes
41	Florin Rd	Mayhew Rd	Bradshaw Rd	County	2	22	Yes	6,317	2	Yes	9,080	Yes
42	Florin Rd	Bradshaw Rd	Excelsior Rd	County	2	22	Yes	3,478	2	Yes	5,910	No
43	Florin Rd	Excelsior Rd	Sunrise Blvd	County	2	22	Yes	3,835	2	Yes	4,690	No
48	Fruitridge Rd	South Watt Ave	Hedge Ave	City of Sacramento/ County	2	22	Yes	2,890	2	Yes	2,940	No
49	Fruitridge Rd	Hedge Ave	Mayhew Rd	County	2	22	Yes	1,790	2	Yes	1,440	No
50	Grant Line Rd	White Rock Rd	Douglas Rd	Rancho Cordova/County	2	22	Yes	7,189	2	Yes	8,310	Yes
58	Happy Ln	Old Placerville Rd	Kiefer Blvd	County	2	22	Yes	4,635	2	Yes	6,700	Yes
59	Hedge Ave	Jackson Rd	Fruitridge Rd	County	2	22	Yes	3,061	2	Yes	2,640	No
60	Hedge Ave	Fruitridge Rd	Elder Creek Rd	City of Sacramento/County	2	22	Yes	3,737	2	Yes	3,960	No
61	Hedge Ave	Elder Creek Rd	Florin Rd	County	2	22	Yes	2,722	2	Yes	3,010	No
70	Jackson Rd	Bradshaw Rd	Excelsior Rd	County	2	26	Yes	13,030	2	Yes	26,090	Yes
71	Jackson Rd	Excelsior Rd	Eagles Nest Rd	County	2	26	Yes	10,478	4	No	32,180	Yes[3]

Red text with light gray shading indicate project impacts.

Table 8.11
Existing Plus Jackson Township Project (Proposed Project) Functionality Impacts

ID	Roadway	Segment		Jurisdiction	Existing Substandard Roadways				Existing + Jackson Township Project (Proposed Project)			
		From	To		Travel Lanes	Pavement (ft)	Substandard? [1]	Existing Volume	Travel Lanes	Substandard? [1]	Forecasted Volume	Functionality Impact? [2]
74	Kiefer Blvd	Florin Perkins Rd	South Watt Ave	City of Sacramento/County	2	22	Yes	4,616	2	Yes	4,860	No
77	Kiefer Blvd	Bradshaw Rd	Happy Ln	County	2	22	Yes	4,618	2	Yes	5,620	No
78	Kiefer Blvd	Zinfandel Dr	Sunrise Blvd	County	2	22	Yes	656	2	Yes	1,790	No
83	Mather Blvd-Excelsior Rd[4]	Douglas Rd	Kiefer Blvd	County	2	22	Yes	6,751	2	Yes	8,760	**Yes**
89	Mayhew Rd	Jackson Rd	Fruitridge Rd	County	2	22	Yes	1,616	2	Yes	1,260	No
116	White Rock Rd	Fitzgerald Rd	Grant Line Rd	Rancho Cordova/County	2	20	Yes	2,490	2	Yes	2,230	No
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd	County	2	<21	Yes	2,848	2	Yes	6,870	**Yes**

Note: Gray shading indicates changes in travel lanes or facility type that the project is responsible to provide. For all roadway segments to be widened, the project is responsible to build the entire roadway to County standards.

[1] Substandard rural roads are defined as rural, 2-lane roadway segments with travel lanes narrower than 12 feet and/or roadside shoulders narrower than 6 feet.
[2] Functionality impacts are triggered when a substandard rural road increases over a threshold of 6,000 ADT, or for a roadway already above 6,000 ADT, increases by more than 600 ADT.
[3] The potential for an impact exists should the project generate traffic volumes on the roadway exceeding 6,000 ADT, or increasing more than 600 ADT on a roadway already above 6,000 ADT, prior to the construction of roadway improvements.
[4] Excluding the roadway segment that is within the developed community of Independence at Mather.
[5] The functionality impact is mitigated by improving the roadway to County standards, including widening travel lanes to 12 feet and/or widening or providing paved shoulders to 6 feet.

Red text with light gray shading indicate project impacts.

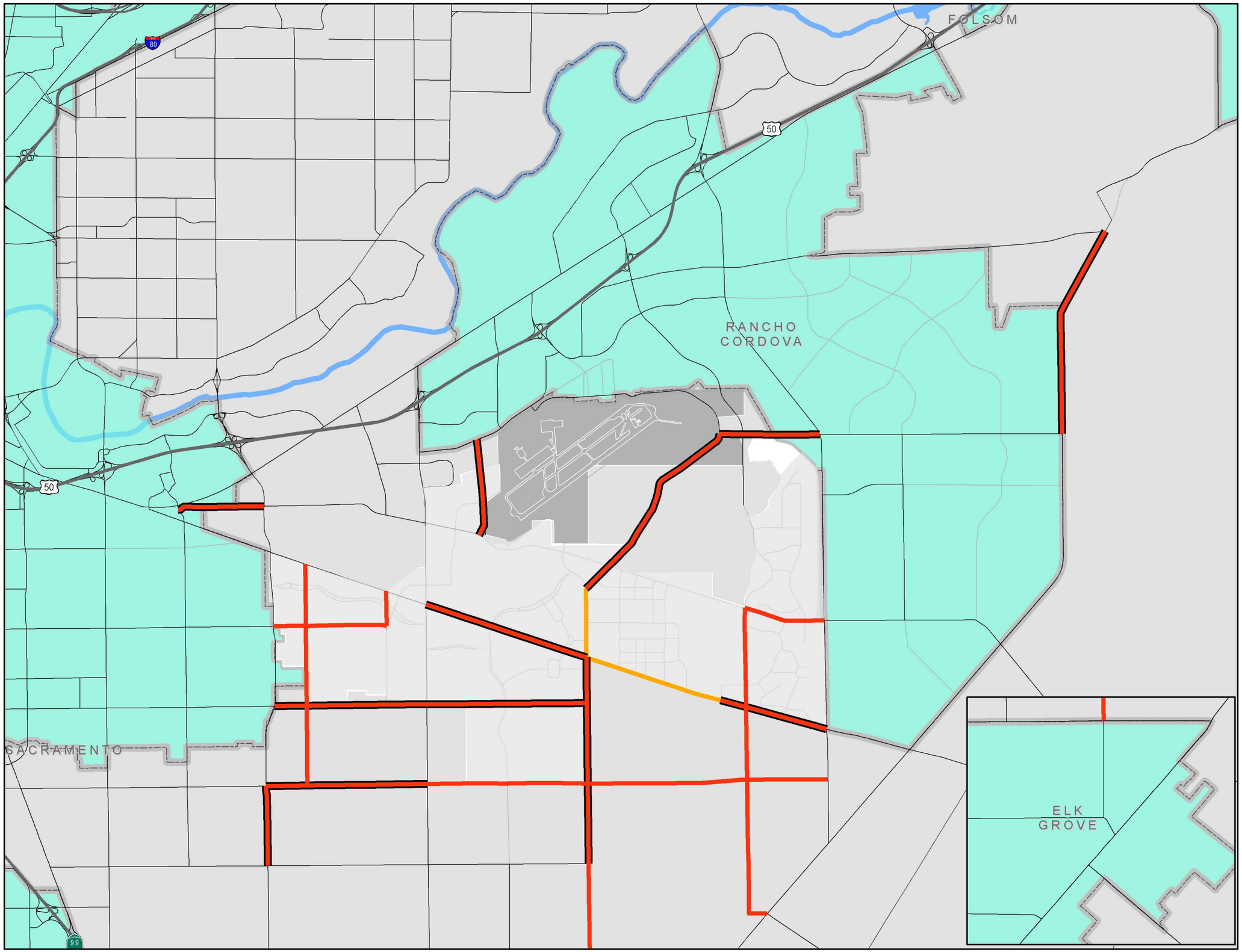


FIGURE 8.6
EXISTING PLUS JACKSON TOWNSHIP (PROPOSED PROJECT) FUNCTIONALITY IMPACTS

Legend

- Substandard Roadways
- Functionality Impact
- Functionality Impact if Roadway is Not Already Improved
- Cities
- Mather Airport

DKS

8.5 MITIGATION

8.5.1 Existing Plus Jackson Township Project Roadway Segment Mitigation

Table 8.12 summarizes the results of the operations analysis for the study area roadway segments with mitigation. Where feasible, the number of roadway lanes was increased to mitigate the impact. However, the increased number of lanes could not exceed the maximum General Plan designations of the appropriate jurisdictions. The shaded table cells under the "Travel Lanes" and "Facility Type" headings illustrate widened roadways for mitigation purposes, which would be the responsibility of the Jackson Township project to implement. The shaded table cells under the "Level of Service" heading indicate those locations that would continue to have LOS impacts after mitigation. The table also includes the constraint that precluded full mitigation of the LOS impact.

The "LOS Impact with Mitigation?" column shows whether there is still an LOS impact after the mitigation measure is applied. In other words, this column shows whether a mitigation measure successfully mitigates the impact or not. In several locations where the improvements allowed under the General Plan would not mitigate an LOS impact, the County has proposed alternative mitigation measures, which are shown in the "Alternative Mitigation" column. These alternative mitigation measures will either fully mitigate the impact or substantially reduce the level of impact.

8.5.2 Existing Plus Jackson Township Project Intersection Mitigation

Tables 8.13 and 8.14 summarize the results of the operations analysis for the study area intersections with mitigation. However, the increased number of lanes on each approach does not exceed the County's standard number of approach lanes. Shaded table cells in Table 8.14 indicate those locations where changes in traffic control and / or number of approach lanes by type have been made which would be the responsibility of the Jackson Township project to implement. As shown in Table 8.13, all LOS impacts have been fully mitigated. Detailed analysis information is included in the technical appendix.

The "LOS Impact with Mitigation?" column in Table 8.14 shows whether there is still an LOS impact after the mitigation measure is applied. In other words, this column shows whether a mitigation measure successfully mitigates the impact or not. In locations where the LOS impact could not be mitigated by implementing the County's standard number of approach lanes, the County has proposed alternative mitigation measures, which are shown in the "Alternative Mitigation" column. These generally include providing additional turn lanes, carrying an additional through lane past the intersection, or designating the intersection as a High Capacity Intersection. These alternative mitigation measures will either fully mitigate the impact or substantially reduce the level of impact.

8.5.3 Existing Plus Jackson Township Project U.S. 50 Freeway Mitigation

Capacity improvements such as widening of the freeway and freeway junctions would reduce the severity of the impacts, but were generally not considered feasible due to right-of-way

restrictions, legal constraints, and the numerous transportation structures that would need to be modified and/or replaced. Potential alternative improvements have been identified from Caltrans' US-50 Transportation Concept Report (TCR) and Corridor System Management Plan (CSMP). The TCR and CSMP is focused on intelligent transportation systems (ITS) and integrated corridor management (ICM) projects that would have operational benefits to US-50 without adding additional capacity. The TCR and CSMP also identify potential improvements to parallel local facilities that would be expected to reduce travel demand on US-50. The Jackson Township project will participate in one or more of these alternative improvements that could directly reduce the severity of the project's impact and/or provide operational benefits to the US-50 corridor in general.

8.5.3.1 US-50 Westbound Alternative Improvements

To lessen the impact to the westbound US-50 weave between Watt Avenue and Howe Avenue, the project may pay a fair share toward the construction of:

- Bus/HOV lanes from Watt Avenue to Downtown Sacramento (2035 SACOG MTP)
- Replacement of existing communication lines with fiber optics to improve performance between SR-51/SR-99 and Watt Avenue (2013 10-Year SHOPP Plan)
- Auxiliary lane between the NB Howe Avenue on-ramp and the SB Howe Avenue on-ramp (2035 SACOG MTP)
- Ramp meter improvements (Caltrans ITS/OPS Project List)

Table 8.12
Existing Plus Jackson Township Project (Proposed Project) Roadway Segment Mitigations

ID	Roadway	Segment		Existing + Jackson Township Project					Mitigated Existing + Jackson Township Project (Proposed Project)						
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Volume / Capacity Ratio	Level of Service	LOS Impact with Mitigation?	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
23	Elder Creek Rd	Power Inn Rd	Florin-Perkins Rd	2	Arterial M	17,400	0.97	**E**	4	Arterial M	0.48	A	No		
44	Folsom Blvd	Howe Ave	Jackson Rd	4	Arterial M	40,090	1.11	**F**	4	Arterial M	1.11	**F**	Yes		Maximum General Plan lanes
56	Grant Line Rd	Sheldon Rd	Wilton Rd	2	Rural S	19,560	0.98	**E**	4	Arterial M	0.54	A	No		
57	Grant Line Rd	Wilton Rd	Bond Rd	2	Rural S	18,070	0.90	**E**	4	Arterial M	0.50	A	No		
62	Howe Ave	US 50	Folsom Blvd	6	Arterial M	55,120	1.02	**F**	6	Arterial M	1.02	**F**	Yes		Maximum General Plan lanes
67	Jackson Rd	South Watt Ave	Hedge Ave	2	Arterial M	23,280	1.29	**F**	4	Arterial M	0.65	B	No		
68	Jackson Rd	Hedge Ave	Mayhew Rd	2	Arterial M	19,660	1.09	**F**	4	Arterial M	0.55	A	No		
69	Jackson Rd	Mayhew Rd	Bradshaw Rd	2	Arterial M	21,730	1.21	**F**	4	Arterial M	0.60	B	No		
70	Jackson Rd	Bradshaw Rd	Excelsior Rd	2	Arterial M	26,090	1.45	**F**	4	Arterial M	0.72	C	No		
73	Jackson Rd	Sunrise Blvd	Grant Line Rd	2	Rural Hwy	14,680	0.64	**E**	4	Arterial M	0.41	A	No		
83	Mather Blvd-Excelsior Rd	Douglas Rd	Kiefer Blvd	2	Res Collector F	8,760	1.10	**F**	2	Res Collector F	0.85	E	No	Construct Douglas Road extension	
106	Sunrise Blvd	Kiefer Blvd	Jackson Rd	2	Arterial M	19,180	1.07	**F**	4	Arterial M	0.53	A	No		
110	Watt Ave	US 50	Folsom Blvd	6	Arterial H	67,710	1.13	**F**	6	Arterial H	1.13	**F**	Yes		Maximum General Plan lanes

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 8.12
Existing Plus Jackson Township Project (Proposed Project) Roadway Segment Mitigations

ID	Roadway	Segment		Existing + Jackson Township Project					Mitigated Existing + Jackson Township Project (Proposed Project)						
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Volume / Capacity Ratio	Level of Service	LOS Impact with Mitigation?	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible

Note: Gray shading represents changes in travel lanes or facility type that the project is responsible to provide.

[1] The following classifications are used to determine daily roadway capacity:
Arterial L - Arterial, Low Access Control
Arterial M - Arterial, Moderate Access Control
Arterial H - Arterial, High Access Control
Rural Hwy - Rural 2-lane Highway
Rural S - Rural 2-lane Road, 24'-36' of pavement, Paved Shoulders
Rural NS - Rural 2-lane Road, 24'-36' of pavement, No Shoulders
Res Collector F - Residential Collector with Frontage
Res Collector NF - Residential Collector with No Frontage

[2] Alternative mitigations represent proposed mitigations beyond the General Plan, as proposed by the County of Sacramento.

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 8.13

Existing Plus Jackson Township Project (Proposed Project) Impacted Intersections and Mitigations

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing Plus Jackson Township Project			LOS Impact	Mitigated Existing Plus Jackson Township Project			Existing Plus Jackson Township Project			LOS Impact	Mitigated Existing Plus Jackson Township Project		
		Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)
18	S. Watt Avenue & Elder Creek Road	Signal	E	80.0	Yes	Signal	D	45.0	Signal	E	79.1	Yes	Signal	D	37.3
25	Hedge Avenue & Elder Creek Road	All-way stop	F	62.2	Yes	Signal	B	18.8	All-way stop	C	23.1	No	Signal	C	24.6
29	Mayhew Road & Jackson Road	Two-way stop	A	1.8	Yes	Signal	B	18.9	Two-way stop	A	0.8	No	Signal	B	14.6
	Northbound Through - Left Turn		*F*	*50.0*						*E*	*48.9*				
	Northbound Right Turn		*C*	*18.0*						*C*	*15.3*				
	Southbound		*D*	*30.3*						*D*	*32.7*				
	Eastbound Left Turn		*A*	*9.3*						*A*	*9.3*				
	Westbound Left Turn		*A*	*9.4*						*A*	*9.3*				
38	Bradshaw Road & Jackson Road	Signal	F	158.7	Yes	Signal	E	79.7	Signal	E	77.3	No	Signal	D	45.5
42	Happy Lane & Old Placerville Road	Two-way stop	B	11.8	Yes	Signal	C	31.7	Two-way stop	B	12.8	Yes	Signal	C	25.6
	Northbound Left Turn		*F*	*215.4*						*F*	*>300*				
	Northbound Right Turn		*D*	*31.3*						*C*	*19.9*				
	Westbound Left Turn		*B*	*10.6*						*B*	*10.7*				
45	Excelsior Road & Jackson Road	Signal	F	171.2	Yes	Signal	E	59.6	Signal	F	134.9	Yes	Signal	D	54.1
46	Excelsior Road & Elder Creek Road	Two-way stop	F	62.0	Yes	Signal	B	10.2	Two-way stop	F	101.5	Yes	Signal	D	42.0
	Northbound Left Turn		*A*	*8.1*						*A*	*8.8*				
	Eastbound		*F*	*>300*						*F*	*>300*				
47	Excelsior Road & Florin Road	All-way stop	F	173.9	Yes	Signal	D	50.7	All-way stop	F	72.7	Yes	Signal	D	36.6
52	Mather Boulevard & Douglas Road	All-way stop	F	80.1	Yes	Signal			All-way stop	E	44.0	No	Signal		
60	Eagles Nest Road & Jackson Road	Two-way stop	F	83.6	Yes	Signal	C	26.5	Two-way stop	C	23.3	Yes	Signal	C	26.9

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 8.13

Existing Plus Jackson Township Project (Proposed Project) Impacted Intersections and Mitigations

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing Plus Jackson Township Project			LOS Impact	Mitigated Existing Plus Jackson Township Project			Existing Plus Jackson Township Project			LOS Impact	Mitigated Existing Plus Jackson Township Project		
		Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)
	Northbound		*F*	*>300*						*F*	*271.8*				
	Southbound		*C*	*15.7*						*E*	*41.0*				
	Eastbound Left Turn		*B*	*10.3*						*A*	*8.0*				
	Westbound Left Turn		*A*	*8.1*						*A*	*8.9*				
80	Grant Line Road & Jackson Road	Signal	F	80.8	Yes	Signal	C	27.6	Signal	E	68.2	Yes	Signal	C	30.4
90	Excelsior Road & Calvine Rd	All-way stop	E	43.9	Yes	Signal	D	36.7	All-way stop	C	20.3	No	Signal	C	32.5

Note: Gray shading represents changes in traffic control that the project is responsible to provide.

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 8.14

Existing Plus Jackson Township Project (Proposed Project) Intersection Impacts and Mitigations

	Intersection	Traffic Control		Existing Plus Jackson Township Project Lane Geometrics				Mitigated Existing Plus Jackson Township Project Lane Geometrics				LOS Impact with Mitgation?	High Capacity Intersection?[1]	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
		Existing Plus Project	Mitigated Existing Plus Project	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach				
18	S. Watt Avenue & Elder Creek Road	Signal	Signal									No	No		
25	Hedge Avenue & Elder Creek Road	All-way stop	Signal												
29	Mayhew Road & Jackson Road	Two-way stop	Signal									No	No		
38	Bradshaw Road & Jackson Road	Signal	Signal									No	No		
42	Happy Lane & Old Placerville Road	Two-way stop	Signal									No	No	Realign Happy Lane to Routier Road (2 lanes)	
45	Excelsior Road & Jackson Road	Signal	Signal									No	No		
46	Excelsior Road & Elder Creek Road	Two-way stop	Signal									No	No		
47	Excelsior Road & Florin Road	All-way stop	Signal									No	No		
52	Mather Boulevard & Douglas Road	All-way stop	Signal									No	No		
60	Eagles Nest Road & Jackson Road	Two-way stop	Signal									No	No		
80	Grant Line Road & Jackson Road	Signal	Signal									No	No		
90	Excelsior Road & Calvine Rd	All-way stop	Signal									No	No		

[1] High capacity intersections are defined in the Sacramento County General Plan and may include grade separations, additional turn lanes, and/or other features as deemed appropriate by the County.

[2] Alternative mitigations represent proposed mitigations beyond the General Plan, excluding high capacity intersections, as proposed by the County of Sacramento.

Note: Gray shading represents changes in traffic control or approach lanes that the project is responsible to provide.

8.5.4 Existing Plus Jackson Township Project Pedestrian and Bicycle Facility Mitigation

The Jackson Township project applicant shall coordinate with Sacramento County to identify the necessary on- and off-site pedestrian and bicycle facilities to serve the proposed development. These facilities shall be incorporated into the Jackson Township project and could include sidewalks, stop signs, standard pedestrian and school crossing warning signs, lane striping to provide a bicycle lane, bicycle parking, signs to identify pedestrian and bicycle paths, raised crosswalks, pedestrian signal heads, and all appropriate traffic calming measures as defined in the County's Neighborhood Traffic Management Program (NTMP). Sidewalks would be required as part of the frontage improvements along all new roadway construction in the Jackson Township project vicinity in conformance with County design standards. Circulation and access to all proposed public spaces shall include sidewalks that meet Americans with Disabilities Act standards.

8.5.5 Existing Plus Jackson Township Project Transit System Mitigation

The Jackson Township project applicant shall coordinate with Regional Transit (or other transit operators) to provide the additional transit facilities and services assumed in transportation analysis (see Section 8.1.2.3), or a cost-effective equivalent level of transit facilities and services.

The assumed transit routes and service frequency would be required at full development of the Jackson Township project. The full level of transit service would not achieve adequate transit ridership during the early stages of development. Thus the ultimate transit service, like the roadway system serving the Jackson Township project, must be phased with development of the Jackson Township project.

8.5.6 Existing Plus Jackson Township Project Functionality Mitigation

Table 8.15 summarizes the results of the functionality analysis for the study area rural roadway segments with mitigation.

8.5.7 Existing Plus Jackson Township Project Mitigation Summary

Tables 8.16 through 8.19 summarize all of the roadway segments, intersections, and freeway facilities that would exhibit significant LOS impacts along with the mitigation success for these impacts.

Table 8.15
Existing Plus Jackson Township Project (Proposed Project) Functionality Mitigations

ID	Roadway	Segment		Existing + Jackson Township Project (Proposed Project)				Mitigation	Impact after Mitigation?
		From	To	Travel Lanes	Substandard? [1]	Forecasted Volume	Functionality Impact? [2]		
15	Douglas Rd	Mather Blvd	Zinfandel Dr	2	Yes	7,390	**Yes**	Widen to County standards [5]	No
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd	2	Yes	9,210	**Yes**	Widen to County standards [5]	No
25	Elder Creek Rd	South Watt Ave	Hedge Ave	2	Yes	9,060	**Yes**	Widen to County standards [5]	No
26	Elder Creek Rd	Hedge Ave	Mayhew Rd	2	Yes	9,390	**Yes**	Widen to County standards [5]	No
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd	2	Yes	9,400	**Yes**	Widen to County standards [5]	No
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd	2	Yes	10,340	**Yes**	Widen to County standards [5]	No
30	Excelsior Rd	Kiefer Blvd	Jackson Rd	2	Yes	15,060	**Yes**	Widen to County standards [5]	No
31	Excelsior Rd	Jackson Rd	Elder Creek Rd	2	Yes	16,560	**Yes**	Widen to County standards [5]	No
32	Excelsior Rd	Elder Creek Rd	Florin Rd	2	Yes	7,220	**Yes**	Widen to County standards [5]	No
33	Excelsior Rd	Florin Rd	Gerber Rd	2	Yes	7,580	**Yes**	Widen to County standards [5]	No
39	Florin Rd	South Watt Ave	Hedge Ave	2	Yes	9,910	**Yes**	Widen to County standards [5]	No
40	Florin Rd	Hedge Ave	Mayhew Rd	2	Yes	9,010	**Yes**	Widen to County standards [5]	No
41	Florin Rd	Mayhew Rd	Bradshaw Rd	2	Yes	9,080	**Yes**	Widen to County standards [5]	No
50	Grant Line Rd	White Rock Rd	Douglas Rd	2	Yes	8,310	**Yes**	Widen to County standards [5]	No
58	Happy Ln	Old Placerville Rd	Kiefer Blvd	2	Yes	6,700	**Yes**	Widen to County standards [5]	No
70	Jackson Rd	Bradshaw Rd	Excelsior Rd	2	Yes	26,090	**Yes**	Widen to County standards [5]	No
71	Jackson Rd	Excelsior Rd	Eagles Nest Rd	4	No	32,180	**Yes[3]**	Widen to County standards [5]	No
83	Mather Blvd-Excelsior Rd[4]	Douglas Rd	Kiefer Blvd	2	Yes	8,760	**Yes**	Widen to County standards [5]	No
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd	2	Yes	6,870	**Yes**	Widen to County standards [5]	No

Red text with light gray shading indicate project impacts.

Table 8.15
Existing Plus Jackson Township Project (Proposed Project) Functionality Mitigations

ID	Roadway	Segment		Existing + Jackson Township Project (Proposed Project)				Mitigation	Impact after Mitigation?
		From	To	Travel Lanes	Substandard? [1]	Forecasted Volume	Functionality Impact? [2]		

Note: Gray shading indicates changes in travel lanes or facility type that the project is responsible to provide. For all roadway segments to be widened, the project is responsible to build the entire roadway to County standards.

[1] Substandard rural roads are defined as rural, 2-lane roadway segments with travel lanes narrower than 12 feet and/or roadside shoulders narrower than 6 feet.

[2] Functionality impacts are triggered when a substandard rural road increases over a threshold of 6,000 ADT, or for a roadway already above 6,000 ADT, increases by more than 600 ADT.

[3] The potential for an impact exists should the project generate traffic volumes on the roadway exceeding 6,000 ADT, or increasing more than 600 ADT on a roadway already above 6,000 ADT, prior to the construction of roadway improvements.

[4] Excluding the roadway segment that is within the developed community of Independence at Mather.

[5] The functionality impact is mitigated by improving the roadway to County standards, including widening travel lanes to 12 feet and/or widening or providing paved shoulders to 6 feet.

Red text with light gray shading indicate project impacts.

Table 8.16
Existing Plus Jackson Township Project (Prop. Proj.) List of Impacted Roadway Segments

ID	Roadway	Segment	
		From	To
Level of Service Impact Fully Mitigated by General Plan Lanes			
23	Elder Creek Rd	Power Inn Rd	Florin-Perkins Rd
55.2	Grant Line Rd	Elk Grove City Limit	Sheldon Rd
56	Grant Line Rd	Sheldon Rd	Wilton Rd
57	Grant Line Rd	Wilton Rd	Bond Rd
67	Jackson Rd	South Watt Ave	Hedge Ave
68	Jackson Rd	Hedge Ave	Mayhew Rd
69	Jackson Rd	Mayhew Rd	Bradshaw Rd
70	Jackson Rd	Bradshaw Rd	Excelsior Rd
73	Jackson Rd	Sunrise Blvd	Grant Line Rd
83	Mather Blvd-Excelsior Rd	Douglas Rd	Kiefer Blvd
106	Sunrise Blvd	Kiefer Blvd	Jackson Rd
Level of Service Impact Not Fully Mitigated by General Plan Lanes			
44	Folsom Blvd	Howe Ave	Jackson Rd
62	Howe Ave	US 50	Folsom Blvd
110	Watt Ave	US 50	Folsom Blvd

Note: Refer to Table 3.12 for detailed description of impacts and mitigations.

Table 8.17

Existing Plus Jackson Township Project (Proposed Project) Summary of Impacted Intersections

	Intersection	Alternative Mitigation
Level of Service Impact Fully Mitigated by General Plan Lanes		
18	S. Watt Avenue & Elder Creek Road	
25	Hedge Avenue & Elder Creek Road	
29	Mayhew Road & Jackson Road	
38	Bradshaw Road & Jackson Road	
42	Happy Lane & Old Placerville Road	**
45	Excelsior Road & Jackson Road	
46	Excelsior Road & Elder Creek Road	
48	Excelsior Road & Gerber Road/Birch Ranch Drive	
52	Mather Boulevard & Douglas Road	
60	Eagles Nest Road & Jackson Road	
80	Grant Line Road & Jackson Road	
90	Excelsior Road & Calvine Rd	

[1] Alternative mitigations represent proposed mitigations beyond the General Plan, excluding designated high capacity intersections, as proposed by the County of Sacramento.

* denotes alternative mitigations that improve operations but do not fully mitigate the impact.
** denotes alternative mitigations that fully mitigate the impact.

Table 8.18

Existing Plus Jackson Township (Proposed Project)
Summary of Impacted Freeway Merge/Diverge/Weave Segments

Direction	Location	Junction Type
Level of Service Impact Not Mitigated		
Westbound US-50	Southbound Watt Avenue Slip Entrance	Weave
	Howe Avenue Exit	

Source: *DKS Associates, 2018.*

Table 8.19
Existing Plus Jackson Township Project (Prop. Proj.) Functionality Impact Summary

ID	Roadway	Segment	
		From	To
Functionality Impact Fully Mitigated			
15	Douglas Rd	Mather Blvd	Zinfandel Dr
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd
25	Elder Creek Rd	South Watt Ave	Hedge Ave
26	Elder Creek Rd	Hedge Ave	Mayhew Rd
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd
30	Excelsior Rd	Kiefer Blvd	Jackson Rd
31	Excelsior Rd	Jackson Rd	Elder Creek Rd
32	Excelsior Rd	Elder Creek Rd	Florin Rd
33	Excelsior Rd	Florin Rd	Gerber Rd
39	Florin Rd	South Watt Ave	Hedge Ave
40	Florin Rd	Hedge Ave	Mayhew Rd
41	Florin Rd	Mayhew Rd	Bradshaw Rd
50	Grant Line Rd	White Rock Rd	Douglas Rd
58	Happy Ln	Old Placerville Rd	Kiefer Blvd
70	Jackson Rd	Bradshaw Rd	Excelsior Rd
71	Jackson Rd	Excelsior Rd	Eagles Nest Rd
83	Mather Blvd-Excelsior Rd[4]	Douglas Rd	Kiefer Blvd
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd

9. EXISTING PLUS FOUR PROJECTS SCENARIO (JACKSON TOWNSHIP PROPOSED PROJECT)

9.1 PROJECT DESCRIPTION

The existing plus FOUR PROJECTS scenario evaluates the effects of the traffic of four developments (FOUR PROJECTS) added to existing conditions. **Figure 9.1** illustrates the location of the FOUR PROJECTS:

- West Jackson
- Jackson Township
- NewBridge
- Mather South

The FOUR PROJECTS are located in unincorporated Sacramento County, generally east of the City of Sacramento and south of the community of Rosemont and the City of Rancho Cordova. The FOUR PROJECTS are located both north and south of Jackson Road (SR 16). The FOUR PROJECTS are generally bounded to the west by South Watt Avenue, to the north by the Community of Rosemont and Mather Airport, to the east by Sunrise Boulevard, and to the south by Elder Creek Road and Florin Road.

9.1.1 Land Use

Table 9.1 summarizes the land use assumptions for the FOUR PROJECTS in Jackson Corridor. Together, the FOUR PROJECTS would contain over 29,100 dwelling units and contain enough non-residential land uses to employ over 38,100 workers.

9.1.2 Transportation Network

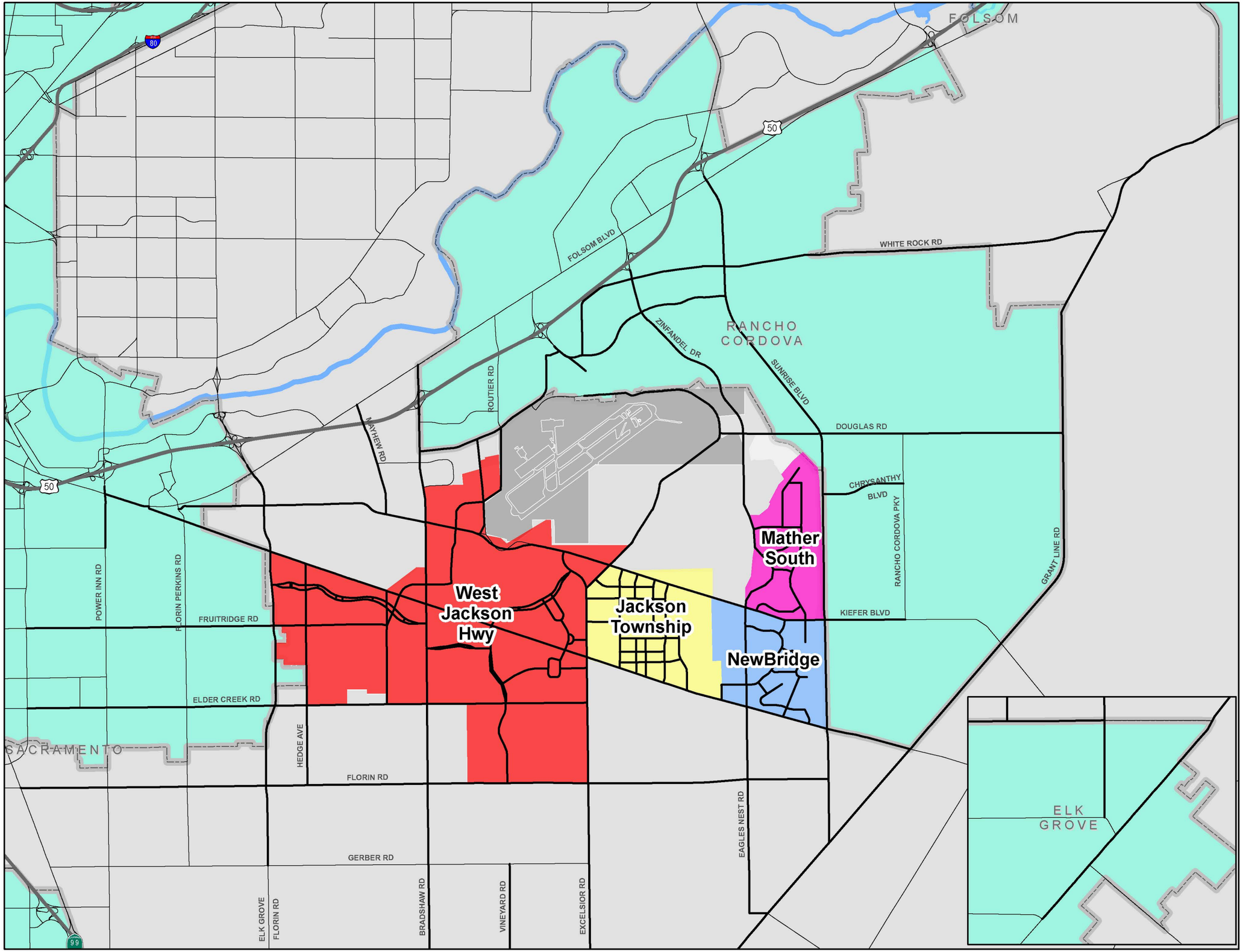
9.1.2.1 Roadway Segments and Intersections

Figure 9.2 illustrates the FOUR PROJECTS transportation network. The FOUR PROJECTS would widen and / or complete many roadways that cross or border the FOUR PROJECTS sites. The FOUR PROJECTS would improve many intersections within or on the borders of the projects. In addition, the FOUR PROJECTS would include new roadways to serve the proposed land use. The proposed improvements associated with the FOUR PROJECTS are summarized later in Sections 9.2.1 and 9.2.2.

9.1.2.2 Pedestrian and Bicycle Facilities

The roadways within the FOUR PROJECTS would meet County standards, which would provide sidewalks and on-street (Class II) bike lanes on all collector, arterial and thoroughfare roadways. The FOUR PROJECTS also provide several off-street (Class I) multi-purpose trails.

FIGURE 9.1
FOUR PROJECTS
PROJECT LOCATIONS



Legend

- Study Roadway Segments
- Freeways
- Other Major Roadways
- West Jackson Hwy Project
- Jackson Township Project
- NewBridge Project
- Mather South Project
- Cities
- Mather Airport

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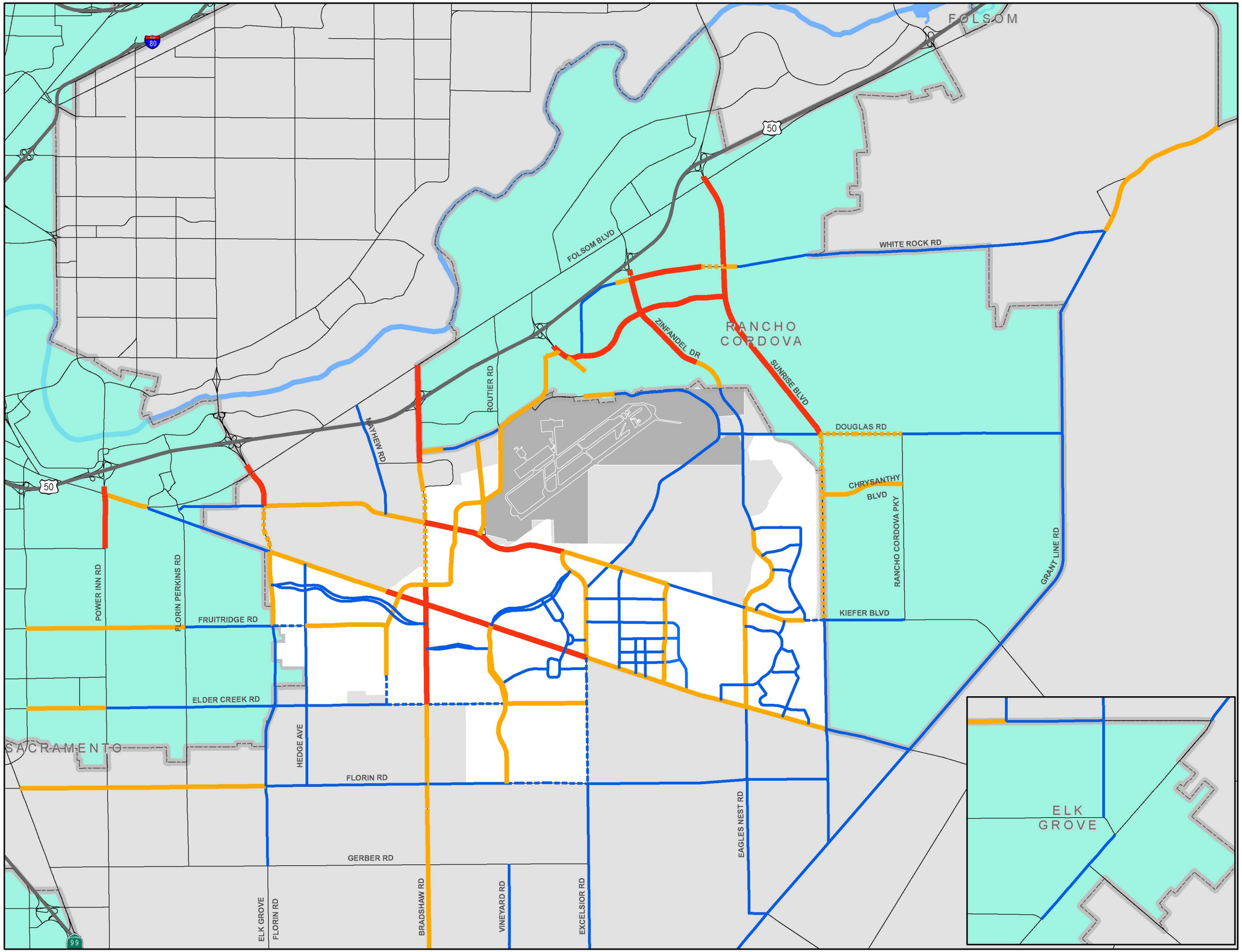
Table 9.1: Assumed Land Use for Existing Plus FOUR PROJECTS Scenario			
Project	**General Land Use**	**Acres**	**Dwelling Units**
West Jackson	Residential	1979.9	12,345
	Assumed Density Bonus[1]		237
	Mixed Use	120.9	2,418
	Commercial	342.8	
	Employment	803.3	
	Industrial	154.8	
	Schools	131.7	
	Park/Open Space/Ag	2108.3	
	Institutional	23.4	
	Primary Roadways	248.2	
	Subtotal	**5913.3**	**15,000**
Jackson Township	Residential	577.5	6,043
	Assumed Density Bonus[1]		76
	Commercial/Mixed Use	96.5	100
	Office	33.6	
	Pubic/Quasi Public	105.0	
	Park/Open Space/Ag	488.2	545
	Primary Roadways	90.2	
	Subtotal	**1,391.0**	**6,764**
NewBridge	Residential	368.0	2,915
	Assumed Density Bonus[1]		108
	Commercial/Mixed Use	31.7	160
	Office	13.8	
	Pubic/Quasi Public	13.8	
	Park/Open Space/Ag	514.7	660
	Primary Roadways	47.9	
	Subtotal	**1,095.3**	**3,843**

Mather South	Residential	428.7	3,352
	Assumed Density Bonus[1]		30
	Commercial	21.1	
	Environmental Education Campus	27.9	200
	Research and Development	21.4	
	Parks & Recreation	43.1	
	Public Utilities	3.5	
	Schools	23.7	
	Open Space	210.5	
	Streets	62.7	
	Subtotal	**848.2**	**3,552**

[1] Reflects estimated potential for additional units that may occur due to County's Housing Incentive Program.

Source: *Project Applicants and Sacramento County, 2018.*

FIGURE 9.2
EXISTING PLUS FOUR PROJECTS ROADWAY NETWORK



Legend

- 2 Lanes
- 3 Lanes
- 4 Lanes
- 5 Lanes
- 6 Lanes
- 7 Lanes
- Cities
- Mather Airport

DKS

9.1.2.3 Transit System

As described in Section 2.2, transit service in the vicinity of the FOUR PROJECTS is very limited. The FOUR PROJECTS are designed with significant amounts of higher density and mixed uses to help support transit use but transit service within walking distances of those uses is required to achieve significant transit ridership.

An accurate estimation of transit use requires the definition of specific transit routes and frequency of service on those routes. A separate planning effort, involving staff from Sacramento County and Sacramento Regional Transit (RT), was conducted to define an appropriate transit system for the transportation analysis. That effort is described in Section 8.1.2.3.

The planning effort resulted in four transit lines that would serve the FOUR PROJECTS at a frequency of 15 minutes during the peak commute hours (approximately 6-9 AM and 3-6 PM) and 30 minutes during off-peak service hours (approximately 9AM-3PM and 6PM-8PM) on weekdays. Another key characteristic of the proposed transit system built into the modeling assumptions is the targeted use of queue jumps on portions of key corridors (Bradshaw Road from Kiefer Boulevard to Rock Creek Parkway, and Jackson Road from Watt Avenue to Excelsior Road). Queue jumps ensure that buses are not excessively delayed at signals along congested corridors, and therefore not too heavily penalized from a travel time perspective. This is necessary to achieve the adequate ridership levels that were forecast and ensure reliable operations. **Figure 9.3** shows the assumed transit routes for this scenario.

The assumed transit routes, service frequency, and supporting infrastructure (i.e. queue jumps) would be required at full development of the FOUR PROJECTS. The full level of transit service would not achieve adequate transit ridership during the early stages of development. Thus the ultimate transit service, like the roadway system serving the FOUR PROJECTS, must be phased with development of the FOUR PROJECTS.

9.2 TRIP GENERATION

The SACSIM model that has been utilized for the transportation forecasts in this analysis estimated trip generation of the FOUR PROJECTS. **Table 9.2** summarizes the person trip generation. The FOUR PROJECTS would generate over 85,000 daily work person trip ends, and over ,000 daily person trip ends for all trip purposes.

Table 9.3 summarizes the estimated mode choice for the Existing plus FOUR PROJECTS scenario. About 90.9 percent of all person trips are expected to be accommodated by automobile. Transit will serve about 1.5 percent of all trips, while walk and bike modes will accommodate about 7.6 percent of all trips. The mode choice assumes full implementation of the project's pedestrian and bicycle systems.

Table 9.4 summarizes the vehicular (auto) trip generation of the FOUR PROJECTS. The FOUR PROJECTS are estimated to generate over 463,000 daily vehicle trip ends. About 100,000 of the daily vehicle trip ends will be associated with trips with both an origin and destination within the

individual projects, over 21 percent of the trip ends. The internal trip ends represent about 50,000 daily vehicle trips (one-half the number of internal trip ends). The FOUR PROJECTS will generate about 363,000 external vehicle trips that have an origin or destination inside one of the FOUR PROJECTS but the other end of the trip is outside the project from which it originated. Table 9.4 also shows the vehicle trips generated during the a.m. and p.m. peak hours.

Table 9.2: Estimated Daily Person Trip Generation
Existing Plus FOUR PROJECTS Scenario (Proposed Project)

Trip Purpose	Daily Person Trip Ends
Work Trips	85,644
Non-Work Trips	590,680
All Trip Purposes	676,324

Source: *DKS Associates, 2018.*

Table 9.3: Mode Split
Existing Plus FOUR PROJECTS Scenario (Proposed Project)

Mode	Percentage of Person Trips by Trip Purpose		
	Work Trips	Non-Work Trips	All Trip Purposes
Auto - SOV	85.8%	48.4%	53.2%
Auto - HOV	10.4%	41.6%	37.7%
Transit	2.8%	1.3%	1.5%
Walk	0.5%	7.8%	6.8%
Bike	0.5%	0.8%	0.8%

Source: *DKS Associates, 2018.*

Table 9.4: Estimated Daily Vehicle Trip Generation
Existing Plus FOUR PROJECTS Scenario (Proposed Project)

Trip Type		AM Peak Hour	PM Peak Hour	Daily
Total Vehicle Trip Ends		40,317	43,108	463,209
Percent Internal Trip Ends[1]		18.2%	21.8%	21.6%
Vehicle Trips	Internal to Projects	3,675	4,706	50,087
	External to Projects	32.966	33,696	363,034
	Total	36,642	38,402	413,122

[1.] Both trip ends within individual projects.

Source: *DKS Associates, 2018.*

9.3 TRIP DISTRIBUTION

The distribution of trips associated with development of the FOUR PROJECTS was derived utilizing SACSIM, incorporating the proposed land use and access locations associated with the FOUR PROJECTS. Trip distribution varies by land use and time period. **Figure 9.4** illustrates the overall trip distribution of daily FOUR PROJECTS trips with the Existing Plus FOUR PROJECTS scenario. The highest percentages of FOUR PROJECTS traffic are accommodated on Jackson Road, Bradshaw Road, Kiefer Boulevard, and Vineyard Road.

9.4 OPERATIONS ANALYSIS AND IMPACTS

For purposes of this analysis, full development of the FOUR PROJECTS is assumed to occur "instantaneously." In this manner, the traffic and impacts associated with the FOUR PROJECTS can be directly compared to known and measured conditions. Existing scenario impacts are determined by comparing the traffic operating conditions associated with the FOUR PROJECTS with the traffic operating conditions associated with the existing (without FOUR PROJECTS) conditions, and comparing the change to the thresholds of significance. **Figure 9.5** illustrates the resultant traffic operating conditions.

9.4.1 Existing Plus FOUR PROJECTS Roadway Segment Impacts

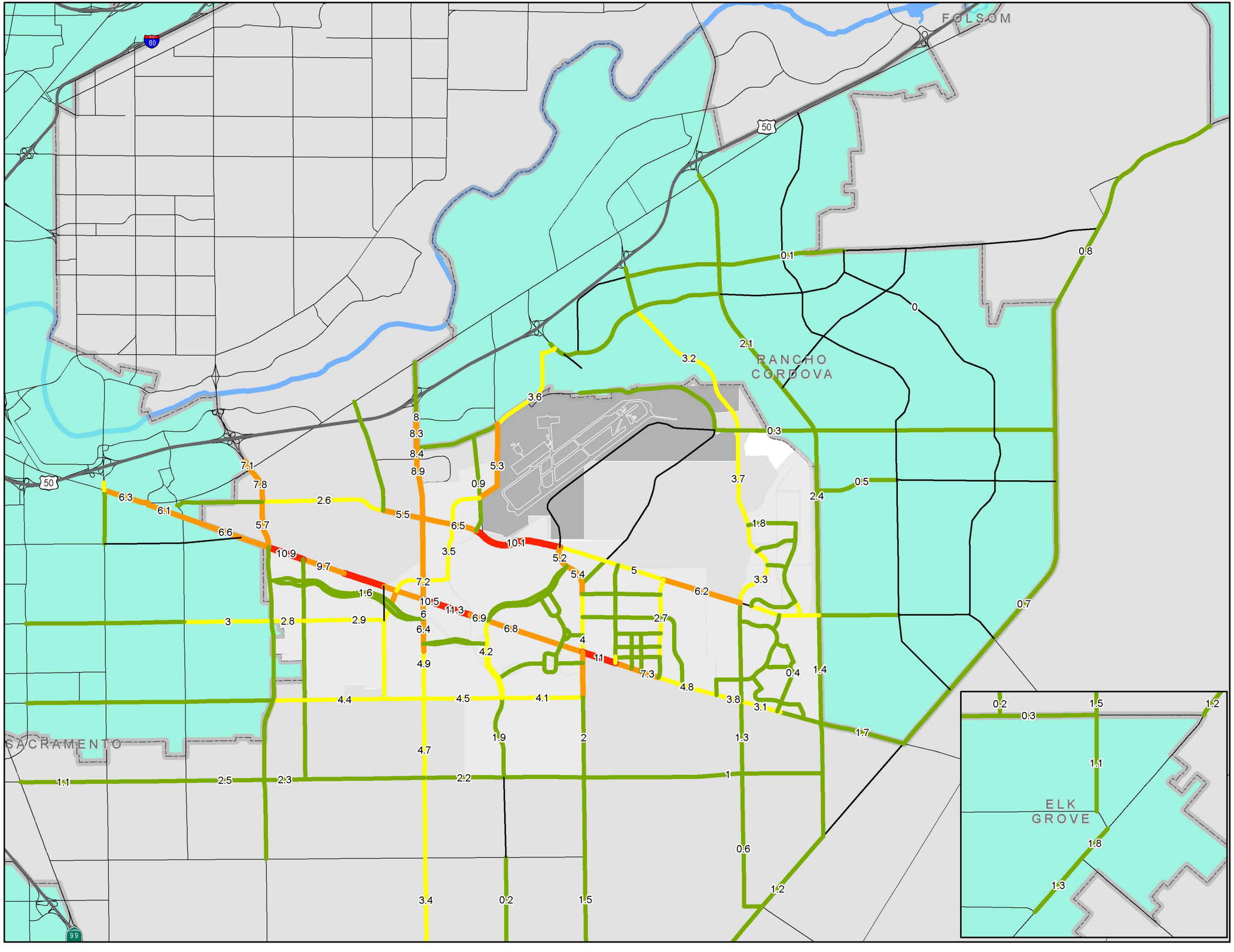
Table 9.5 summarizes the results of the operations analysis for the study area roadway segments. The table includes the number of lanes assumed with the implementation of the FOUR PROJECTS. The shaded table cells under the "Travel Lanes" and "Facility Type" headings illustrate new roadways or widened roadways. The last column of the table shows the project(s) responsible for the increase in the number of roadway lanes. The shaded table cells under the "Level of Service" heading indicate those locations with an LOS impact.

FIGURE 9.3
PROJECT TRANSIT NETWORK
EXISTING PLUS JACKSON TOWNSHIP
(PROPOSED PROJECT)

Legend

- Jackson Express Route
- Kiefer Jackson Local Route
- West Jackson Local Route A
- West Jackson Local Route B
- Cities
- Mather Airport

FIGURE 9.4
EXISTING PLUS FOUR PROJECTS
FOUR PROJECTS TRIP DISTRIBUTION
(JT PROPOSED PROJ)



Legend

- 0%
- 0.1% to 2.5%
- 2.6% to 5.0%
- 5.1% to 10.0%
- 10.0% and up
- Freeways
- Other Major Roadways
- Cities
- Mather Airport

DKS

FIGURE 9.5
EXISTING PLUS FOUR PROJECTS (JT PROPOSED PROJECT) ROADWAY SEGMENT AND INTERSECTION LOS AND IMPACTS

FOLSOM

RANCHO CORDOVA

SACRAMENTO

ELK GROVE

Legend

Intersections (AM Peak Hour)

- LOS A-D
- LOS E
- LOS F

Intersections (PM Peak Hour)

- LOS A-D
- LOS E
- LOS F
- Mitigable Intersection Impact
- Unavoidable Intersection impact

- LOS A-D
- LOS E
- LOS F
- Unavoidable Segment Impact
- Mitigable Segment Impact
- Cities
- Mather Airport

DKS

Table 9.5
Existing Plus FOUR PROJECTS (Proposed Project) Roadway Segment Levels of Service

ID	Roadway	Segment		Existing					Existing + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
1	Bradshaw Rd	Folsom Blvd	US 50	6	Arterial M	20,592	0.38	A	6	Arterial M	18,970	0.35	A	
2	Bradshaw Rd	US 50	Lincoln Village Dr	6	Arterial M	52,590	0.97	**E**	6	Arterial M	74,990	1.39	**F**	
3	Bradshaw Rd	Lincoln Village Dr	Old Placerville Rd	6	Arterial M	42,787	0.79	C	6	Arterial M	68,530	1.27	**F**	
4	Bradshaw Rd	Old Placerville Rd	Goethe Rd	6	Arterial M	38,984	0.72	C	6	Arterial M	61,140	1.13	**F**	
5.1	Bradshaw Rd	Goethe Rd	Collector WJ-8	4	Arterial M	28,651	0.80	C	4	Arterial M	52,870	1.47	**F**	
5.2	Bradshaw Rd	Collector WJ-8	Kiefer Blvd	4	Arterial M	28,651	0.80	C	5	Arterial M	48,770	1.35	**F**	West Jackson
6.1	Bradshaw Rd	Kiefer Blvd	Collector WJ-9	4	Arterial M	30,726	0.85	D	5	Arterial M	42,990	1.19	**F**	West Jackson
6.2	Bradshaw Rd	Collector WJ-9	Mayhew Rd	4	Arterial M	30,726	0.85	D	5	Arterial M	43,240	1.20	**F**	West Jackson
6.3	Bradshaw Rd	Mayhew Rd	Jackson Rd	4	Arterial M	30,726	0.85	D	6	Arterial M	45,370	0.84	D	West Jackson
7.1	Bradshaw Rd	Jackson Rd	Rock Creek Pkwy	4	Arterial M	22,871	0.64	B	6	Arterial M	35,310	0.65	B	West Jackson
7.2	Bradshaw Rd	Rock Creek Pkwy	Collector WJ-10	4	Arterial M	22,871	0.64	B	6	Arterial M	36,570	0.68	B	West Jackson
7.3	Bradshaw Rd	Collector WJ-10	Collector WJ-11	4	Arterial M	22,871	0.64	B	6	Arterial M	29,270	0.54	A	West Jackson
7.4	Bradshaw Rd	Collector WJ-11	Elder Creek Rd	4	Arterial M	22,871	0.64	B	6	Arterial M	23,960	0.44	A	West Jackson
8	Bradshaw Rd	Elder Creek Rd	Florin Rd	4	Arterial M	22,265	0.62	B	4	Arterial M	32,240	0.90	D	
9	Bradshaw Rd	Florin Rd	Gerber Rd	4	Arterial M	22,883	0.64	B	4	Arterial M	32,680	0.91	E	
10	Bradshaw Rd	Gerber Rd	Calvine Rd	4	Arterial M	16,984	0.47	A	4	Arterial M	24,850	0.69	B	
11	Calvine Rd	Waterman Rd	Bradshaw Rd	4	Arterial M	16,015	0.44	A	4	Arterial M	21,310	0.59	A	
12	Calvine Rd	Bradshaw Rd	Vineyard Rd	4	Arterial M	12,395	0.34	A	4	Arterial M	13,150	0.37	A	
13	Calvine Rd	Vineyard Rd	Excelsior Rd	2	Arterial M	6,036	0.34	A	2	Arterial M	6,810	0.38	A	
14	Chrysanthy Blvd	Sunrise Blvd	Rancho Cordova Pkwy	4	Arterial M	3,411	0.09	A	4	Arterial M	4,910	0.14	A	
15	Douglas Rd	Mather Blvd	Zinfandel Dr	2	Arterial M	6,635	0.37	A	2	Arterial M	6,020	0.33	A	
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd	2	Arterial M	8,369	0.46	A	2	Arterial M	8,710	0.48	A	
17	Douglas Rd	Sunrise Blvd	Rancho Cordova Pkwy	5	Arterial M	3,674	0.10	A	5	Arterial M	5,360	0.15	A	
18	Douglas Rd	Rancho Cordova Pkwy	Grant Line Rd	2	Arterial M	3,674	0.20	A	2	Arterial M	5,140	0.29	A	
19.1	Eagles Nest Rd	Kiefer Blvd	N Bridgewater Dr	2	Arterial M	740	0.04	A	4	Arterial M	8,200	0.23	A	NewBridge
19.2	Eagles Nest Rd	N Bridgewater Dr	S Bridgewater Dr	2	Arterial M	740	0.04	A	4	Arterial M	8,370	0.23	A	NewBridge
19.3	Eagles Nest Rd	S Bridgewater Dr	Jackson Rd	2	Arterial M	740	0.04	A	4	Arterial M	9,540	0.27	A	NewBridge
20	Eagles Nest Rd	Jackson Rd	Florin Rd	2	Arterial M	517	0.03	A	2	Arterial M	6430	0.36	A	
21	Eagles Nest Rd	Florin Rd	Grant Line Rd	2	Arterial M	189	0.01	A	2	Arterial M	3480	0.19	A	
22	Elder Creek Rd	65th St	Power Inn Rd	4	Arterial M	17,891	0.50	A	4	Arterial M	23,200	0.64	B	
23	Elder Creek Rd	Power Inn Rd	Florin-Perkins Rd	2	Arterial M	15,734	0.87	D	2	Arterial M	22,450	1.25	**F**	
24	Elder Creek Rd	Florin Perkins Rd	South Watt Ave	2	Arterial M	11,092	0.62	B	2	Arterial M	17,920	1.00	**E**	
25	Elder Creek Rd	South Watt Ave	Hedge Ave	2	Arterial M	5,576	0.31	A	2	Arterial M	24,330	1.35	**F**	
26	Elder Creek Rd	Hedge Ave	Mayhew Rd	2	Arterial M	5,797	0.32	A	2	Arterial M	23,810	1.32	**F**	

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Table 9.5
Existing Plus FOUR PROJECTS (Proposed Project) Roadway Segment Levels of Service

ID	Roadway	Segment		Existing					Existing + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd	2	Arterial M	5,355	0.30	A	3	Arterial M	14,060	0.78	C	West Jackson
28.1	Elder Creek Rd	Bradshaw Rd	Vineyard Rd	2	Arterial M	2,158	0.12	A	3	Arterial M	20,840	1.16	**F**	West Jackson
28.2	Elder Creek Rd	Vineyard Rd	Excelsior Rd	2	Arterial M	2,158	0.12	A	4	Arterial M	17,590	0.49	A	West Jackson
29	Elk Grove-Florin Rd	Florin Rd	Gerber Rd	2	Arterial M	22,960	1.28	**F**	2	Arterial M	24,660	1.37	**F**	
30.1	Excelsior Rd	Kiefer Blvd	Douglas Rd	2	Arterial M	3,716	0.21	A	2	Arterial M	4,000	0.22	A	
30.2	Excelsior Rd	Douglas Rd	Collector WJ-1/ Collector JT-1	2	Arterial M	3,716	0.21	A	4	Arterial M	23,640	0.66	B	West Jackson; Jackson Township
30.3	Excelsior Rd	Collector WJ-1/ Collector JT-1	Collector WJ-2/ Collector JT-2	2	Arterial M	3,716	0.21	A	4	Arterial M	20,080	0.56	A	West Jackson; Jackson Township
30.4	Excelsior Rd	Collector WJ-2/ Collector JT-2	Jackson Rd	2	Arterial M	3,716	0.21	A	4	Arterial M	18,460	0.51	A	West Jackson; Jackson Township
31.1	Excelsior Rd	Jackson Rd	Collector WJ-6	2	Arterial M	5,075	0.28	A	3	Arterial M	28,300	1.57	**F**	West Jackson
31.2	Excelsior Rd	Collector WJ-6	Elder Creek Rd	2	Arterial M	5,075	0.28	A	3	Arterial M	27,200	1.51	**F**	West Jackson
32	Excelsior Rd	Elder Creek Rd	Florin Rd	2	Arterial M	4,203	0.23	A	3	Arterial M	11,810	0.66	B	West Jackson
33	Excelsior Rd	Florin Rd	Gerber Rd	2	Arterial M	5,423	0.30	A	2	Arterial M	12,980	0.72	C	
34	Excelsior Rd	Gerber Rd	Calvine Rd	2	Arterial M	4,229	0.23	A	2	Arterial M	10,200	0.57	A	
35	Excelsior Rd	Calvine Rd	Sheldon Rd	2	Arterial M	4,473	0.25	A	2	Arterial M	8,520	0.47	A	
36	Florin Rd	Stockton Blvd	Power Inn Rd	4	Arterial M	27,495	0.76	C	4	Arterial M	31,670	0.88	D	
37	Florin Rd	Power Inn Rd	Florin-Perkins Rd	4	Arterial M	21,595	0.60	A	4	Arterial M	31,000	0.86	D	
38	Florin Rd	Florin-Perkins Rd	So Watt Ave/ Elk Grove Florin Rd	4	Arterial M	14,163	0.39	A	4	Arterial M	23,830	0.66	B	
39	Florin Rd	South Watt Ave	Hedge Ave	2	Arterial M	7,718	0.43	A	2	Arterial M	16,140	0.90	D	
40	Florin Rd	Hedge Ave	Mayhew Rd	2	Arterial M	6,312	0.35	A	2	Arterial M	13,120	0.73	C	
41	Florin Rd	Mayhew Rd	Bradshaw Rd	2	Arterial M	6,317	0.35	A	2	Arterial M	13,330	0.74	C	
42.1	Florin Rd	Bradshaw Rd	Vineyard Rd	2	Arterial M	3,478	0.19	A	2	Arterial M	12,770	0.71	C	
42.2	Florin Rd	Vineyard Rd	Excelsior Rd	2	Arterial M	3,478	0.19	A	3	Arterial M	10,520	0.58	A	West Jackson
43	Florin Rd	Excelsior Rd	Sunrise Blvd	2	Arterial M	3,835	0.21	A	2	Arterial M	7,260	0.40	A	
44	Folsom Blvd	Howe Ave	Jackson Rd	4	Arterial M	37,516	1.04	**F**	4	Arterial M	54,050	1.50	**F**	
45	Fruitridge Rd	65th St	Power Inn Rd	4	Arterial M	16,634	0.46	A	4	Arterial M	22,960	0.64	B	
46	Fruitridge Rd	Power Inn Rd	Florin Perkins Rd	4	Arterial M	15,214	0.42	A	4	Arterial M	27,800	0.77	C	
47	Fruitridge Rd	Florin Perkins Rd	South Watt Ave	2	Arterial M	10,280	0.57	A	2	Arterial M	22,110	1.23	**F**	

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Table 9.5
Existing Plus FOUR PROJECTS (Proposed Project) Roadway Segment Levels of Service

ID	Roadway	Segment		Existing					Existing + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
48	Fruitridge Rd	South Watt Ave	Hedge Ave	2	Arterial M	2,890	0.16	A	3	Arterial M	14,910	0.83	D	West Jackson
49.1	Fruitridge Rd	Hedge Ave	Collector WJ-12	2	Arterial M	1,790	0.10	A	4	Arterial M	17,470	0.49	A	West Jackson
49.2	Fruitridge Rd	Collector WJ-12	Mayhew Rd	2	Arterial M	1,790	0.10	A	4	Arterial M	15,870	0.44	A	West Jackson
50	Grant Line Rd	White Rock Rd	Douglas Rd	2	Rural NS	7,189	0.42	D	2	Rural NS	9,330	0.55	D	
51	Grant Line Rd	Douglas Rd	Kiefer Blvd	2	Rural S	6,143	0.31	C	2	Rural S	8,500	0.43	D	
52	Grant Line Rd	Kiefer Blvd	Jackson Rd	2	Rural S	5,758	0.29	C	2	Rural S	7,820	0.39	D	
53	Grant Line Rd	Jackson Rd	Sunrise Blvd	2	Rural S	14,720	0.74	E	2	Rural S	13,350	0.67	E	
54	Grant Line Rd	Sunrise Blvd	Calvine Rd	2	Rural S	14,812	0.74	E	2	Rural S	18,520	0.93	E	
55.1	Grant Line Rd	Calvine Rd	Elk Grove City Limit	2	Rural S	13,140	0.66	**E**	2	Rural S	15,870	0.79	**E**	
55.2	Grant Line Rd	Elk Grove City Limit	Sheldon Rd	2	Rural S	13,140	0.66	**E**	2	Rural S	15,920	0.80	**E**	
56	Grant Line Rd	Sheldon Rd	Wilton Rd	2	Rural S	17,459	0.87	**E**	2	Rural S	22,670	1.13	**F**	
57	Grant Line Rd	Wilton Rd	Bond Rd	2	Rural S	16,064	0.80	**E**	2	Rural S	20,150	1.01	**F**	
58.1	Happy Lane	Old Placerville Road	Routier Ext	2	Rural S	4,635	0.23	C	4	Arterial M	7,410	0.21	A	West Jackson
58.2	Happy Lane	Routier Ext	Kiefer Boulevard	2	Rural S	4,635	0.23	C	4	Arterial M	19,570	0.54	A	West Jackson
59.1	Hedge Ave	Jackson Rd	Rock Creek Pkwy	2	Arterial M	3,061	0.17	A	2	Arterial M	7,630	0.42	A	
59.2	Hedge Ave	Rock Creek Pkwy	Fruitridge Rd	2	Arterial M	3,061	0.17	A	2	Arterial M	2,480	0.14	A	
60	Hedge Ave	Fruitridge Rd	Elder Creek Rd	2	Arterial M	3,737	0.21	A	2	Arterial M	3,770	0.21	A	
61	Hedge Ave	Elder Creek Rd	Florin Rd	2	Arterial M	2,722	0.15	A	2	Arterial M	3,630	0.20	A	
62	Howe Ave	US 50	Folsom Blvd	6	Arterial M	53,849	1.00	E	6	Arterial M	61,660	1.14	**F**	
63	International Dr	Mather Field Rd	Zinfandel Dr	6	Arterial M	17,500	0.32	A	6	Arterial M	22,200	0.41	A	
64	International Dr	Zinfandel Dr	Sunrise Blvd	6	Arterial M	8,802	0.16	A	6	Arterial M	10,660	0.20	A	
65	Jackson Rd	Folsom Blvd	Florin Perkins Rd	2	Arterial M	12,358	0.69	B	2	Arterial M	32,990	1.83	**F**	
66	Jackson Rd	Florin Perkins Rd	South Watt Ave	2	Arterial M	10,414	0.58	A	2	Arterial M	37,140	2.06	**F**	
67	Jackson Rd	South Watt Ave	Hedge Ave	2	Arterial M	17,060	0.95	E	4	Arterial M	58,480	1.62	**F**	West Jackson
68.1	Jackson Rd	Hedge Ave	Collector WJ-3	2	Arterial M	12,616	0.70	C	4	Arterial M	50,280	1.40	**F**	West Jackson
68.2	Jackson Rd	Collector WJ-3	Mayhew Rd	2	Arterial M	12,616	0.70	C	4	Arterial M	51,720	1.44	**F**	West Jackson
69	Jackson Rd	Mayhew Rd	Bradshaw Rd	2	Arterial M	14,996	0.83	D	6	Arterial M	49,930	0.92	E	West Jackson
70.1	Jackson Rd	Bradshaw Rd	Collector WJ-4	2	Arterial M	13,030	0.72	C	6	Arterial M	53,130	0.98	E	West Jackson
70.2	Jackson Rd	Collector WJ-4	Happy Ln	2	Arterial M	13,030	0.72	C	6	Arterial M	53,010	0.98	E	West Jackson
70.3	Jackson Rd	Happy Ln	Rock Creek Pkwy	2	Arterial M	13,030	0.72	C	6	Arterial M	34,050	0.63	B	West Jackson
70.4	Jackson Rd	Rock Creek Pkwy	Collector WJ-5	2	Arterial M	13,030	0.72	C	6	Arterial M	33,720	0.62	B	West Jackson
70.5	Jackson Rd	Collector WJ-5	Collector WJ-6	2	Arterial M	13,030	0.72	C	6	Arterial M	30,710	0.57	A	West Jackson

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Table 9.5
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ID	Roadway	Segment		Existing					Existing + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
70.6	Jackson Rd	Collector WJ-6	Excelsior Rd	2	Arterial M	13,030	0.72	C	6	Arterial M	30,730	0.57	A	West Jackson
71.1	Jackson Rd	Excelsior Rd	Collector JT-3	2	Rural Hwy	10,478	0.46	D	4	Arterial M	46,470	1.29	**F**	Jackson Township
71.2	Jackson Rd	Collector JT-3	Tree View Ln	2	Rural Hwy	10,478	0.46	D	4	Arterial M	33,450	0.93	E	Jackson Township
71.3	Jackson Rd	Tree View Ln	Collector JT-4	2	Rural Hwy	10,478	0.46	D	4	Arterial M	25,090	0.70	B	Jackson Township
71.4	Jackson Rd	Collector JT-4	Eagles Nest Rd	2	Rural Hwy	10,478	0.46	D	4	Arterial M	22,080	0.61	B	Jackson Township
72.1	Jackson Rd	Eagles Nest Rd	Rockbridge Dr	2	Rural Hwy	9,976	0.44	D	4	Arterial M	19,670	0.55	A	NewBridge
72.2	Jackson Rd	Rockbridge Dr	Sunrise Blvd	2	Rural Hwy	9,976	0.44	D	4	Arterial M	18,650	0.52	A	NewBridge
73	Jackson Rd	Sunrise Blvd	Grant Line Rd	2	Rural Hwy	13,306	0.58	D	2	Rural Hwy	17,810	0.78	**E**	
74	Kiefer Blvd	Florin Perkins Rd	South Watt Ave	2	Arterial M	4,616	0.26	A	2	Arterial M	5,570	0.31	A	
75	Kiefer Blvd	South Watt Ave	Mayhew Rd	4	Arterial M	18,668	0.52	A	4	Arterial M	26,360	0.73	C	
76	Kiefer Blvd	Mayhew Rd	Bradshaw Rd	4	Arterial M	9,274	0.26	A	4	Arterial M	37,250	1.03	**F**	
77.1	Kiefer Boulevard	Bradshaw Road	Collector WJ-14	2	Arterial M	4,618	0.26	A	6	Arterial M	43,540	0.81	D	West Jackson
77.2	Kiefer Boulevard	Collector WJ-14	Routier Ext	2	Arterial M	4,618	0.26	A	6	Arterial M	39,840	0.74	C	West Jackson
77.3	Kiefer Boulevard	Routier Ext	Happy Lane	2	Arterial M	4,618	0.26	A	6	Arterial M	39,840	0.74	C	West Jackson
78.1	Kiefer Blvd	Eagles Nest Rd	W Collector MS-1	2	Arterial M	656	0.04	A	4	Arterial M	15,640	0.43	A	NewBridge; Mather South
78.2	Kiefer Blvd	W Collector MS-1	Northbridge Dr	2	Arterial M	656	0.04	A	4	Arterial M	12,280	0.34	A	NewBridge; Mather South
78.3	Kiefer Blvd	Northbridge Dr	E Collector MS-1	2	Arterial M	656	0.04	A	4	Arterial M	12,770	0.35	A	NewBridge; Mather South
78.4	Kiefer Blvd	E Collector MS-1	Sunrise Blvd	2	Arterial M	656	0.04	A	3	Arterial M	14,640	0.81	D	NewBridge
79	Kiefer Blvd	Sunrise Blvd	Rancho Cordova Pkwy	2	Arterial M	2,786	0.15	A	2	Arterial M	2,860	0.16	A	
80	Mather Blvd / Norden Ave	Von Karman St	Bleckely St	4	Arterial M	4,373	0.12	A	4	Arterial M	5,090	0.14	A	
81	Mather Blvd	Bleckely St	Femoyer St	4	Arterial M	4,373	0.12	A	4	Arterial M	5,090	0.14	A	
82	Mather Blvd	Femoyer St	Douglas Rd	2	Arterial M	4,373	0.24	A	2	Arterial M	5,030	0.28	A	
83	Mather Blvd-Excelsior Rd	Douglas Rd	Kiefer Blvd	2	Res Collector F	6,751	0.84	E	2	Res Collector F	4,430	0.55	C	
84	Mather Field Rd	US 50	Rockingham Dr	6	Arterial M	37,755	0.70	B	6	Arterial M	40,020	0.74	C	
85	Mather Field Rd	Rockingham Dr	International Dr	6	Arterial M	37,520	0.69	B	6	Arterial M	43,830	0.81	D	
86	Mather Field Rd	International Dr	Peter A McCuen Blvd	4	Arterial M	14,857	0.41	A	4	Arterial M	15,210	0.42	A	
87	Mayhew Rd	Folsom Blvd	Goethe Rd	2	Arterial M	6,977	0.39	A	2	Arterial M	13,220	0.73	C	
88	Mayhew Rd	Goethe Rd	Kiefer Blvd	2	Arterial L	6,593	0.44	A	2	Arterial L	10,500	0.70	C	
89.1	Mayhew Rd	Jackson Rd	Rock Creek Pkwy	2	Arterial L	1,616	0.11	A	4	Arterial M	34,120	0.95	E	West Jackson

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		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
89.2	Mayhew Rd	Rock Creek Pkwy	Fruitridge Rd	2	Arterial L	1,616	0.11	A	4	Arterial M	30,700	0.85	D	West Jackson
90	Old Placerville Rd	Bradshaw Rd	Granby Dr	4	Arterial M	15,800	0.44	A	4	Arterial M	13,610	0.38	A	
91	Old Placerville Rd	Granby Dr	Happy Ln	2	Arterial M	13,573	0.75	C	2	Arterial M	10,140	0.56	A	
92	Old Placerville Rd	Happy Ln	Routier Rd	2	Arterial M	10,710	0.60	A	2	Arterial M	6,860	0.38	A	
93	Old Placerville Rd	Routier Rd	Rockingham Dr	4	Arterial M	10,710	0.30	A	4	Arterial M	28,890	0.80	D	
94	Power Inn Rd	Folsom Blvd	14th Ave	6	Arterial M	36,175	0.67	B	6	Arterial M	35,350	0.65	B	
95	Rockingham Dr	Old Placerville Rd	Mather Field Rd	4	Arterial M	19,881	0.55	A	4	Arterial M	32,660	0.91	**E**	
96	South Watt Ave	Folsom Blvd	Kiefer Blvd	6	Arterial M	40,920	0.76	C	6	Arterial M	64,520	1.19	**F**	
97	South Watt Ave	Kiefer Blvd	Jackson Rd	5	Arterial M	32,415	0.90	E	5	Arterial M	49,130	1.36	**F**	
98.1	South Watt Ave	Jackson Rd	Rock Creek Pkwy	2	Arterial M	25,832	1.44	**F**	4	Arterial M	30,510	0.85	D	West Jackson
98.2	South Watt Ave	Rock Creek Pkwy	Fruitridge Rd	2	Arterial M	25,832	1.44	**F**	4	Arterial M	29,520	0.82	D	West Jackson
99	South Watt Ave	Fruitridge Rd	Elder Creek Rd	2	Arterial M	21,567	1.20	**F**	2	Arterial M	22,370	1.24	**F**	
100	South Watt Ave	Elder Creek Rd	Florin Rd	2	Arterial M	19,069	1.06	**F**	2	Arterial M	24,520	1.36	**F**	
101	Sunrise Blvd	US 50	Folsom Blvd	7	Arterial M	54,500	1.01	**F**	7	Arterial M	55,970	1.04	**F**	
102	Sunrise Blvd	Folsom Blvd	Trade Center Dr	6	Arterial M	49,500	0.92	**E**	6	Arterial M	52,560	0.97	**E**	
103	Sunrise Blvd	Trade Center Dr	White Rock Rd	6	Arterial M	34,571	0.64	B	6	Arterial M	39,340	0.73	C	
104.1	Sunrise Blvd	White Rock Rd	International Dr	6	Arterial M	25,811	0.48	A	6	Arterial M	30,740	0.57	A	
104.2	Sunrise Blvd	International Dr	Rio Del Oro Pkwy	6	Arterial M	28,400	0.53	A	6	Arterial M	34,450	0.64	B	
104.3	Sunrise Blvd	Rio Del Oro Pkwy	Douglas Rd	6	Arterial M	25,811	0.48	A	6	Arterial M	32,950	0.61	B	
105	Sunrise Blvd	Douglas Rd	Kiefer Blvd	5	Arterial M	21,878	0.61	B	5	Arterial M	28,160	0.78	C	
106	Sunrise Blvd	Kiefer Blvd	Jackson Rd	2	Arterial M	16,894	0.94	**E**	2	Arterial M	20,180	1.12	**F**	
107	Sunrise Blvd	Jackson Rd	Florin Rd	2	Rural S	11,181	0.56	D	2	Rural S	14,170	0.71	E	
108	Sunrise Blvd	Florin Rd	Grant Line Rd	2	Rural S	7,752	0.39	D	2	Rural S	10,190	0.51	D	
109	Vineyard Rd	Gerber Rd	Calvine Rd	2	Arterial M	5,515	0.31	A	2	Arterial M	5,630	0.31	A	
110	Watt Ave	US 50	Folsom Blvd	6	Arterial H	65,242	1.09	**F**	6	Arterial H	77,810	1.30	**F**	
111	White Rock Rd	International Rd	Quality Dr	2	Arterial M	3,962	0.22	A	2	Arterial M	4,000	0.22	A	
112	White Rock Rd	Quality Dr	Zinfandel Dr	4	Arterial M	11,200	0.31	A	4	Arterial M	10,170	0.28	A	
113	White Rock Rd	Zinfandel Dr	Kilgore Rd	6	Arterial M	14,756	0.27	A	6	Arterial M	14,990	0.28	A	
114	White Rock Rd	Kilgore Rd	Sunrise Blvd	5	Arterial M	14,756	0.41	A	5	Arterial M	15,780	0.44	A	
115	White Rock Rd	Sunrise Blvd	Fitzgerald Rd	4	Arterial M	15,433	0.43	A	4	Arterial M	15,890	0.44	A	
116	White Rock Rd	Fitzgerald Rd	Grant Line Rd	2	Rural NS	2,490	0.15	B	2	Rural NS	2,090	0.12	B	
117	White Rock Rd	Grant Line Rd	Prairie City Rd	4	Arterial M	9,400	0.26	A	4	Arterial M	11,130	0.31	A	
118	Zinfandel Dr	US 50	White Rock Rd	7	Arterial M	45,228	0.84	D	7	Arterial M	49,830	0.92	**E**	

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Table 9.5
Existing Plus FOUR PROJECTS (Proposed Project) Roadway Segment Levels of Service

ID	Roadway	Segment		Existing					Existing + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
119	Zinfandel Dr	White Rock Rd	International Rd	6	Arterial M	17,923	0.33	A	6	Arterial M	26,360	0.49	A	
120	Zinfandel Dr	International Rd	Baroque Dr	6	Arterial M	7,595	0.14	A	6	Arterial M	20,550	0.38	A	
121	Zinfandel Dr	Baroque Dr	City Limit	4	Arterial M	7,595	0.21	A	4	Arterial M	20,550	0.57	A	
122	Zinfandel Dr	City Limit	Douglas Rd	2	Arterial M	7,595	0.42	A	2	Arterial M	20,550	1.14	**F**	
123.1	Zinfandel Dr	Douglas Rd	Collector MS-2	2	Arterial M	2,848	0.16	A	2	Arterial M	19,650	1.09	**F**	
123.2	Zinfandel Dr	Collector MS-2	Collector MS-3						4	Arterial M	14,360	0.40	A	Mather South
123.3	Zinfandel Dr	Collector MS-3	Collector MS-4						4	Arterial M	14,020	0.39	A	Mather South
123.4	Zinfandel Dr	Collector MS-4	Kiefer Blvd						4	Arterial M	14,660	0.41	A	Mather South
200	Kiefer Blvd	Tree View Ln	Eagles Nest Rd						2	Arterial M	22,730	1.26	**F**	West Jackson; Jackson Township; NewBridge; Mather South
300	Douglas Rd	Excelsior Rd	Rock Creek Pkwy						4	Arterial M	23,910	0.66	B	West Jackson
301	Douglas Rd	Rock Creek Pkwy	Kiefer Blvd						4	Arterial M	26,420	0.73	C	West Jackson
302	Kiefer Blvd	Happy Ln	Douglas Rd						6	Arterial M	49,610	0.92	E	West Jackson
303	Kiefer Blvd	Douglas Rd	Excelsior Rd						4	Arterial M	23,190	0.64	B	West Jackson
304	Mayhew Rd	Routier Ext	Bradshaw Rd						4	Arterial M	24,860	0.69	B	West Jackson
305	Mayhew Rd	Bradshaw Rd	Jackson Rd						4	Arterial M	26,920	0.75	C	West Jackson
306	Mayhew Rd	Fruitridge Rd	Collector WJ-13						4	Arterial M	17,260	0.48	A	West Jackson
307	Mayhew Rd	Collector WJ-13	Elder Creek Rd						3	Arterial M	17,510	0.97	E	West Jackson
308	Rock Creek Pkwy	South Watt Ave	Hedge Ave						2	Arterial M	2,340	0.13	A	West Jackson
309	Rock Creek Pkwy	Hedge Ave	Mayhew Rd						2	Arterial M	7,500	0.42	A	West Jackson
310	Rock Creek Pkwy	Mayhew Rd	Bradshaw Rd						2	Arterial M	3,460	0.19	A	West Jackson
311	Rock Creek Pkwy East	Excelsior Road	Collector WJ-16						2	Arterial M	6,250	0.35	A	West Jackson
312	Rock Creek Pkwy East	Collector WJ-16	Jackson Road						2	Arterial M	12,990	0.72	C	West Jackson
313	Vineyard Rd	Jackson Road	New Collector						4	Arterial M	22,830	0.63	B	West Jackson
314	Vineyard Rd	New Collector	Collector WJ-18						4	Arterial M	19,760	0.55	A	West Jackson
315	Vineyard Rd	Collector WJ-18	Elder Creek Road						4	Arterial M	17,260	0.48	A	West Jackson
316	Vineyard Rd	Elder Creek Road	Florin Road						4	Arterial M	8,820	0.25	A	West Jackson
317	Routier Ext	Old Placerville Road	Happy Lane						4	Arterial M	34,310	0.95	E	West Jackson
318	Routier Ext	Happy Lane	Kiefer Boulevard						4	Arterial M	22,770	0.63	B	West Jackson
319	Routier Ext	Kiefer Boulevard	Mayhew Road						4	Arterial M	23,800	0.66	B	West Jackson
320	Collector WJ-16	Rock Creek Pkwy	Collector WJ-6						2	Res Collector F	830	0.10	A	West Jackson

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Table 9.5
Existing Plus FOUR PROJECTS (Proposed Project) Roadway Segment Levels of Service

ID	Roadway	Segment		Existing					Existing + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
321	Collector WJ-17	Rock Creek Pkwy	Collector WJ-6						2	Res Collector F	730	0.09	A	West Jackson
322	Collector WJ-6	Collector WJ-16/WJ-17	Jackson Road						2	Res Collector F	2,550	0.32	B	West Jackson
323	Collector WJ-6	Jackson Road	Collector WJ-18						2	Res Collector F	2,970	0.37	B	West Jackson
324	Collector WJ-2	Excelsior Road	Collector WJ-6						2	Res Collector F	2,510	0.31	B	West Jackson
325	Collector WJ-18	Vineyard Rd	Collector WJ-6						2	Res Collector F	2,830	0.35	B	West Jackson
326	Collector WJ-18	Collector WJ-6	Excelsior Road						2	Res Collector F	3,150	0.39	B	West Jackson
327	Collector WJ-19	Bradshaw Road	Vineyard Road						2	Arterial M	4,850	0.27	A	West Jackson
400	Collector JT-1	Excelsior Rd	Collector JT-3						2	Res Collector F	3,360	0.42	C	Jackson Township
401	Collector JT-1	Collector JT-3	Tree View Ln						2	Res Collector F	1,430	0.18	A	Jackson Township
402	Collector JT-3	Kiefer Blvd	Collector JT-1						2	Res Collector F	2,230	0.28	B	Jackson Township
403	Collector JT-3	Collector JT-1	Collector JT-6						2	Res Collector F	1,420	0.18	A	Jackson Township
404	Collector JT-3	Collector JT-6	Collector JT-5						2	Res Collector F	2,860	0.36	B	Jackson Township
405	Collector JT-3	Collector JT-5	Jackson Rd						2	Arterial M	14,560	0.81	D	Jackson Township
406	Collector JT-4	Jackson Rd	Bridgewater Dr						2	Arterial M	2,400	0.13	A	Jackson Township
407	Collector JT-5	Collector JT-3	Tree View Ln						2	Arterial M	6,980	0.39	A	Jackson Township
408	Collector JT-6	Excelsior Rd	Collector JT-3						2	Res Collector F	4,020	0.50	C	Jackson Township
409	Collector JT-6	Collector JT-3	Tree View Ln						2	Res Collector F	590	0.07	A	Jackson Township
410	Kiefer Blvd	Excelsior Rd	Tree View Ln						4	Arterial M	20,420	0.57	A	Jackson Township
411	Tree View Ln	Kiefer Blvd	Collector JT-1						4	Arterial M	10,300	0.29	A	Jackson Township
412	Tree View Ln	Collector JT-1	Collector JT-6						4	Arterial M	9,810	0.27	A	Jackson Township

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Table 9.5
Existing Plus FOUR PROJECTS (Proposed Project) Roadway Segment Levels of Service

ID	Roadway	Segment		Existing					Existing + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
413	Tree View Ln	Collector JT-6	Collector JT-5						4	Arterial M	9,720	0.27	A	Jackson Township
414	Tree View Ln	Collector JT-5	Jackson Rd						4	Arterial M	4,900	0.14	A	Jackson Township
415	Collector JT-7	Collector JT-3	Tree View Ln						2	Arterial M	1,490	0.08	A	Jackson Township
416	Collector JT-8	Collector JT-3	Tree View Ln						2	Arterial M	1,940	0.11	A	Jackson Township
417	Collector JT-9	Jackson Rd	Collector JT-8						2	Arterial M	6,430	0.36	A	Jackson Township
418	Collector JT-10	Jackson Rd	Collector JT-8						2	Arterial M	1,980	0.11	A	Jackson Township
419	Collector JT-6	Tree View Ln	Jackson Rd						2	Res Collector F	780	0.10	A	Jackson Township
500	S Bridgewater Dr	Collector JT-4	Eagles Nest Rd						2	Res Collector F	3,470	0.43	C	NewBridge
501	S Bridgewater Dr	Eagles Nest Rd	Northbridge Dr						2	Res Collector F	3,150	0.39	B	NewBridge
502	N Bridgewater Dr	Northbridge Dr	Eagles Nest Rd						2	Res Collector F	1,070	0.13	A	NewBridge
503	Northbridge Dr	Kiefer Blvd	Bridgewater Dr						2	Arterial M	2,750	0.15	A	NewBridge
504	Street A	S Bridgewater Dr	Street B						2	Res Collector F	1,470	0.18	A	NewBridge
505	Street B	S Bridgewater Dr	Street A						2	Res Collector F	1,270	0.16	A	NewBridge
506	Rockbridge Dr	Street B	Stonebridge Dr						2	Res Collector F	1,490	0.19	A	NewBridge
507	Rockbridge Dr	Stonebridge Dr	Jackson Rd						2	Arterial M	4,380	0.24	A	NewBridge
508	Stonebridge Dr	S Bridgewater Dr	Rockbridge Dr						2	Arterial M	2,210	0.12	A	NewBridge
509	Stonebridge Dr	Rockbridge Dr	Jackson Rd						2	Res Collector F	2,450	0.31	B	NewBridge
600	Collector MS-1	Kiefer Boulevard	Collector MS-5						2	Arterial M	9,910	0.55	A	Mather South
601	Collector MS-1	Collector MS-5	Collector MS-4						2	Arterial M	4,810	0.27	A	Mather South
602	Collector MS-1	Collector MS-4	Collector MS-3						2	Res Collector F	5,260	0.66	D	Mather South
603	Collector MS-1	Collector MS-3	Collector MS-2						2	Arterial M	2,560	0.14	A	Mather South
604	Collector MS-2	Eagles Nest Road	Collector MS-5						2	Arterial M	7,330	0.41	A	Mather South
605	Collector MS-3	Eagles Nest Road	Collector MS-5						2	Arterial M	5,980	0.33	A	Mather South
606	Collector MS-4	Eagles Nest Road	Collector MS-5						2	Arterial M	6,020	0.33	A	Mather South
607	Collector MS-5	Kiefer Boulevard	Collector MS-1						2	Arterial M	4,650	0.26	A	Mather South

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Table 9.5
Existing Plus FOUR PROJECTS (Proposed Project) Roadway Segment Levels of Service

ID	Roadway	Segment		Existing					Existing + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Daily Volume	Volume / Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	

Note: Gray shading indicates changes in travel lanes or facility type that the project is responsible to provide.

[1] The following classifications are used to determine daily roadway capacity:
Arterial L - Arterial, Low Access Control
Arterial M - Arterial, Moderate Access Control
Arterial H - Arterial, High Access Control
Rural Hwy - Rural 2-lane Highway
Rural S - Rural 2-lane Road, 24'-36' of pavement, Paved Shoulders
Rural NS - Rural 2-lane Road, 24'-36' of pavement, No Shoulders
Res Collector F - Residential Collector with Frontage
Res Collector NF - Residential Collector with No Frontage

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9.4.2 Existing Plus FOUR PROJECTS Intersection Impacts

Tables 9.6 and 9.7 summarize the results of the operations analysis for the study area intersections. The tables include the implementation of intersection changes associated with the FOUR PROJECTS. Table 9.7 illustrates the type of traffic control and number of lanes by type on each study area intersection approach. Shaded table cells indicate those locations where changes in traffic control and / or number of approach lanes by type would be fully funded by the project(s) shown in the last column. Shaded table cells in Table 9.6 illustrate those locations with an LOS impact. Detailed analysis information is included in the technical appendix.

Signal warrant analysis was conducted for all unsignalized intersections along Jackson Road, and other unsignalized intersections in close proximity to the project. The project is considered to have a significant impact at an unsignalized location if both the impact criteria in Table 1.6 are met, and one or more of the signal warrants specified in the California Manual on Uniform Traffic Control Devices (CAMUTCD) are met. The following unsignalized intersections exhibit significant impacts and meet one or more traffic signal warrants:

- Hedge Avenue and Florin Road
- Happy Lane and Old Placerville Road
- Excelsior Road and Gerber Road
- Eagles Nest Road and Florin Road
- Excelsior Road and Calvine Road

9.4.3 Existing Plus FOUR PROJECTS U.S. 50 Freeway Impacts

9.4.3.1 Freeway Basic Segments

Table 9.8 summarizes a.m. and p.m. peak hour US 50 freeway mainline operations. Details of the analysis are included in the technical appendix. The following locations exhibit significant impacts:

- Eastbound US 50
    - Stockton Boulevard to 59th Street - a.m. peak hour
    - Zinfandel Drive to Hazel Avenue - p.m. peak hour
- Westbound US 50
    - Watt Avenue to SR 99 / SR 51 - p.m. peak hour

9.4.3.2 Freeway Merge/Diverge/Weave Segments

Table 9.9 summarizes a.m. and p.m. peak hour freeway operations at ramp junctions and weaving areas. Details of the analysis are included in the technical appendix. The following locations exhibit significant impacts:

- Eastbound
    - 65th Street to Howe Avenue weave - a.m. peak hour
    - Mather Field Road to Zinfandel Drive weave - a.m. peak hour

9.4.3.3 Freeway Ramp Intersection Queuing

Table 9.10 summarizes a.m. and p.m. peak hour freeway ramp intersection queuing. No locations exhibit a significant impact.

Table 9.6

Existing Plus FOUR PROJECTS (Proposed Project) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus FOUR PROJECTS			LOS Impact	Existing			Existing Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
1	Howe Avenue & College Town Drive/US 50 WB Ramps	Signal	D	36.6	Signal	B	17.6	No	Signal	D	44.4	Signal	C	25.7	No
2	Howe Avenue & US 50 EB Ramps	Signal	B	16.9	Signal	C	29.5	No	Signal	C	20.5	Signal	B	12.0	No
3	Power Inn Road/Howe Avenue & Folsom Blvd	Signal	D	39.1	Signal	E	74.2	No	Signal	D	55.0	Signal	E	56.6	No
4	Power Inn Road & 14th Avenue	Signal	C	31.5	Signal	B	15.9	No	Signal	D	39.6	Signal	C	20.7	No
5	Power Inn Road & Fruitridge Road	Signal	D	43.4	Signal	D	53.3	No	Signal	C	33.5	Signal	D	36.3	No
6	Jackson Road/Notre Dame Dr. & Folsom Blvd.	Signal	D	36.8	Signal	C	31.1	No	Signal	C	32.1	Signal	D	43.0	No
7	Florin Perkins Road/Julliard Dr. & Folsom Boulevard	Signal	D	39.0	Signal	C	25.1	No	Signal	E	55.6	Signal	C	31.7	No
8	Florin Perkins Road & Kiefer Blvd.	Two-way stop			Two-way stop			No	Two-way stop			Two-way stop			No
	Westbound Left Turn		*C*	*20.1*		*C*	*19.4*			*C*	*23.3*		D	33.5	
	Westbound Right Turn		*B*	*13.3*		*B*	*11.6*			*B*	*12.6*		*B*	*13.4*	
	Southbound Left Turn		*A*	*10.0*		*A*	*9.4*			*B*	*10.9*		*B*	*13.0*	
9	Florin Perkins Road & Jackson Road	Signal	D	51.5	Signal	E	68.8	No	Signal	D	54.1	Signal	F	146.5	Yes
10	Florin Perkins Road & Fruitridge Road	Signal	C	25.1	Signal	C	27.3	No	Signal	C	25.4	Signal	C	22.9	No
11	Florin Perkins Road & Elder Creek Road	Signal	C	25.7	Signal	C	23.9	No	Signal	C	26.2	Signal	C	26.7	No
12	Watt Avenue & Folsom Blvd.	Signal	E	66.2	Signal	E	75.0	No	Signal	E	71.9	Signal	E	75.2	No
13	S. Watt Ave. & Reith Ct/Manlove Road	Signal	B	19.6	Signal	B	10.8	No	Signal	D	54.1	Signal	B	12.9	No
14	S. Watt Avenue & Kiefer Blvd.	Signal	E	56.0	Signal	F	125.6	Yes	Signal	E	75.9	Signal	F	111.6	Yes

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Table 9.6

Existing Plus FOUR PROJECTS (Proposed Project) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus FOUR PROJECTS			LOS Impact	Existing			Existing Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
15	S. Watt Avenue & Canberra Dr.	Signal	B	11.5	Signal	A	8.3	No	Signal	A	9.7	Signal	A	6.3	No
16	S. Watt Avenue & Jackson Road	Signal	E	62.5	Signal	F	336.6	Yes	Signal	E	66.4	Signal	F	730.1	Yes
17	S. Watt Avenue & Fruitridge Road	Signal	D	38.1	Signal	D	51.4	No	Signal	D	41.7	Signal	E	63.6	Yes
18	S. Watt Avenue & Elder Creek Road	Signal	E	62.7	Signal	F	124.3	Yes	Signal	E	68.8	Signal	F	144.2	Yes
20	Elk Grove Florin Road/S. Watt Ave. & Florin Road	Signal	D	54.7	Signal	D	47.6	No	Signal	D	51.8	Signal	E	56.8	No
21	Elk Grove Florin Road & Gerber Road	Signal	D	49.1	Signal	D	44.6	No	Signal	E	64.6	Signal	E	77.9	No
23	Hedge Avenue & Jackson Road	Signal	D	35.1	Signal	E	77.9	No	Signal	D	37.3	Signal	C	30.6	No
24	Hedge Avenue & Fruitridge Road	All-way stop	B	13.6	Signal	B	18.1	No	All-way stop	A	9.4	Signal	B	14.4	No
25	Hedge Avenue & Elder Creek Road	All-way stop	C	15.9	Signal	B	18.8	No	All-way stop	B	11.6	Signal	C	24.6	No
26	Hedge Avenue & Tokay Lane	Two-way stop			Two-way stop			No	Two-way stop			Two-way stop			No
	Northbound Left Turn		*A*	*0.0*		*A*	*0.0*			*A*	*0.0*		*A*	*0.0*	
	Southbound Left Turn		*A*	*8.0*		*A*	*8.6*			*A*	*7.3*		*A*	*7.4*	
	Eastbound		*B*	*12.2*		*B*	*14.5*			*B*	*10.2*		*B*	*12.6*	
	Westbound		*B*	*11.1*		*B*	*13.0*			*A*	*9.6*		*B*	*11.0*	
27	Hedge Avenue & Florin Road	All-way stop	B	12.9	All-way stop	F	221.8	Yes	All-way stop	B	11.1	All-way stop	E	47.3	No
28	Mayhew Road & Kiefer Boulevard	Signal	D	48.6	Signal	E	74.7	No	Signal	D	51.1	Signal	D	51.6	No

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Table 9.6

Existing Plus FOUR PROJECTS (Proposed Project) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus FOUR PROJECTS			LOS Impact	Existing			Existing Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
29	Mayhew Road & Jackson Road	Two-way stop			Signal	D	53.7	No	Two-way stop			Signal	D	52.8	No
	Northbound Through - Left Turn		*D*	*27.6*						*D*	*34.0*				
	Northbound Right Turn		*B*	*11.8*						*C*	*15.0*				
	Southbound		*C*	*18.3*						*C*	*24.9*				
	Eastbound Left Turn		*A*	*8.9*						*A*	*8.4*				
	Westbound Left Turn		*A*	*8.3*						*A*	*9.3*				
30	Mayhew Road & Fruitridge Road	Two-way stop			Signal	B	14.5	No	Two-way stop			Signal	C	20.2	No
	Northbound Left Turn		*A*	*0.0*						*A*	*7.4*				
	Eastbound		*A*	*9.2*						*A*	*9.2*				
31	Mayhew Road & Elder Creek Road	Two-way stop			Signal	F	>300	Yes	Two-way stop			Signal	F	269.2	Yes
	Northbound		*B*	*11.9*						*B*	*10.9*				
	Southbound		*B*	*11.1*						*A*	*9.8*				
	Eastbound Left Turn		*A*	*8.3*						*A*	*7.6*				
	Westbound Left Turn		*A*	*7.5*						*A*	*0.0*				
32	Woodring Drive & Zinfandel Drive	Two-way stop			Two-way stop			Yes	Two-way stop			Two-way stop			Yes
	Eastbound		*A*	*9.3*		F	86.5			*A*	*9.3*		F	79.1	
	Northbound Left Turn		*A*	*0.0*		*A*	*9.5*			*A*	*0.0*		*B*	*10.1*	
33	Bradshaw Road & Folsom Blvd.	Signal	E	56.7	Signal	B	19.5	No	Signal	D	49.9	Signal	B	18.4	No
34	Bradshaw Road & US 50 WB Ramps	Signal	B	15.9	Signal	A	7.5	No	Signal	B	15.2	Signal	C	24.2	No
35	Bradshaw Road & US 50 EB Ramps	Signal	C	24.4	Signal	D	40.0	No	Signal	B	16.0	Signal	C	30.2	No
36	Bradshaw Road & Old Placerville Road	Signal	D	45.9	Signal	E	62.3	Yes	Signal	D	52.0	Signal	E	62.5	Yes
37	Bradshaw Road & Kiefer Boulevard	Signal	D	45.7	Signal	F	108.6	Yes	Signal	E	66.2	Signal	F	105.4	Yes

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Table 9.6

Existing Plus FOUR PROJECTS (Proposed Project) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus FOUR PROJECTS			LOS Impact	Existing			Existing Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
38	Bradshaw Road & Jackson Road	Signal	E	73.1	Signal	F	100.6	Yes	Signal	E	59.4	Signal	F	82.4	Yes
39	Bradshaw Road & Elder Creek Road	Signal	D	36.8	Signal	F	81.6	Yes	Signal	D	36.1	Signal	E	71.6	No
40	Bradshaw Road & Florin Road	Signal	D	38.1	Signal	F	112.5	Yes	Signal	D	53.6	Signal	E	74.7	No
41	Bradshaw Road & Gerber Road	Signal	E	72.2	Signal	E	76.1	No	Signal	D	49.9	Signal	D	45.4	No
42	Happy Lane & Old Placerville Road	Two-way stop			Two-way stop			No	Two-way stop			Two-way stop			Yes
	Northbound Left Turn		*F*	*64.8*		E	45.9			*F*	*95.9*		*F*	*>300*	
	Northbound Right Turn		*D*	*30.6*		C	15.9			*C*	*15.4*		B	13.6	
	Westbound Left Turn		*B*	*10.2*		A	9.0			*B*	*10.1*		*A*	*9.2*	
43	Happy Lane & Kiefer Boulevard	Free Turn			Signal	D	47.9	No	Free Turn			Signal	C	27.8	No
44	Excelsior Road & Kiefer Boulevard	West Jackson/Jackson Township Project Int.			Signal	C	32.1	No	West Jackson/Jackson Township Project Int.			Signal	C	22.4	No
45	Excelsior Road & Jackson Road	Signal	D	36.7	Signal	F	281.1	Yes	Signal	D	40.3	Signal	F	225.2	Yes
46	Excelsior Road & Elder Creek Road	Two-way stop	A	3.5	Signal	D	46.2	No	Two-way stop	A	2.7	Signal	D	45.5	No
	Northbound Left Turn		*A*	*7.5*						*A*	*8.0*				
	Eastbound		*C*	*18.6*						*B*	*12.3*				
47	Excelsior Road & Florin Road	All-way stop	C	24.9	Signal	D	50.7	No	All-way stop	B	12.5	Signal	D	40.8	No
48	Excelsior Road & Gerber Road/Birch Ranch Drive	All-way stop	B	14.0	All-way stop	F	158.8	Yes	All-way stop	B	10.6	All-way stop	F	104.3	Yes
49	Mather Field Road & US 50 WB Ramps	Signal	C	24.7	Signal	B	13.2	No	Signal	A	9.4	Signal	A	6.0	No
50	Mather Field Road & US 50 EB Ramps	Signal	C	27.7	Signal	B	17.7	No	Signal	B	13.4	Signal	A	6.9	No

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Table 9.6

Existing Plus FOUR PROJECTS (Proposed Project) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus FOUR PROJECTS			LOS Impact	Existing			Existing Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
51	Mather Field Road & Rockingham Drive	Signal	E	56.4	Signal	F	132.2	Yes	Signal	D	54.7	Signal	E	62.0	Yes
52	Mather Boulevard & Douglas Road	All-way stop	E	39.3	All-way stop	B	14.9	No	All-way stop	C	15.5	All-way stop	B	12.4	No
53	Zinfandel Drive & US 50 WB Ramps	Signal	B	16.4	Signal	A	9.8	No	Signal	D	51.7	Signal	C	28.7	No
54	Zinfandel Drive & US 50 EB Ramps/Gold Center Drive	Signal	D	40.0	Signal	D	53.8	No	Signal	E	60.1	Signal	D	45.0	No
55	Zinfandel Drive & White Rock Road	Signal	D	47.7	Signal	C	23.2	No	Signal	D	54.7	Signal	D	39.2	No
56	Zinfandel Drive & Data Drive	Signal	D	49.3	Signal	B	15.8	No	Signal	D	52.9	Signal	C	21.9	No
57	Zinfandel Drive & International Dr	Signal	C	34.0	Signal	C	23.1	No	Signal	D	48.5	Signal	C	29.6	No
58	Zinfandel Drive & Douglas Road	Signal	E	55.5	Signal	D	40.5	No	Signal	D	54.2	Signal	C	26.8	No
59	Eagles Nest Road/Zinfandel Drive & Kiefer Boulevard	Free Turn			Signal	C	27.3	No	Free Turn			Signal	C	21.7	No
60	Eagles Nest Road & Jackson Road	Two-way stop			Signal	C	23.5	No	Two-way stop			Signal	C	21.0	No
	Northbound		*C*	*22.0*						*C*	*23.8*				
	Southbound		*B*	*13.9*						*C*	*22.0*				
	Eastbound Left Turn		*A*	*8.8*						*A*	*7.9*				
	Westbound Left Turn		*A*	*7.9*						*A*	*8.7*				
61	Eagles Nest Road & Florin Road	Two-way stop			Two-way stop			Yes	Two-way stop			Two-way stop			Yes
	Northbound		*B*	*12.7*		*F*	*141.4*			*B*	*12.1*		D	25.5	
	Southbound		*B*	*10.0*		C	20.3			*B*	*10.5*		*F*	*76.6*	
	Eastbound Left Turn		*A*	*7.7*		*A*	*5.4*			*A*	*7.7*		*A*	*8.0*	
	Westbound Left Turn		*A*	*0.0*		*A*	*0.0*			*A*	*7.6*		*A*	*7.6*	

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Table 9.6

Existing Plus FOUR PROJECTS (Proposed Project) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus FOUR PROJECTS			LOS Impact	Existing			Existing Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
62	Sunrise Boulevard & US 50 WB Ramps	Signal	D	44.7	Signal	D	36.0	No	Signal	B	19.7	Signal	A	9.5	No
63	Sunrise Boulevard & US 50 EB Ramps	Signal	B	16.9	Signal	B	13.2	No	Signal	B	17.6	Signal	B	12.5	No
64	Sunrise Boulevard & Folsom Boulevard	Signal	D	54.4	Signal	C	31.6	No	Signal	D	48.6	Signal	D	36.1	No
65	Sunrise Boulevard & White Rock Road	Signal	D	47.8	Signal	C	33.1	No	Signal	D	51.6	Signal	D	36.5	No
66	Sunrise Boulevard & International Drive/Monier Circle	Signal	D	47.8	Signal	B	16.3	No	Signal	D	45.8	Signal	C	21.0	No
67	Sunrise Boulevard & Douglas Road	Signal	D	51.7	Signal	C	32.6	No	Signal	D	46.5	Signal	C	20.7	No
68	Sunrise Boulevard & Chrysanthy Boulevard	Signal	C	27.0	Signal	B	10.4	No	Signal	C	21.0	Signal	A	7.9	No
69	Sunrise Boulevard & Kiefer Boulevard	Signal	D	53.6	Signal	E	60.7	Yes	Signal	C	27.0	Signal	D	39.5	No
70	Sunrise Boulevard & Jackson Road	Signal	E	57.0	Signal	F	123.0	Yes	Signal	D	47.2	Signal	E	72.6	Yes
71	Sunrise Boulevard & Florin Road	Signal	B	11.3	Signal	A	8.6	No	Signal	D	48.3	Signal	B	15.8	No
72	Sheldon Lake Drive/Sunrise Boulevard & Grant Line Road	Signal	D	43.2	Signal	C	22.4	No	Signal	D	40.7	Signal	C	27.6	No
73	Hazel Avenue & Tributary Point Drive/US 50 WB Off-ramp	Signal	C	31.2	Signal	C	27.7	No	Signal	D	41.4	Signal	B	17.1	No
74	Hazel Avenue & US 50 EB Ramps	Signal	C	20.6	Signal	B	10.5	No	Signal	C	29.9	Signal	A	4.6	No
75	Hazel Avenue & Folsom Boulevard	Signal	D	51.7	Signal	C	30.1	No	Signal	D	46.7	Signal	D	43.6	No
76	Prairie City Road & White Rock Road	Signal	B	19.2	Signal	B	12.4	No	Signal	B	15.0	Signal	B	10.2	No

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Table 9.6

Existing Plus FOUR PROJECTS (Proposed Project) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus FOUR PROJECTS			LOS Impact	Existing			Existing Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
77	Grant Line Road & White Rock Road	Signal	B	10.9	Signal	A	6.7	No	Signal	B	11.2	Signal	A	6.8	No
78	Grant Line Road & Douglas Road	All-way stop	C	15.2	Signal	B	14.8	No	All-way stop	B	12.3	Signal	B	11.0	No
79	Grant Line Road & Kiefer Boulevard	All-way stop	B	11.4	All-way stop	C	15.1	No	All-way stop	B	10.5	All-way stop	C	15.6	No
80	Grant Line Road & Jackson Road	Signal	E	74.0	Signal	F	98.3	Yes	Signal	E	78.9	Signal	E	70.7	No
81	Watt Avenue & US-50 EB Ramps	Signal	B	13.0	Signal	B	11.9	No	Signal	B	14.9	Signal	B	12.9	No
82	Watt Avenue & US-50 WB Ramps	Signal	C	32.9	Signal	C	31.5	No	Signal	C	28.6	Signal	C	29.6	No
83	Mayhew Rd & Folsom Blvd.	Signal	B	19.8	Signal	B	15.6	No	Signal	C	20.1	Signal	B	16.3	No
84	65th Street Expy & Fruitridge Road	Signal	C	31.2	Signal	C	34.8	No	Signal	D	35.3	Signal	C	32.9	No
85	Power Inn Road & Elder Creek Road	Signal	D	35.2	Signal	C	30.1	No	Signal	D	36.3	Signal	C	33.7	No
86	Power Inn Road & Florin Rd	Signal	D	36.3	Signal	E	70.9	No	Signal	D	45.9	Signal	E	64.8	No
87	Florin Perkins Road & Florin Rd	Signal	D	36.7	Signal	D	37.6	No	Signal	C	32.5	Signal	D	44.1	No
88	Bradshaw Rd & Calvine Rd	Signal	C	30.5	Signal	C	34.0	No	Signal	D	36.9	Signal	D	45.7	No
89	Vineyard Rd & Calvine Rd	Signal	C	30.8	Signal	B	14.1	No	Signal	C	34.9	Signal	B	12.7	No
90	Excelsior Road & Calvine Rd	All-way stop	C	16.6	All-way stop	F	121.0	Yes	All-way stop	B	13.0	All-way stop	F	80.4	Yes
91	Grant Line Rd & Eagles Nest Rd/Sloughhouse Rd	Signal	D	51.7	Signal	B	16.2	No	Signal	D	46.5	Signal	D	52.6	No

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Table 9.6

Existing Plus FOUR PROJECTS (Proposed Project) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus FOUR PROJECTS			LOS Impact	Existing			Existing Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
92	Grant Line Rd & Calvine Rd	Signal	C	21.4	Signal	C	21.3	No	Signal	C	24.0	Signal	C	24.6	No
93	Grant Line Rd & Dwy/Wilton Rd	Signal	E	65.9	Signal	F	83.2	Yes	Signal	E	64.8	Signal	E	73.0	Yes
94	Grant Line Rd & Bond Rd/Wrangler Dr	Signal	C	33.3	Signal	B	14.6	No	Signal	D	46.4	Signal	B	15.1	No
200	Excelsior Road & Collector WJ-1/Collector JT-1	West Jackson/Jackson Township Project Int.			Signal	C	21.7	No	West Jackson/Jackson Township Project Int.			Signal	B	18.6	No
201	Excelsior Road & Collector WJ-2/Collector JT-2	West Jackson/Jackson Township Project Int.			Signal	B	17.9	No	West Jackson/Jackson Township Project Int.			Signal	B	16.9	No
202	W Collector MS-1 & Kiefer Boulevard	Mather South Project Int.			Signal	B	16.4	No	Mather South Project Int.			Signal	B	10.9	No
203	Northbridge Dr & Kiefer Boulevard	NewBridge Project Int.			Signal	A	7.3	No	NewBridge Project Int.			Signal	A	6.1	No
204	E Collector MS-1 & Kiefer Boulevard	Mather South Project Int.			Signal	B	12.0	No	Mather South Project Int.			Signal	B	12.8	No
300	Collector WJ-3 & Jackson Road	West Jackson Project Int.			Signal	B	14.6	No	West Jackson Project Int.			Signal	A	8.4	No
301	Collector WJ-4 & Jackson Road	West Jackson Project Int.			Signal	B	19.7	No	West Jackson Project Int.			Signal	B	17.3	No
302	Happy Lane & Jackson Road	West Jackson Project Int.			Signal	E	69.5	No	West Jackson Project Int.			Signal	E	65.6	No
304	Collector WJ-5 & Jackson Road	West Jackson Project Int.			Signal	B	12.6	No	West Jackson Project Int.			Signal	B	15.0	No
305	Collector WJ-6 & Jackson Road	West Jackson Project Int.			Signal	B	13.1	No	West Jackson Project Int.			Signal	B	13.6	No
306	Excelsior Road & Collector WJ-6	West Jackson Project Int.			Signal	C	22.1	No	West Jackson Project Int.			Signal	A	6.7	No
307	S. Watt Avenue & Rock Creek Pkwy	West Jackson Project Int.			Signal	A	5.6	No	West Jackson Project Int.			Signal	A	6.8	No

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Table 9.6

Existing Plus FOUR PROJECTS (Proposed Project) Intersection Levels of Service

Intersection		AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus FOUR PROJECTS			LOS Impact	Existing			Existing Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
308	Hedge Avenue & Rock Creek Pkwy WB	West Jackson Project Int.			Roundabout	A	7.5	No	West Jackson Project Int.			Roundabout	A	6.0	No
309	Hedge Avenue & Rock Creek Pkwy EB	West Jackson Project Int.			Roundabout	A	6.8	No	West Jackson Project Int.			Roundabout	A	6.1	No
310	Mayhew Road & Rock Creek Pkwy WB	West Jackson Project Int.			Roundabout	C	22.2	No	West Jackson Project Int.			Roundabout	C	23.2	Yes
311	Mayhew Road & Rock Creek Pkwy EB	West Jackson Project Int.			Roundabout	D	26.2	No	West Jackson Project Int.			Roundabout	C	17.7	No
312	Bradshaw Road & Rock Creek Pkwy	West Jackson Project Int.			Signal	A	6.7	No	West Jackson Project Int.			Signal	B	12.7	No
314	Vineyard Road/Happy Lane & Rock Creek Pkwy	West Jackson Project Int.			Signal	A	6.0	No	West Jackson Project Int.			Signal	A	9.2	No
315	Douglas Road & Rock Creek Pkwy	West Jackson Project Int.			Signal	A	9.6	No	West Jackson Project Int.			Signal	B	12.5	No
316	Bradshaw Road & Collector WJ-8	West Jackson Project Int.			Signal	B	12.4	No	West Jackson Project Int.			Signal	A	7.8	No
317	Bradshaw Road & Collector WJ-9	West Jackson Project Int.			Signal	A	3.3	No	West Jackson Project Int.			Signal	A	3.3	No
318	Bradshaw Road & Mayhew Road	West Jackson Project Int.			Signal	D	41.9	No	West Jackson Project Int.			Signal	D	39.6	No
319	Bradshaw Road & Collector WJ-10	West Jackson Project Int.			Signal	F	96.2	Yes	West Jackson Project Int.			Signal	B	14.7	No
320	Bradshaw Road & Collector WJ-11	West Jackson Project Int.			Signal	A	7.5	No	West Jackson Project Int.			Signal	A	9.8	No
321	Collector WJ-12 & Fruitridge Road	West Jackson Project Int.			Signal	A	6.9	No	West Jackson Project Int.			Signal	A	6.7	No
322	Mayhew Road & Collector WJ-13	West Jackson Project Int.			Signal	B	13.0	No	West Jackson Project Int.			Signal	B	13.3	No
323	Collector WJ-14 & Kiefer Boulevard	West Jackson Project Int.			Signal	B	18.4	No	West Jackson Project Int.			Signal	B	16.4	No

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Table 9.6

Existing Plus FOUR PROJECTS (Proposed Project) Intersection Levels of Service

Intersection		AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus FOUR PROJECTS			LOS Impact	Existing			Existing Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
325	Douglas Road & Kiefer Boulevard	West Jackson Project Int.			Signal	F	117.8	Yes	West Jackson Project Int.			Signal	F	137.6	Yes
327	Vineyard Road & Elder Creek Road	West Jackson Project Int.			Signal	B	16.3	No	West Jackson Project Int.			Signal	B	16.2	No
328	Vineyard Road & Florin Road	West Jackson Project Int.			Signal	B	10.8	No	West Jackson Project/CEQA Cumulative Intersection			Signal	A	8.5	No
329	Routier Ext & Kiefer Boulevard	West Jackson Project Int.			Signal	C	34.9	No	West Jackson Project Int.			Signal	C	30.1	No
330	Happy Ln & Routier Ext	West Jackson Project Int.			Signal	E	60.0	No	West Jackson Project Int.			Signal	D	52.4	No
331	Routier Ext/Routier Rd & Old Placerville Rd.	West Jackson Project Int.			Signal	F	242.3	Yes	West Jackson Project Int.			Signal	F	192.3	Yes
400	Collector JT-3 & Jackson Road	Jackson Township Project Int.			Signal	B	18.6	No	Jackson Township Project Int.			Signal	C	21.5	No
401	Tree View Lane & Jackson Road	Jackson Township Project Int.			Signal	B	11.6	No	Jackson Township Project Int.			Signal	A	7.3	No
402	Collector JT-4 & Jackson Road	Jackson Township Project Int.			Signal	A	7.7	No	Jackson Township Project Int.			Signal	A	5.8	No
403	Tree View Lane & Collector JT-5	Jackson Township Project Int.			Signal	B	13.4	No	Jackson Township Project Int.			Signal	B	13.9	No
404	Tree View Lane & Collector JT-6	Jackson Township Project Int.			Signal	C	22.0	No	Jackson Township Project Int.			Signal	B	15.0	No
405	Tree View Lane & Collector JT-1	Jackson Township Project Int.			Signal	B	15.0	No	Jackson Township Project Int.			Signal	B	13.8	No
406	Tree View Lane & Kiefer Boulevard	Jackson Township Project Int.			Signal	B	13.6	No	Jackson Township Project Int.			Signal	C	25.2	No
407	HS/MS Dwy & Kiefer Boulevard	Jackson Township Project Int.			Signal	A	7.4	No	Jackson Township Project Int.			Signal	A	7.0	No
500	Rockbridge Dr & Jackson Road	NewBridge Project Int.			Signal	A	9.6	No	NewBridge Project Int.			Signal	A	7.5	No

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Table 9.6

Existing Plus FOUR PROJECTS (Proposed Project) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing			Existing Plus FOUR PROJECTS			LOS Impact	Existing			Existing Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
501	Eagles Nest Road & N Bridgewater Dr	NewBridge Project Int.			Signal	A	5.5	No	NewBridge Project Int.			Signal	A	4.1	No
502	Eagles Nest Road & S Bridgewater Dr	NewBridge Project Int.			Signal	B	14.3	No	NewBridge Project Int.			Signal	B	13.5	No
600	Zinfandel Drive & Collector MS-2	Mather South Project Int.			Roundabout	C	17.6	No	Mather South Project Int.			Roundabout	C	22.2	No
601	Zinfandel Drive & Collector MS-3	Mather South Project Int.			Roundabout	B	14.7	No	Mather South Project Int.			Roundabout	B	13.7	No
602	Zinfandel Drive & Collector MS-4	Mather South Project Int.			Roundabout	C	16.1	No	Mather South Project Int.			Roundabout	B	13.2	No
603	Collector MS-5 & Collector MS-2	Mather South Project Int.			Two-way stop	A	2.6	No	Mather South Project Int.			Two-way stop	A	4.4	No
604	Collector MS-5 & Collector MS-3	Mather South Project Int.			Two-way stop			No	Mather South Project Int.			Two-way stop			No
	Northbound Left Turn					*A*	*7.6*						*A*	*7.4*	
	Eastbound					*A*	*9.7*						*A*	*9.3*	
605	Collector MS-5 & Collector MS-4	Mather South Project Int.			Two-way stop	A	5.4	No	Mather South Project Int.			Two-way stop	A	8.3	No
606	Collector MS-5 & W Collector MS-1/E Collector MS-1	Mather South Project Int.			Two-way stop	A	1.2	No	Mather South Project Int.			Two-way stop	A	2.1	No

Note: Gray shading represents changes in traffic control for which the project is responsible to pay a fair share.

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Table 9.7

Existing and Existing Plus (Proposed Project) FOUR PROJECTS Intersection Geometrics

	Intersection	Traffic Control		Existing Lane Geometrics				Existing Plus FOUR PROJECTS Lane Geometrics				Project(s) Responsible for Change
		Existing	Existing Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
1	Howe Avenue & College Town Drive/US 50 Westbound Ramps	Signal	Signal	↑ ↑ ↑ ↱	↲ ↓ ↓ ↓ ↓	↰ ↱↱	↰↰↰ ↱↱	↑ ↑ ↑ ↱	↲ ↓ ↓ ↓ ↓	↰ ↱↱	↰↰↰ ↱↱	
2	Howe Avenue & US 50 Eastbound Ramps/US 50 Eastbound Entrance	Signal	Signal	↑ ↑ ↑ ↱	↲ ↓ ↓ ↓	↰↰↱↱		↑ ↑ ↑ ↱	↲ ↓ ↓ ↓	↰↰↱↱		
3	Power Inn Road/Howe Avenue & Folsom Blvd.	Signal	Signal	↰↰↑ ↑ ↑ ↱	↲ ↓ ↓ ↓ ↳↳	↰↰↑ ↱	↰↰↑ ↑ ↱↱	↰↰↑ ↑ ↑ ↱	↲ ↓ ↓ ↓ ↳↳	↰↰↑ ↱	↰↰↑ ↑ ↱↱	
4	Power Inn Road & 14th Avenue	Signal	Signal	↰↰↑ ↑ ↱	↲ ↓ ↓ ↳	↰↰↱	↟	↰↰↑ ↑ ↱	↲ ↓ ↓ ↳	↰↰↱	↟	
5	Power Inn Road & Fruitridge Road	Signal	Signal	↰↰↑ ↱	↲ ↓ ↓ ↳↳	↰↑ ↱	↰↑ ↑ ↱	↰↰↑ ↱	↲ ↓ ↓ ↳↳	↰↑ ↱	↰↑ ↑ ↱	
6	Jackson Road/Notre Dame Dr. & Folsom Blvd.	Signal	Signal	↰↰↱	↲↱	↰↑ ↑ ↱	↰↑ ↑ ↱	↰↰↱	↲↱	↰↑ ↑ ↱	↰↑ ↑ ↱	
7	Florin Perkins Road/Julliard Dr. & Folsom Boulevard	Signal	Signal	↰↰↱	↲↱	↰↑ ↑ ↱	↰↑ ↱	↰↰↱	↲↱	↰↑ ↑ ↱	↰↑ ↱	
8	Florin Perkins Road & Kiefer Blvd.	Two-way stop	Two-way stop	↑ ↱	↓ ↓ ↳		↰↱	↑ ↱	↓ ↓ ↳		↰↱	
9	Florin Perkins Road & Jackson Road	Signal	Signal	↰↑ ↑ ↱	↲↓ ↳	↰↑ ↱↱	↰↑ ↱	↰↑ ↑ ↱	↲↓ ↳	↰↑ ↱↱	↰↑ ↱	
10	Florin Perkins Road & Fruitridge Road	Signal	Signal	↰↑ ↑ ↱	↲ ↓ ↓ ↳	↰↑ ↑ ↱	↰↑ ↱	↰↑ ↑ ↱	↲ ↓ ↓ ↳	↰↑ ↑ ↱	↰↑ ↱	
11	Florin Perkins Road & Elder Creek Road	Signal	Signal	↰↑ ↑ ↱	↲ ↓ ↓ ↳	↰↑ ↑ ↱	↰↑ ↑ ↱	↰↑ ↑ ↱	↲ ↓ ↓ ↳	↰↑ ↑ ↱	↰↑ ↑ ↱	
12	S. Watt Ave./Watt Avenue & Folsom Blvd.	Signal	Signal	↰↰↑ ↑ ↑ ↱	↲ ↓ ↓ ↓ ↳↳	↰↰↑ ↑ ↱	↰↰↑ ↑ ↱	↰↰↑ ↑ ↑ ↱	↲ ↓ ↓ ↓ ↳↳	↰↰↑ ↑ ↱	↰↰↑ ↑ ↱	
13	S. Watt Ave. & Reith Ct/Manlove Road	Signal	Signal	↰↑ ↑ ↑ ↱	↲ ↓ ↓ ↳	↟	↰↱↱	↰↑ ↑ ↑ ↱	↲ ↓ ↓ ↳	↟	↰↱↱	
14	S. Watt Avenue & Kiefer Blvd.	Signal	Signal	↰↰↑ ↑ ↱	↲ ↓ ↓ ↳↳	↰↰↑ ↑ ↱	↰↰↑ ↑ ↱	↰↰↑ ↑ ↱	↲ ↓ ↓ ↳↳	↰↰↑ ↑ ↱	↰↰↑ ↑ ↱	
15	S. Watt Avenue & Canberra Dr.	Signal	Signal	↑ ↑ ↱	↓ ↓ ↳		↰↱	↑ ↑ ↱	↓ ↓ ↳		↰↱	
16	S. Watt Avenue & Jackson Road	Signal	Signal	↰↑ ↑ ↱	↲ ↓ ↓ ↳	↰↱	↰↑ ↱	↰↰↑ ↑ ↱	↲ ↓ ↓ ↳	↰↱	↰↰↑ ↑ ↱	West Jackson
17	S. Watt Avenue & Fruitridge Road	Signal	Signal	↰↑ ↱	↲ ↓ ↓ ↳	↰↑ ↱	↰↱	↰↑ ↱	↲ ↓ ↓ ↳	↰↑ ↱	↰↑ ↱	West Jackson
18	S. Watt Avenue & Elder Creek Road	Signal	Signal	↰↑ ↱	↲ ↓ ↳	↟ ↱	↰↑ ↱	↰↑ ↱	↲ ↓ ↳	↟ ↱	↰↑ ↱	
20	Elk Grove Florin Road/S. Watt Ave. & Florin Road	Signal	Signal	↰↑ ↱	↲ ↓ ↳	↰↑ ↱	↰↑ ↑ ↱	↰↑ ↱	↲ ↓ ↳	↰↑ ↱	↰↑ ↑ ↱	
21	Elk Grove Florin Road & Gerber Rd./Gerber Road	Signal	Signal	↰↰↑ ↱	↲ ↓ ↓ ↳↳	↰↰↑ ↑ ↱	↰↰↑ ↑ ↱	↰↰↑ ↱	↲ ↓ ↓ ↳↳	↰↰↑ ↑ ↱	↰↰↑ ↑ ↱	
23	Hedge Avenue & Jackson Road	Signal	Signal	↰↱	↲ ↳	↰↑ ↱	↰↑ ↱	↰↱	↲ ↳	↰↑ ↱	↰↑ ↱	West Jackson
24	Hedge Avenue & Fruitridge Road	All-way stop	Signal	↟	↟	↟	↟	↰↑ ↱	↲ ↓ ↳	↰↑ ↱	↰↑ ↱	West Jackson
25	Hedge Avenue & Elder Creek Road	All-way stop	Signal	↟	↟	↟	↟	↰↑ ↱	↲ ↓ ↳	↰↑ ↱	↰↑ ↱	West Jackson
26	Hedge Avenue & Tokay Lane	Two-way stop	Two-way stop	↟	↟	↟	↟	↟	↟	↟	↟	
27	Hedge Avenue & Florin Road	All-way stop	All-way stop	↟	↟	↟	↟	↟	↟	↟	↟	
28	Mayhew Road & Kiefer Boulevard	Signal	Signal	↰↑ ↱	↲ ↓ ↳	↰↑ ↱	↰↑ ↱	↰↑ ↱	↲ ↓ ↳	↰↑ ↱	↰↑ ↱	

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 9.7

Existing and Existing Plus (Proposed Project) FOUR PROJECTS Intersection Geometrics

	Intersection	Traffic Control		Existing Lane Geometrics				Existing Plus FOUR PROJECTS Lane Geometrics				Project(s) Responsible for Change
		Existing	Existing Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
29	Mayhew Road & Jackson Road	Two-way stop	Signal	↰ ↱	⅄	↰ ↑ ↱	↰ ↱	↰ ↰ ↑ ↑ ↱	↲ ↓ ↓ ↳ ↳	↰ ↰ ↑ ↑ ↑ ↱	↰ ↰ ↑ ↑ ↑ ↱	West Jackson
30	Mayhew Road & Fruitridge Road	Two-way stop	Signal	↰	⅄	⅄		↰ ↰ ↑ ↑	↲ ↓ ↓	↰ ↰ ↱		West Jackson
31	Mayhew Road & Elder Creek Road	Two-way stop	Signal	⅄	⅄	⅄	⅄	⅄	⅄	⅄	↰ ↑ ↱	West Jackson
32	Zinfandel Drive & Woodring Drive	Two-way stop	Two-way stop	↰	⅄	⅄		↰ ↑	⅄	⅄		Mather South
33	Bradshaw Road & Folsom Blvd.	Signal	Signal	↰ ↰ ↑ ↱	↲ ↓ ↓ ↳	↰ ↑ ↑ ↱	↰ ↰ ↑ ↑ ↱	↰ ↰ ↑ ↱	↲ ↓ ↓ ↳	↰ ↑ ↑ ↱	↰ ↰ ↑ ↑ ↱	
34	Bradshaw Road & US 50 Westbound Ramps	Signal	Signal	↑ ↑ ↑ ↱	↲ ↓ ↓ ↓		↰ ↰ ↱ ↱	↑ ↑ ↑ ↱	↲ ↓ ↓ ↓		↰ ↰ ↱ ↱	
35	Bradshaw Road & US 50 Eastbound Ramps	Signal	Signal	↑ ↑ ↑ ↱	↲ ↓ ↓ ↓	↰ ↰ ↱ ↱		↑ ↑ ↑ ↱	↲ ↓ ↓ ↓	↰ ↰ ↱ ↱		
36	Bradshaw Road & Old Placerville Road	Signal	Signal	↰ ↑ ↑ ↑ ↱	⅄ ↓ ↓ ↳ ↳	↰ ↱	↰ ↰ ↑ ↱	↰ ↑ ↑ ↑ ↱	⅄ ↓ ↓ ↳ ↳	↰ ↱	↰ ↰ ↑ ↱	
37	Bradshaw Road & Kiefer Boulevard	Signal	Signal	↰ ↰ ↑ ↑ ↑ ↱	↲ ↓ ↓ ↳ ↳	↰ ↰ ↑ ↱	↰ ↰ ↑ ↱	↰ ↰ ↑ ↑ ↑ ↱	↲ ↓ ↓ ↳ ↳	↰ ↰ ↑ ↑ ↱	↰ ↰ ↑ ↑ ↱	West Jackson
38	Jackson Road & Bradshaw Road	Signal	Signal	↰ ↑ ↱	↲ ↓ ↓ ↳	↰ ↑ ↱	↰ ↑ ↱	↰ ↰ ↑ ↑ ↑ ↱	↲ ↓ ↓ ↓ ↳ ↳	↰ ↰ ↑ ↑ ↑ ↱	↰ ↰ ↑ ↑ ↑ ↱	West Jackson
39	Bradshaw Road & Elder Creek Road	Signal	Signal	↰ ↑ ↱	⅄ ↓ ↳	↰ ↰ ↱	↰ ↰ ↱	↰ ↑ ↱	↲ ↓ ↓ ↳ ↳	↰ ↰ ↱	↰ ↰ ↑ ↑ ↱	West Jackson
40	Bradshaw Road & Florin Road	Signal	Signal	↰ ↑ ↱	⅄ ↓ ↳	↰ ↰ ↱	↰ ↰ ↱	↰ ↑ ↱	⅄ ↓ ↳	↰ ↰ ↱	↰ ↰ ↱	
41	Bradshaw Road & Gerber Road	Signal	Signal	↰ ↑ ↱	⅄ ↓ ↳	↰ ↰ ↱	↰ ↱	↰ ↑ ↱	⅄ ↓ ↳	↰ ↰ ↱	↰ ↱	
42	Happy Lane & Old Placerville Road	Two-way stop	Two-way stop	↰ ↱		↑ ↱	↰ ↑	↰ ↱		↑ ↱	↰ ↑	
43	Kiefer Boulevard & Happy Ln		Signal		↲	↰			↲ ↳ ↳	↰ ↰ ↑ ↑ ↑	↑ ↑ ↑ ↱	West Jackson
44	Excelsior Road & Kiefer Boulevard	Two-way stop	Signal	↱	↳		↰ ↱	↰ ↑ ↱	↲ ↓ ↳	↰ ↑ ↱	↰ ↑ ↱	West Jackson; Jackson Township
45	Excelsior Road & Jackson Road	Signal	Signal	↰ ↱	⅄ ↳	↰ ↑ ↱	↰ ↑ ↱	↰ ↱	↲ ↓ ↓ ↳ ↳	↰ ↑ ↑ ↱	↰ ↑ ↑ ↱	West Jackson; Jackson Township
46	Excelsior Road & Elder Creek Road	Two-way stop	Signal	↰	↲ ↓	↰		↰ ↑	↲ ↓	↰ ↱		West Jackson
47	Excelsior Road & Florin Road	All-way stop	Signal	⅄	⅄	⅄	⅄	↰ ↱	⅄ ↳	↰ ↱	↰ ↱	West Jackson
48	Excelsior Road & Gerber Road/Birch Ranch Drive	All-way stop	All-way stop	⅄	⅄	⅄	⅄	⅄	⅄	⅄	⅄	
49	Mather Field Road & US 50 Westbound Ramps	Signal	Signal	↑ ↑ ↱	↲ ↓ ↓		↰ ⅄	↑ ↑ ↱	↲ ↓ ↓		↰ ⅄	
50	Mather Field Road & US 50 Eastbound Ramps	Signal	Signal	↑ ↑ ↑ ↱	↲ ↓ ↓	↰ ⅄ ↱		↑ ↑ ↑ ↱	↲ ↓ ↓	↰ ⅄ ↱		
51	Mather Field Road & Rockingham Drive	Signal	Signal	↰ ↑ ↑ ↱	↲ ↓ ↓ ↓ ↳	↰ ↰ ↱	↰ ↱	↰ ↑ ↑ ↱	↲ ↓ ↓ ↓ ↳	↰ ↰ ↱	↰ ↱	
52	Mather Boulevard & Douglas Road	All-way stop	All-way stop	⅄	⅄ ↳	⅄	⅄	⅄	⅄ ↳	⅄	⅄	
53	Zinfandel Drive & US 50 Westbound	Signal	Signal	↑ ↑ ↑ ↱	↲ ↓ ↓		↰ ↰ ↱	↑ ↑ ↑ ↱	↲ ↓ ↓		↰ ↰ ↱	
54	Zinfandel Drive & US 50 Eastbound Ramps/Gold Center Drive	Signal	Signal	↑ ↑ ↑ ↱	↲ ↓ ↓	↰ ↰ ↱ ↱	↱ ↱	↑ ↑ ↑ ↱	↲ ↓ ↓	↰ ↰ ↱ ↱	↱ ↱	

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 9.7

Existing and Existing Plus (Proposed Project) FOUR PROJECTS Intersection Geometrics

Intersection		Traffic Control		Existing Lane Geometrics				Existing Plus FOUR PROJECTS Lane Geometrics				Project(s) Responsible for Change
		Existing	Existing Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
55	Zinfandel Drive & White Rock Road	Signal	Signal	↰↰↑↑ ↱	↲↓↓↓↘↘	↰↰↑↑ ↱	↰↰↑ ↱↱	↰↰↑↑ ↱	↲↓↓↓↘↘	↰↰↑↑ ↱	↰↰↑ ↱↱	
56	Zinfandel Drive & Data Drive	Signal	Signal	↰↑↑ ↱	↲↓↓↘	↰Y	↰↱ ↱	↰↑↑ ↱	↲↓↓↘	↰Y	↰↱ ↱	
57	Zinfandel Dr & International Dr	Signal	Signal	↰↰↑↑↑ ↱	↲↓↓↘↘	↰↰↑↑ ↱	↰↰↑↑↑ ↱	↰↰↑↑↑ ↱	↲↓↓↘↘	↰↰↑↑ ↱	↰↰↑↑↑ ↱	
58	Zinfandel Drive & Douglas Road	Signal	Signal	↰↱	↲↓↘↘	↰↑ ↱	↰↑ ↱	↰↱	↲↓↘↘	↰↑ ↱	↰↑ ↱	
59	Eagles Nest Road/Zinfandel Drive & Kiefer Boulevard		Signal	↱			↰	↰↰↑↑ ↱	↲↓↓↘↘	↰↰↑↑ ↱	↰↰↑↑ ↱	NewBridge; Mather South
60	Eagles Nest Road & Jackson Road	Two-way stop	Signal	Y	⅄	↰↱	↰↱	↰↑↱	↲↓↘↘	↰↰↑ ↱	↰↑↑ ↱	NewBridge
61	Eagles Nest Rd/Eagles Nest Road & Florin Road	Two-way stop	Two-way stop	Y	⅄	Y	Y	Y	⅄	Y	Y	
62	Sunrise Boulevard & US 50 Westbound Ramps	Signal	Signal	↑↑↑ ↱	↲↓↓↓		↰↰↱↱	↑↑↑ ↱	↲↓↓↓		↰↰↱↱	
63	Sunrise Boulevard & US 50 Eastbound Ramps	Signal	Signal	↑↑↑↑ ↱	↲↓↓↓	↰↰↰↱↱		↑↑↑↑ ↱	↲↓↓↓	↰↰↰↱↱	Y	
64	Sunrise Boulevard & Folsom Boulevard	Signal	Signal	↰↰↑↑↑↑ ↱	↲↓↓↓↘↘	↰↰↑↑ ↱	↰↰↑ ↱↱	↰↰↑↑↑↑ ↱	↲↓↓↓↘↘	↰↰↑↑ ↱	↰↰↑ ↱↱	
65	Sunrise Boulevard & White Rock Road	Signal	Signal	↰↰↑↑↑ ↱	↲↓↓↓↘↘	↰↰↑↑ ↱	↰↰↑↑↑ ↱	↰↰↑↑↑ ↱	↲↓↓↓↘↘	↰↰↑↑ ↱	↰↰↑↑↑ ↱	
66	Sunrise Boulevard & International Drive/Monier Circle	Signal	Signal	↰↰↑↑ ↱	↲↓↓↓↘	↰↰↑ ↱↱	↰↱	↰↰↑↑ ↱	↲↓↓↓↘	↰↰↑ ↱↱	↰↱	
67	Sunrise Boulevard & Douglas Road	Signal	Signal	↰↰↑↑↑ ↱	↲↓↓↓↘↘	↰↰↑ ↱	↰↰↑↑ ↱	↰↰↑↑↑ ↱	↲↓↓↓↘↘	↰↰↑ ↱	↰↰↑↑ ↱	
68	Sunrise Boulevard & Chrysanthy Boulevard	Signal	Signal	↑↑↑ ↱	↓↓↘↘		↰↰↱	↑↑↑ ↱	↓↓↘↘		↰↰↱	
69	Sunrise Boulevard & Kiefer Boulevard	Signal	Signal	↰↑↑ ↱	↲↓↘↘	Y	Y↱	↰↑↑ ↱	↲↓↘↘	↰↰↑↑ ↱	Y↱	NewBridge; Mather South
70	Sunrise Boulevard & Jackson Road	Signal	Signal	↰↱	↲↓↘	↰↑ ↱	↰↑ ↱	↰↱	↲↓↘	↰↑ ↱	↰↑ ↱	
71	Sunrise Boulevard & Florin Road	Signal	Signal	↰↑	↲	Y		↰↑	↲	Y		
72	Sheldon Lake Drive/Sunrise Boulevard & Grant Line Road	Signal	Signal	Y	↲⅄	↰↑ ↱	↰↱	Y	↲⅄	↰↑ ↱	↰↱	
73	Hazel Avenue & Tributary Point Drive/US 50 Westbound Off-ramp	Signal	Signal	↰↰↑↑↑	↲↓↓↓↓	↱	Y↱↱	↰↰↑↑↑	↲↓↓↓↓	↱	Y↱↱	
74	Hazel Aveneu/Hazel Avenue & US 50 Eastbound Ramps	Signal	Signal		↲↓↓	↰Y↱			↲↓↓	↰Y↱		
75	Hazel Avenue & Folsom Boulevard	Signal	Signal	↰↱	↲⅄⅄↘	↰↰↑ ↱	↰↑ ↱	↰↱	↲⅄⅄↘	↰↰↑ ↱	↰↑ ↱	
76	White Rock Road & Prairie City Road	Signal	Signal		↲↘	↰↑↑	↑↑ ↱		↲↘	↰↑↑	↑↑ ↱	
77	Grant Line Road & White Rock Road	Signal	Signal	↰↑↑	↲↓↓	↰↰↱		↰↑↑	↲↓↓	↰↰↱		
78	Grant Line Road & Douglas Road	All-way stop	Signal[1]	Y	⅄	Y		↰↑	↲↓	↰↱		
79	Grant Line Road & Kiefer Boulevard	All-way stop	All-way stop	Y	⅄	Y	Y	Y	⅄	Y	Y	
80	Grant Line Road & Jackson Road	Signal	Signal	Y	⅄	↰↱	↰↱	Y	⅄	↰↱	↰↱	

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 9.7

Existing and Existing Plus (Proposed Project) FOUR PROJECTS Intersection Geometrics

Intersection		Traffic Control		Existing Lane Geometrics				Existing Plus FOUR PROJECTS Lane Geometrics				Project(s) Responsible for Change
		Existing	Existing Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
81	Watt Avenue & US-50 EB Ramps	Signal	Signal	↑↑↑↑ ↱	↲↲↓↓	↰↰↱↱		↑↑↑↑ ↱	↲↲↓↓	↰↰↱↱		
82	Watt Avenue & US-50 WB Ramps	Signal	Signal	↑↑ ↱↱	↲↲↓↓↓		↰↰↱↱↱	↑↑ ↱↱	↲↲↓↓↓		↰↰↱↱↱	
83	Mayhew Rd & Folsom Blvd.	Signal	Signal	↰↰↱		↑↑ ↱	↰↑↑	↰↰↱		↑↑ ↱	↰↑↑	
84	65th Street Expy & Fruitridge Road	Signal	Signal	↰↑↑ ↱	↲↓↓↘	↰↑↑	↰↑↑ ↱	↰↑↑ ↱	↲↓↓↘	↰↑↑	↰↑↑ ↱	
85	Power Inn Road & Elder Creek Road	Signal	Signal	↰↑↱	↲↓↘	↰↑↑ ↱	↰↑ ↱	↰↑↱	↲↓↘	↰↑↑ ↱	↰↑ ↱	
86	Power Inn Road & Florin Rd	Signal	Signal	↰↑↱	↲↓↓↘	↰↑↑ ↱	↰↑↑ ↱	↰↑↱	↲↓↓↘	↰↑↑ ↱	↰↑↑ ↱	
87	Florin Perkins Road & Florin Rd	Signal	Signal	↰↑↑ ↱	↲↓↓↘	↰↑ ↱	↰↑ ↱	↰↑↑ ↱	↲↓↓↘	↰↑ ↱	↰↑ ↱	
88	Bradshaw Rd & Calvine Rd	Signal	Signal	↰↰↑↱	↲↓↓↘↘	↰↰↑↑ ↱	↰↰↑ ↱	↰↰↑↱	↲↓↓↘↘	↰↰↑↑ ↱	↰↰↑ ↱	
89	Vineyard Rd & Calvine Rd	Signal	Signal	↟	↲↱↘	↰↑ ↱	↰↑ ↱	↟	↲↱↘	↰↑ ↱	↰↑ ↱	
90	Excelsior Road & Calvine Rd	All-way stop	All-way stop	↟	↟	↟	↟	↟	↟	↟	↟	
91	Grant Line Road & Eagles Nest Rd/Sloughhouse Rd	Signal	Signal	↰↑↱	↲↘	↟	↰↱	↰↑↱	↲↘	↟	↰↱	
92	Grant Line Road & Calvine Rd	Signal	Signal	↰↑	↲	↾		↰↑	↲	↾		
93	Grant Line Road & Driveway/Wilton Rd	Signal	Signal	↰↱	↲↘	↰↱	↰↱	↰↱	↲↘	↰↱	↰↱	
94	Bond Rd/Wrangler Dr & Grant Line Road	Signal	Signal	↰↱	↲↓↘	↰↱	↟	↰↱	↲↓↘	↰↱	↟	
200	Excelsior Road & Collector WJ-1/Collector JT-1		Signal					↰↑↱	↲↓↘	↰↑ ↱	↰↑ ↱	West Jackson; Jackson Township
201	Excelsior Road & Collector WJ-2/Collector JT-2		Signal					↰↑↱	↲↓↘	↰↑ ↱	↰↑ ↱	West Jackson; Jackson Township
202	Kiefer Boulevard & W Collector MS-1		Signal						↲↘	↰↑↑	↑ ↱	Mather South
203	Northbridge Dr & Kiefer Boulevard		Signal					↰↱		↑ ↱	↰↑↑	NewBridge
204	Kiefer Boulevard & E Collector MS-1		Signal						↲↘	↰↑	↑↑ ↱	Mather South
300	Collector WJ-3 & Jackson Road		Signal					↰↱		↑ ↱	↰↑↑	West Jackson
301	Collector WJ-4 & Jackson Road		Signal					↰↑↱	↲↓↘	↰↑↑ ↱	↰↑↑ ↱	West Jackson
302	Rock Creek Pkwy & Jackson Road		Signal					↰↰↑↱	↲↓↘	↰↑↑↑ ↱	↰↰↑↑↑ ↱	West Jackson
304	Collector WJ-5 & Jackson Road		Signal					↰↑↱	↲↓↘	↰↑↑ ↱	↰↑↑ ↱	West Jackson
305	Collector WJ-6 & Jackson Road		Signal					↰↑↱	↲↓↘	↰↑↑ ↱	↰↑↑ ↱	West Jackson
306	Excelsior Road & Collector WJ-6		Signal					↰↑	↲↓	↰↱		West Jackson
307	S. Watt Avenue & Rock Creek Pkwy		Signal					↑↱	↓↓↘↘		↰↱	West Jackson

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 9.7

Existing and Existing Plus (Proposed Project) FOUR PROJECTS Intersection Geometrics

Intersection		Traffic Control		Existing Lane Geometrics				Existing Plus FOUR PROJECTS Lane Geometrics				Project(s) Responsible for Change
		Existing	Existing Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
308	Hedge Avenue & Rock Creek Pkwy WB		Roundabout									West Jackson
309	Hedge Avenue & Rock Creek Pkwy EB		Roundabout									West Jackson
310	Mayhew Road & Rock Creek Pkwy WB		Roundabout									West Jackson
311	Mayhew Road & Rock Creek Pkwy EB		Roundabout									West Jackson
312	Bradshaw Road & Rock Creek Pkwy		Signal									West Jackson
314	Vineyard Road & Rock Creek Pkwy		Signal									West Jackson
315	Douglas Road & Rock Creek Pkwy		Signal									West Jackson
316	Bradshaw Road & Collector WJ-8		Signal									West Jackson
317	Bradshaw Road & Collector WJ-9		Signal									West Jackson
318	Bradshaw Road & Mayhew Road		Signal									West Jackson
319	Bradshaw Road & Rock Creek Pkwy		Signal									West Jackson
320	Bradshaw Road & Collector WJ-11		Signal									West Jackson
321	Collector WJ-12 & Fruitridge Road		Signal									West Jackson
322	Collector WJ-13 & Mayhew Road		Signal									West Jackson
323	Collector WJ-14 & Kiefer Boulevard		Signal									West Jackson
325	Douglas Road & Kiefer Boulevard		Signal									West Jackson
327	Vineyard Road & Elder Creek Road		Signal									West Jackson
328	Florin Road & Vineyard Road		Signal									West Jackson
329	Routier Ext & Kiefer Boulevard		Signal									West Jackson
330	Happy Ln/Happy Lane & Routier Ext		Signal									West Jackson
331	Routier Ext/Routier Rd & Old Placerville Road		Signal									West Jackson
400	Jackson Road & Collector JT-3		Signal									Jackson Township
401	Jackson Road & Tree View Lane		Signal									Jackson Township
402	Jackson Road & Collector JT-4		Signal									Jackson Township
403	Tree View Lane & Collector JT-5		Signal									Jackson Township
404	Tree View Lane & Collector JT-6		Signal									Jackson Township
405	Tree View Lane & Collector JT-1		Signal									Jackson Township

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 9.7

Existing and Existing Plus (Proposed Project) FOUR PROJECTS Intersection Geometrics

Intersection		Traffic Control		Existing Lane Geometrics				Existing Plus FOUR PROJECTS Lane Geometrics				Project(s) Responsible for Change
		Existing	Existing Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
406	Tree View Lane & Kiefer Boulevard		Signal									Jackson Township
407	HS/MS Dwy & Kiefer Boulevard		Signal									Jackson Township
500	Jackson Road & Rockbridge Dr		Signal									NewBridge
501	Eagles Nest Road & N Bridgewater Dr		Signal									NewBridge
502	Eagles Nest Road & S Bridgewater Dr		Signal									NewBridge
600	Zinfandel Drive & Collector MS-2		Roundabout									Mather South
601	Zinfandel Drive & Collector MS-3		Roundabout									Mather South
602	Zinfandel Drive & Collector MS-4		Roundabout									Mather South
603	Collector MS-5 & Collector MS-2		Two-way stop									Mather South
604	Collector MS-5 & Collector MS-3		Two-way stop									Mather South
605	Collector MS-5 & Collector MS-4		Two-way stop									Mather South
606	E Collector MS-1/Collector MS-5 & W Collector MS-1		Two-way stop									Mather South

1. Reflects 2017 intersection improvements.

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 9.8: Existing Plus FOUR PROJECTS (Proposed Project) Peak Hour Freeway Basic Segment Level of Service									
Direc-tion	**Location**	**Existing**				**Existing Plus FOUR PROJECTS**			
		AM Peak Hour		**PM Peak Hour**		**AM Peak Hour**		**PM Peak Hour**	
		Volume	**LOS**	**Volume**	**LOS**	**Volume**	**LOS**	**Volume**	**LOS**
East-bound US 50	SR 99 / SR 51 to Stockton Boulevard	7,068	C	6,415	C	7,677	C	6,755	C
	Stockton Boulevard to 59th Street	7,470	**F**	7,228	**F**	8,103	**F**	7,596	**F**
	59th Street to 65th Street	6,767	D	6,641	D	7,393	D	6,983	D
	65th Street to Howe Avenue	7,962	D	7,562	D	8,651	D	7,891	D
	Howe Avenue to Watt Avenue	7,405	D	7,602	D	7,596	D	7,741	D
	Watt Avenue to Bradshaw Road	7,935	D	7,176	C	8,147	D	7,345	C
	Bradshaw Rd to Mather Field Rd	7,725	**F**	7,366	C	7,749	**F**	7,251	C
	Mather Field Rd to Zinfandel Drive	7,275	C	7,224	C	7,712	C	7,557	C
	Zinfandel Drive to Sunrise Blvd	5,121	C	6,649	**F**	5,735	C	7,068	**F**
	Sunrise Boulevard to Hazel Avenue	4,985	C	5,323	**F**	5,496	C	5,610	**F**
West-bound US 50	Hazel Avenue to Sunrise Boulevard	6,068	D	4,370	C	6,324	E	4,696	C
	Sunrise Blvd to Zinfandel Drive	7,502	D	4,762	C	7,827	E	5,105	C
	Zinfandel Drive to Mather Field Rd	7,548	C	5,765	B	7,839	C	5,894	B
	Mather Field Rd to Bradshaw Road	7,859	**F**	6,939	D	7,809	**F**	6,845	D
	Bradshaw Road to Watt Avenue	7,550	**F**	6,466	D	7,467	**F**	6,929	E
	Watt Avenue to Howe Avenue	7,376	**F**	5,106	**F**	7,217	**F**	5,404	**F**
	Howe Avenue to 65th Street	8,157	**F**	7,407	**F**	8,497	**F**	8,037	**F**
	65th Street to 59th Street	8,278	**F**	7,358	**F**	8,610	**F**	7,952	**F**
	59th Street to Stockton Boulevard	9,115	D	7,945	**F**	9,462	D	8,535	**F**
	Stockton Boulevard to SR 99 / SR 51	8,546	D	8,136	**F**	8,853	D	8,639	**F**

Bold values denote level of service "F" conditions.

Red shaded values indicate project impacts.

Source: *DKS Associates, 2018.*

Table 9.9: Existing Plus FOUR PROJECTS (Prop. Proj.) Peak Hour Freeway Merge/Diverge/Weave Segment Level of Service										
Direc-tion	**Location**	**Junction Type**	**Existing**				**Existing Plus FOUR PROJECTS**			
			A.M. Peak Hour		**P.M. Peak Hour**		**A.M. Peak Hour**		**P.M. Peak Hour**	
			Ramp Volume	**LOS**	**Ramp Volume**	**LOS**	**Ramp Volume**	**LOS**	**Ramp Volume**	**LOS**
East-bound US 50	Northbound 65th Street Slip Entrance	Weave	765	D	653	C	752	F	575	D
	Howe Avenue / Hornet Drive Exit		1,631		1,417		2,178		1,619	
	Southbound Howe Avenue Loop Entrance	One-Lane Merge	484	C	881	C	566	C	922	D
	Northbound Howe Avenue Slip Entrance	One-Lane Merge	419	C	431	C	392	C	394	C
	Watt Avenue Exit	Two-Lane Diverge	1,317	B	1,634	B	1,137	B	1,457	B
	Watt Avenue Entrance	One-Lane Merge	2,134	**F**	1,724	D	1,963	E	1,539	D
	Bradshaw Road Exit	Two-Lane Diverge	1,520	B	1,228	B	1,876	C	1,599	B
	Southbound Bradshaw Road Loop Entrance	One-Lane Merge	220	C	422	C	164	C	412	C
	Northbound Bradshaw Road Slip Entrance	One-Lane Merge	971	C	918	C	1,237	D	1,114	C
	Mather Field Road Exit	Two-Lane Diverge	1,266	B	1,062	A	1,192	B	1,000	A
	Southbound Mather Field	One-Lane Merge	125	C	101	B	124	C	103	B

Table 9.9: Existing Plus FOUR PROJECTS (Prop. Proj.) Peak Hour Freeway Merge/Diverge/Weave Segment Level of Service										
Direc-tion	**Location**	**Junction Type**	**Existing**				**Existing Plus FOUR PROJECTS**			
			A.M. Peak Hour		**P.M. Peak Hour**		**A.M. Peak Hour**		**P.M. Peak Hour**	
			Ramp Volume	**LOS**	**Ramp Volume**	**LOS**	**Ramp Volume**	**LOS**	**Ramp Volume**	**LOS**
	Road Loop Entrance									
	Northbound Mather Field Road Slip Entrance	Weave	317	**F**	816	C	644	**F**	1,196	D
	Zinfandel Drive Exit		2,932		1,452		2,923		1,419	
	Southbound Zinfandel Drive Loop Entrance	One-Lane Merge	182	B	129	C	178	B	119	C
	Northbound Zinfandel Drive Slip Entrance	One-Lane Merge	348	B	540	C	540	C	610	C
	Sunrise Boulevard Exit	Major Diverge	1,773	C	1,959	D	1,931	C	2,077	D
	Sunrise Boulevard Entrance	One-Lane Merge	992	C	889	D	1,029	C	851	D
	Hazel Avenue Exit	Two-Lane Diverge	933	B	1,541	C	1,105	C	1,661	C
	Hazel Avenue Entrance	Weave	804	C	945	C	722	C	945	C
	Aerojet Road Exit		241		55		242		52	
West-bound US 50	Hazel Avenue Exit	Two-Lane Diverge	631	A	869	A	621	A	837	B
	Northbound Hazel Avenue Loop Entrance	One-Lane Merge	160	B	600	B	172	B	592	B
	Southbound Hazel Avenue	One-Lane Merge	1,550	B	800	B	1,727	C	961	B

Table 9.9: Existing Plus FOUR PROJECTS (Prop. Proj.) Peak Hour Freeway Merge/Diverge/Weave Segment Level of Service										
Direc-tion	Location	Junction Type	Existing				Existing Plus FOUR PROJECTS			
			A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
			Ramp Volume	LOS	Ramp Volume	LOS	Ramp Volume	LOS	Ramp Volume	LOS
	Slip Entrance									
	Sunrise Boulevard Exit	One-Lane Diverge	749	E	758	D	660	E	762	D
	Sunrise Blvd Entrance	Lane Addition	2,183	**F**	1,656	D	2,191	**F**	1,667	D
	Zinfandel Drive Exit	One-Lane Diverge	1,034	E	608	C	1,077	E	756	C
	Northbound Zinfandel Drive Loop Entrance	Lane Addition	585	B	1,197	B	543	B	1,117	B
	Southbound Zinfandel Drive Slip Entrance	One-Lane Merge	442	C	561	B	412	C	540	B
	Mather Field Road Exit	One-Lane Drop	1,093	C	556	A	1,505	C	741	A
	Northbound Mather Field Road Loop Entrance	One-Lane Merge	515	B	861	B	391	B	846	B
	Southbound Mather Field Road Slip Entrance	One-Lane Merge	387	B	380	B	516	B	358	B
	Bradshaw Road Exit	Two-Lane Diverge	1,236	B	1,327	B	1,591	B	1,465	B
	Northbound Bradshaw Road Loop Entrance	One-Lane Merge	914	D	910	C	1,266	D	1,540	D
	Southbound Bradshaw Road Slip Entrance	One-Lane Merge	338	D	590	C	377	D	666	D
	Watt Avenue Exit	Major Diverge	1,373	D	1,188	C	1,243	D	1,174	C
	Northbound Watt Avenue	One-Lane Merge	820	D	943	C	773	D	903	C

Table 9.9: Existing Plus FOUR PROJECTS (Prop. Proj.) Peak Hour Freeway Merge/Diverge/Weave Segment Level of Service

Direc-tion	Location	Junction Type	Existing				Existing Plus FOUR PROJECTS			
			A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
			Ramp Volume	LOS	Ramp Volume	LOS	Ramp Volume	LOS	Ramp Volume	LOS
	Entrance									
	Southbound Watt Avenue Slip Entrance	Lane Addition / Weave	1,232	C	1,317	D	1,073	C	1,178	B
	Howe Avenue Exit	Major Diverge / Weave	1,531	D	1,419		1,359	D	1,319	D
	Northbound Howe Avenue Loop Entrance	One-Lane Merge	654	D	602	C	684	D	653	C
	Southbound Howe Avenue Slip Entrance	One-Lane Merge	574	C	574	C	689	C	499	C

Bold values denote level of service "F" conditions.
Red shaded values indicate project impacts.
Source: *DKS Associates, 2018.*

Table 9.10: Existing Plus FOUR PROJECTS (Proposed Project) Peak Hour Freeway Ramp Termini Queuing

Direction	US 50 Exit Ramp	Available Storage Length (feet / lane)			Maximum Queue Length (feet / lane)					
					AM Peak Hour			PM Peak Hour		
		L	T	R	L	T	R	L	T	R
Eastbound US-50	Howe Avenue	765	-	765	119	-	634	118	-	244
	Watt Avenue	1,500	-	1,500	113	-	212	161	-	225
	Bradshaw Road	1,250	-	1,250	115	-	740	62	-	624
	Mather Field Road	1,385	-	1,385	156	-	358	103	-	60
	Zinfandel Drive	1,025	1,025	1,025	236	792	709	429	319	175
	Sunrise Boulevard	1,695	-	1,695	223	-	117	218	-	75
	Hazel Avenue	1,310	-	1,310	196	-	48	182	-	8
Westbound US-50	Hazel Avenue	1,995		1,995	262		47	159		217
	Sunrise Boulevard	1,540	-	1,540	67	-	46	139	-	123
	Zinfandel Drive	1,065	-	1,065	188	-	38	93	-	103
	Mather Field Road	1,335	-	1,335	429	-	403	121	-	100
	Bradshaw Road	1,330	-	1,330	179	-	34	175	-	13
	Watt Avenue	1,480	-	1,480	205	-	546	104	-	459
	Howe Avenue	1,355	1,355	1,355	76	412	65	149	412	151

Red shaded values indicate project impacts.

L = left turn movement, T = through movement, R = right turn movement

Source: *DKS Associates, 2018.*

9.4.4 Existing Plus FOUR PROJECTS Pedestrian and Bicycle Facility Impacts

The FOUR PROJECTS would not remove any existing or planned pedestrian facility. The FOUR PROJECTS would not remove any existing bicycle facility or any facility that is planned in the Bikeway Master Plan. The FOUR PROJECTS would add pedestrian and bicycle demands within the FOUR PROJECTS site and to and from nearby land uses. Complete information on improvements to on- and off-site bicycle and pedestrian facilities is not available at this time. Because the FOUR PROJECTS would add demand for pedestrian and bicycle facilities that may not be available, the impact of the FOUR PROJECTS on pedestrian and bicycle circulation is potentially significant.

9.4.5 Existing Plus FOUR PROJECTS Transit System Impacts

Public transit service is currently limited in the vicinity of the FOUR PROJECTS. In the preparation of this analysis, a conceptual transit system to serve the FOUR PROJECTS was developed (see Section 8.1.2.3). The additional transit service was assumed to be funded by the FOUR PROJECTS. However, the timing and implementation of the transit system are uncertain at this time. The FOUR PROJECTS would increase demands for public transit facilities. Therefore, the impact of the FOUR PROJECTS on the transit system is potentially significant.

9.4.6 Existing Plus FOUR PROJECTS Functionality Impacts

Table 9.11 summarizes the results of the rural roadway segment functionality analysis. **Figure 9.6** illustrates the resultant functionality impacts. The table includes the number of lanes assumed with the implementation of the FOUR PROJECTS, which in many cases is greater than the number of lanes in the existing condition. The shaded table cells under the "Travel Lanes" heading illustrates new roadways and widened roadways that are assumed part of the FOUR PROJECTS. The "Substandard?" heading indicates whether or not a roadway meets the County standards of 12-foot lanes and 6-foot shoulders. If the FOUR PROJECTS make improvements to a roadway segment such as widening, they would be required to reconstruct the entire substandard roadway segment to County standards. The shaded table cells under the "Functionality Impact?" heading indicate those locations with a functionality impact.

As stated above, the traffic analysis assumed that the FOUR PROJECTS would construct a number of travel lanes on roadway segments that are internal to or on the boundary of the FOUR PROJECTS, and the entire roadway segment would be reconstructed to County standards at that time. The timing of implementation of such additional traffic lanes on these internal or boundary roadway segments will affect whether or not impacts would exist at some time prior to full build out of the FOUR PROJECTS.

Table 9.11
Existing Plus FOUR PROJECTS (Proposed Project) Functionality Impacts

ID	Roadway	Segment		Jurisdiction	Existing Substandard Roadways				Existing + FOUR PROJECTS			
		From	To		Travel Lanes	Pavement (ft)	Substandard? [1]	Existing Volume	Travel Lanes	Substandard? [1]	Forecasted Volume	Functionality Impact? [2]
15	Douglas Rd	Mather Blvd	Zinfandel Dr	County	2	23	Yes	6,635	2	Yes	6,020	No
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd	Rancho Cordova/County	2	23	Yes	8,369	2	Yes	8,710	No
19	Eagles Nest Rd	Kiefer Blvd	Jackson Rd	County	2	20	Yes	740	4	No	9,540	Yes[3]
20	Eagles Nest Rd	Jackson Rd	Florin Rd	County	2	<21	Yes	517	2	Yes	6,430	Yes
21	Eagles Nest Rd	Florin Rd	Grant Line Rd	County	2	<21	Yes	189	2	Yes	3,480	No
25	Elder Creek Rd	South Watt Ave	Hedge Ave	County	2	23	Yes	5,576	2	Yes	24,330	Yes
26	Elder Creek Rd	Hedge Ave	Mayhew Rd	County	2	23	Yes	5,797	2	Yes	23,810	Yes
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd	County	2	23	Yes	5,355	3	No	14,060	Yes[3]
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd	County	2	23	Yes	2,158	3	No	20,840	Yes[3]
30	Excelsior Rd	Kiefer Blvd	Jackson Rd	County	2	22	Yes	3,716	2	Yes	23,640	Yes
31	Excelsior Rd	Jackson Rd	Elder Creek Rd	County	2	<21	Yes	5,075	3	No	27,200	Yes[3]
32	Excelsior Rd	Elder Creek Rd	Florin Rd	County	2	<21	Yes	4,203	3	No	11,810	Yes[3]
33	Excelsior Rd	Florin Rd	Gerber Rd	County	2	<21	Yes	5,423	2	Yes	12,980	Yes
34	Excelsior Rd	Gerber Rd	Calvine Rd	County	2	<21	Yes	4,229	2	Yes	10,200	Yes
39	Florin Rd	South Watt Ave	Hedge Ave	County	2	22	Yes	7,718	2	Yes	16,140	Yes
40	Florin Rd	Hedge Ave	Mayhew Rd	County	2	22	Yes	6,312	2	Yes	13,120	Yes
41	Florin Rd	Mayhew Rd	Bradshaw Rd	County	2	22	Yes	6,317	2	Yes	13,330	Yes
42	Florin Rd	Bradshaw Rd	Excelsior Rd	County	2	22	Yes	3,478	2	Yes	12,770	Yes
43	Florin Rd	Excelsior Rd	Sunrise Blvd	County	2	22	Yes	3,835	2	Yes	7,260	Yes
48	Fruitridge Rd	South Watt Ave	Hedge Ave	City of Sacramento/ County	2	22	Yes	2,890	3	No	14,910	Yes[3]
49	Fruitridge Rd	Hedge Ave	Mayhew Rd	County	2	22	Yes	1,790	4	No	15,870	Yes[3]
50	Grant Line Rd	White Rock Rd	Douglas Rd	Rancho Cordova/County	2	22	Yes	7,189	2	Yes	9,330	Yes
58	Happy Ln	Old Placerville Rd	Kiefer Blvd	County	2	22	Yes	4,635	4	No	7,410	Yes[3]
59	Hedge Ave	Jackson Rd	Fruitridge Rd	County	2	22	Yes	3,061	2	Yes	7,630	Yes
60	Hedge Ave	Fruitridge Rd	Elder Creek Rd	City of Sacramento/County	2	22	Yes	3,737	2	Yes	3,770	No
61	Hedge Ave	Elder Creek Rd	Florin Rd	County	2	22	Yes	2,722	2	Yes	3,630	No
70	Jackson Rd	Bradshaw Rd	Excelsior Rd	County	2	26	Yes	13,030	6	No	53,130	Yes[3]
71	Jackson Rd	Excelsior Rd	Eagles Nest Rd	County	2	26	Yes	10,478	4	No	46,470	Yes[3]

Red text with light gray shading indicate project impacts.

Table 9.11
Existing Plus FOUR PROJECTS (Proposed Project) Functionality Impacts

ID	Roadway	Segment		Jurisdiction	Existing Substandard Roadways				Existing + FOUR PROJECTS			
		From	To		Travel Lanes	Pavement (ft)	Substandard? [1]	Existing Volume	Travel Lanes	Substandard? [1]	Forecasted Volume	Functionality Impact? [2]
74	Kiefer Blvd	Florin Perkins Rd	South Watt Ave	City of Sacramento/County	2	22	Yes	4,616	2	Yes	5,570	No
77	Kiefer Blvd	Bradshaw Rd	Happy Ln	County	2	22	Yes	4,618	6	No	43,540	Yes[3]
78	Kiefer Blvd	Zinfandel Dr	Sunrise Blvd	County	2	22	Yes	656	3	No	14,640	Yes[3]
83	Mather Blvd-Excelsior Rd[4]	Douglas Rd	Kiefer Blvd	County	2	22	Yes	6,751	2	Yes	4,430	No
89	Mayhew Rd	Jackson Rd	Fruitridge Rd	County	2	22	Yes	1,616	4	No	34,120	Yes[3]
116	White Rock Rd	Fitzgerald Rd	Grant Line Rd	Rancho Cordova/County	2	20	Yes	2,490	2	Yes	2,090	No
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd	County	2	<21	Yes	2,848	2	Yes	19,650	Yes

Note: Gray shading indicates changes in travel lanes or facility type that the project is responsible to provide. For all roadway segments to be widened, the project is responsible to build the entire roadway to County standards.

[1] Substandard rural roads are defined as rural, 2-lane roadway segments with travel lanes narrower than 12 feet and/or roadside shoulders narrower than 6 feet.

[2] Functionality impacts are triggered when a substandard rural road increases over a threshold of 6,000 ADT, or for a roadway already above 6,000 ADT, increases by more than 600 ADT.

[3] The potential for an impact exists should the project generate traffic volumes on the roadway exceeding 6,000 ADT, or increasing more than 600 ADT on a roadway already above 6,000 ADT, prior to the construction of roadway improvements.

[4] Excluding the roadway segment that is within the developed community of Independence at Mather.

[5] The functionality impact is mitigated by improving the roadway to County standards, including widening travel lanes to 12 feet and/or widening or providing paved shoulders to 6 feet.

Red text with light gray shading indicate project impacts.

FIGURE 9.6
EXISTING PLUS FOUR PROJECTS
(PROPOSED PROJECT)
FUNCTIONALITY IMPACTS

Legend

- Substandard Roadways
- Functionality Impact
- Functionality Impact if Roadway is Not Already Improved
- Cities
- Mather Airport

9.5 MITIGATION

9.5.1 Existing Plus FOUR PROJECTS Roadway Segment Mitigation

Table 9.12 summarizes the results of the operations analysis for the study area roadway segments with mitigation. Where feasible, the number of roadway lanes was increased to mitigate the impact. However, the increased number of lanes could not exceed the maximum General Plan designations of the appropriate jurisdictions. The shaded table cells under the "Travel Lanes" and "Facility Type" headings illustrate widened roadways for mitigation purposes, which would be the responsibility of the FOUR PROJECTS to fund and provide. The Jackson Township project would contribute a fair share. The shaded table cells under the "Level of Service" heading indicate those locations that would continue to have LOS impacts after mitigation. The table also includes the constraint that precluded full mitigation of the LOS impact.

The "LOS Impact with Mitigation?" column shows whether there is still an LOS impact after the mitigation measure is applied. In other words, this column shows whether a mitigation measure successfully mitigates the impact or not. In several locations where the improvements allowed under the General Plan would not mitigate an LOS impact, the County has proposed alternative mitigation measures, which are shown in the "Alternative Mitigation" column. These alternative mitigation measures will either fully mitigate the impact or substantially reduce the level of impact.

9.5.2 Existing Plus FOUR PROJECTS Intersection Mitigation

Tables 9.13 and 9.14 summarize the results of the operations analysis for the study area intersections with mitigation. However, the increased number of lanes on each approach does not exceed the County's standard number of approach lanes. Shaded table cells in Table 4.14 indicate those locations where changes in traffic control and / or number of approach lanes by type have been made to mitigate impacts, which would be the responsibility of the FOUR PROJECTS to fund and provide. The Jackson Township project would contribute a fair share. The shaded table cells in Table 9.13 under the "Level of Service" heading indicate those locations with an LOS impact after mitigation. Table 9.14 also identifies those intersections that would continue to have LOS impacts after mitigation, along with the constraint that precluded full mitigation. Detailed analysis information is included in the technical appendix.

The "LOS Impact with Mitigation?" column shows whether there is still an LOS impact after the mitigation measure is applied. In other words, this column shows whether a mitigation measure successfully mitigates the impact or not. In several locations where the LOS impact could not be mitigated by implementing the County's standard number of approach lanes, the County has proposed alternative mitigation measures, which are shown in the "Alternative Mitigation" column. These generally include providing additional turn lanes, carrying an additional through lane past the intersection, or designating the intersection as a High Capacity Intersection. These alternative mitigation measures will either fully mitigate the impact or substantially reduce the level of impact.

High Capacity Intersections

Three intersections are currently designated as "High Capacity Intersections" on the County's General Plan: Watt Avenue & Folsom Boulevard, Watt Avenue & Kiefer Boulevard, and Watt Avenue & Jackson Road.

A high capacity intersection would utilize special treatments to increase the capacity of the intersection so as to reduce congestion and travel delay. Since each intersection could have unique travel movements, volumes and existing context sensitive conditions, the special treatments utilized at each high capacity intersection will be selected to meet the specific needs of each intersection. The range of special treatments is quite wide, ranging from the restriction of certain turning movements to various combinations that could include grade separating certain movements. While the field of traffic engineering is ever expending and evolving resulting in the use of new technologies and treatments, special treatments such as the following could be utilized at a high capacity intersection:

- Restricting turning movements
- Median U-turns
- Roundabouts
- Split intersections
- Quadrant roadway intersections
- Bowtie intersections
- Directional flyovers
- Center turn overpass
- Grade separated Roundabout
- Diverging diamond grade separation
- Compact diamond grade separation
- Single point urban grade separation
- Traditional urban grade separation

The County has conducted conceptual engineering to define potential improvements at the three study area intersections on Watt Avenue that are currently designated as "High Capacity Intersections" on the County's General Plan. These are:

- At the **Watt Avenue & Folsom Boulevard** intersection, the County proposes an ultimate configuration involving grade separation of the northbound and southbound through movements of Watt Avenue. Access to and from Folsom Boulevard would be accomplished via on and off-ramps from the left lanes of Watt Avenue to a single signalized intersection. A bus rapid transit (BRT) lane along Watt Avenue would also intersect Folsom Boulevard at the traffic signal. This design is consistent with the recommendations of the South Watt Area Transportation Study (SWATS) dated November 1, 2002 and approved by the Board of Supervisors on November 26, 2002, and with the planning study for the *State Route 16 (Jackson Road) Corridor Study* (Fehr & Peers, 2012). It should be noted that the State Route 16 study has only had a staff-level review done by Caltrans, Sacramento County Department of Transportation, City of

Rancho Cordova, and City of Sacramento. Other equivalent mitigation measures may be selected to the satisfaction of the Department of Transportation to mitigate the project's impact.

- At the **Watt Avenue & Kiefer Boulevard** intersection, the County proposes a tight diamond interchange as the ultimate improvement. The through movements (and BRT lane) on Watt Avenue would be grade separated from Kiefer Boulevard. Access to and from Kiefer Boulevard would be accomplished via on and off-ramps at two signalized intersections along Kiefer Boulevard. This design is proposed in the planning study prepared for *State Route 16 (Jackson Road) Corridor Study* (Fehr & Peers, 2012). It should be noted that the State Route 16 study has only had a staff-level review done by Caltrans, Sacramento County Department of Transportation, City of Rancho Cordova, and City of Sacramento. Other equivalent mitigation measures may be selected to the satisfaction of the Department of Transportation to mitigate the project's impact.

- At the **Watt Avenue & Jackson Road** intersection, the County proposes a standard six-by-six signalized intersection (two left-turn lanes, three through lanes, and one right-turn lane, on each approach) with three modifications. 1) The southbound left-turn movement would be grade separated; 2) The westbound right-turn movement would be grade separated; and 3) Three northbound left-turn lanes are proposed. This configuration represents an enhanced version of Alternative 6 in the planning study prepared for *State Route 16 (Jackson Road) Corridor Study* (Fehr and Peers, 2012). It should be noted that the State Route 16 study has only had a staff-level review done by Caltrans, Sacramento County Department of Transportation, City of Rancho Cordova, and City of Sacramento. Other equivalent mitigation measures may be selected to the satisfaction of the Department of Transportation to mitigate the project's impact.

Table 9.12
Existing Plus FOUR PROJECTS (Proposed Project) Roadway Segment Mitigations

ID	Roadway	Segment		Existing + FOUR PROJECTS					Mitigated Existing + FOUR PROJECTS						
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Volume / Capacity Ratio	Level of Service	LOS Impact with Mitigation?	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
2	Bradshaw Rd	US 50	Lincoln Village Dr	6	Arterial M	74,990	1.39	**F**	6	Arterial M	1.39	**F**	Yes		Maximum General Plan lanes
3	Bradshaw Rd	Lincoln Village Dr	Old Placerville Rd	6	Arterial M	68,530	1.27	**F**	6	Arterial M	1.27	**F**	Yes		Maximum General Plan lanes
4	Bradshaw Rd	Old Placerville Rd	Goethe Rd	6	Arterial M	61,140	1.13	**F**	6	Arterial M	1.13	**F**	Yes		Maximum General Plan lanes
5.1	Bradshaw Rd	Goethe Rd	Collector WJ-8	4	Arterial M	52,870	1.47	**F**	6	Arterial M	0.98	E	No		
5.2	Bradshaw Rd	Collector WJ-8	Kiefer Blvd	5	Arterial M	48,770	1.35	**F**	6	Arterial M	0.90	E	No		
6.1	Bradshaw Rd	Kiefer Blvd	Collector WJ-9	5	Arterial M	42,990	1.19	**F**	6	Arterial M	0.80	C	No		
6.2	Bradshaw Rd	Collector WJ-9	Mayhew Rd	5	Arterial M	43,240	1.20	**F**	6	Arterial M	0.80	D	No		
23	Elder Creek Rd	Power Inn Rd	Florin-Perkins Rd	2	Arterial M	22,450	1.25	**F**	4	Arterial M	0.62	B	No		
24	Elder Creek Rd	Florin Perkins Rd	South Watt Ave	2	Arterial M	17,920	1.00	**E**	4	Arterial M	0.50	A	No		
25	Elder Creek Rd	South Watt Ave	Hedge Ave	2	Arterial M	24,330	1.35	**F**	4	Arterial M	0.68	B	No		
26	Elder Creek Rd	Hedge Ave	Mayhew Rd	2	Arterial M	23,810	1.32	**F**	4	Arterial M	0.66	B	No		
28.1	Elder Creek Rd	Bradshaw Rd	Vineyard Rd	3	Arterial M	20,840	1.16	**F**	4	Arterial M	0.58	A	No		
29	Elk Grove-Florin Rd	Florin Rd	Gerber Rd	2	Arterial M	24,660	1.37	**F**	4	Arterial M	0.69	B	No		
31.1	Excelsior Rd	Jackson Rd	Collector WJ-6	3	Arterial M	28,300	1.57	**F**	4	Arterial M	0.79	C	No		
31.2	Excelsior Rd	Collector WJ-6	Elder Creek Rd	3	Arterial M	27,200	1.51	**F**	4	Arterial M	0.76	C	No		
44	Folsom Blvd	Howe Ave	Jackson Rd	4	Arterial M	54,050	1.50	**F**	4	Arterial M	1.50	**F**	Yes		Maximum General Plan lanes
47	Fruitridge Rd	Florin Perkins Rd	South Watt Ave	2	Arterial M	22,110	1.23	**F**	4	Arterial M	0.61	B	No		

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 9.12
Existing Plus FOUR PROJECTS (Proposed Project) Roadway Segment Mitigations

ID	Roadway	Segment		Existing + FOUR PROJECTS					Mitigated Existing + FOUR PROJECTS						
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Volume / Capacity Ratio	Level of Service	LOS Impact with Mitigation?	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
55.1	Grant Line Rd	Calvine Rd	Elk Grove City Limit	2	Rural S	15,870	0.79	**E**	4	Arterial M	0.44	A	No		
55.2	Grant Line Rd	Elk Grove City Limit	Sheldon Rd	2	Rural S	15,920	0.80	**E**	4	Arterial M	0.44	A	No		
56	Grant Line Rd	Sheldon Rd	Wilton Rd	2	Rural S	22,670	1.13	**F**	4	Arterial M	0.63	B	No		
57	Grant Line Rd	Wilton Rd	Bond Rd	2	Rural S	20,150	1.01	**F**	4	Arterial M	0.56	A	No		
62	Howe Ave	US 50	Folsom Blvd	6	Arterial M	61,660	1.14	**F**	6	Arterial M	1.14	**F**	Yes		Maximum General Plan lanes
65	Jackson Rd	Folsom Blvd	Florin Perkins Rd	2	Arterial M	32,990	1.83	**F**	4	Arterial M	0.92	E	No		
66	Jackson Rd	Florin Perkins Rd	South Watt Ave	2	Arterial M	37,140	2.06	**F**	4	Arterial M	1.03	**F**	Yes		Maximum General Plan lanes
67	Jackson Rd	South Watt Ave	Hedge Ave	4	Arterial M	58,480	1.62	**F**	6	Arterial M	1.08	**F**	Yes		Maximum General Plan lanes
68.1	Jackson Rd	Hedge Ave	Collector WJ-3	4	Arterial M	50,280	1.40	**F**	6	Arterial M	0.93	E	No		
68.2	Jackson Rd	Collector WJ-3	Mayhew Rd	4	Arterial M	51,720	1.44	**F**	6	Arterial M	0.96	E	No		
71.1	Jackson Rd	Excelsior Rd	Collector JT-3	4	Arterial M	46,470	1.29	**F**	6	Arterial M	0.86	D	No		
73	Jackson Rd	Sunrise Blvd	Grant Line Rd	2	Rural Hwy	17,810	0.78	**E**	4	Arterial M	0.49	A	No		
76	Kiefer Blvd	Mayhew Rd	Bradshaw Rd	4	Arterial M	37,250	1.03	**F**	4	Arterial M	1.03	**F**	Yes		Maximum General Plan lanes

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Table 9.12
Existing Plus FOUR PROJECTS (Proposed Project) Roadway Segment Mitigations

ID	Roadway	Segment		Existing + FOUR PROJECTS					Mitigated Existing + FOUR PROJECTS						
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Volume / Capacity Ratio	Level of Service	LOS Impact with Mitigation?	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
95	Rockingham Dr	Old Placerville Rd	Mather Field Rd	4	Arterial M	32,660	0.91	**E**	4	Arterial M	0.91	**E**	Yes		Maximum General Plan lanes
96	South Watt Ave	Folsom Blvd	Kiefer Blvd	6	Arterial M	64,520	1.19	**F**	6	Arterial M	1.19	**F**	Yes		Maximum General Plan lanes
97	South Watt Ave	Kiefer Blvd	Jackson Rd	5	Arterial M	49,130	1.36	**F**	6	Arterial M	0.91	E	No		
99	South Watt Ave	Fruitridge Rd	Elder Creek Rd	2	Arterial M	22,370	1.24	**F**	4	Arterial M	0.62	B	No		
100	South Watt Ave	Elder Creek Rd	Florin Rd	2	Arterial M	24,520	1.36	**F**	4	Arterial M	0.68	B	No		
102	Sunrise Blvd	Folsom Blvd	Trade Center Dr	6	Arterial M	52,560	0.97	**E**	6	Arterial M	0.97	**E**	Yes		Maximum General Plan lanes
106	Sunrise Blvd	Kiefer Blvd	Jackson Rd	2	Arterial M	20,180	1.12	**F**	4	Arterial M	0.56	A	No		
110	Watt Ave	US 50	Folsom Blvd	6	Arterial H	77,810	1.30	**F**	6	Arterial H	1.30	**F**	Yes		Maximum General Plan lanes
118	Zinfandel Dr	US 50	White Rock Rd	7	Arterial M	49,830	0.92	**E**	7	Arterial M	0.92	**E**	Yes		Maximum General Plan lanes
122	Zinfandel Dr	City Limit	Douglas Rd	2	Arterial M	20,550	1.14	**F**	4	Arterial M	0.57	A	No		
123.1	Zinfandel Dr	Douglas Rd	Collector MS-2	2	Arterial M	19,650	1.09	**F**	4	Arterial M	0.55	A	No		
200	Kiefer Blvd	Tree View Ln	Eagles Nest Rd	2	Arterial M	22,730	1.26	**F**	4	Arterial M	0.63	B	No		

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Table 9.12
Existing Plus FOUR PROJECTS (Proposed Project) Roadway Segment Mitigations

ID	Roadway	Segment		Existing + FOUR PROJECTS					Mitigated Existing + FOUR PROJECTS						
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Volume / Capacity Ratio	Level of Service	LOS Impact with Mitigation?	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible

Note: Gray shading represents changes in travel lanes or facility type that the project is responsible to provide.

[1] The following classifications are used to determine daily roadway capacity:
Arterial L - Arterial, Low Access Control
Arterial M - Arterial, Moderate Access Control
Arterial H - Arterial, High Access Control
Rural Hwy - Rural 2-lane Highway
Rural S - Rural 2-lane Road, 24'-36' of pavement, Paved Shoulders
Rural NS - Rural 2-lane Road, 24'-36' of pavement, No Shoulders
Res Collector F - Residential Collector with Frontage
Res Collector NF - Residential Collector with No Frontage

[2] Alternative mitigations represent proposed mitigations beyond the General Plan, as proposed by the County of Sacramento.

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Table 9.13

Existing Plus FOUR PROJECTS (Proposed Project) Impacted Intersections and Mitigations

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing Plus FOUR ALL OJTS			LOS Impact	Mitigated Existing Plus FOUR ALL OJTS			Existing Plus FOUR ALL OJTS			LOS Impact	Mitigated Existing Plus FOUR ALL OJTS		
		Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)
9	Florin Perkins Road & Jackson Road	Signal	E	68.8	No	Signal	C	28.6	Signal	F	146.5	Yes	Signal	D	42.2
14	S. Watt Avenue & Kiefer Blvd.	Signal	F	125.6	Yes	Signal	SB Ramps B NB Ramps D	SB Ramps 14.2 NB Ramps 50.4	Signal	F	111.6	Yes	Signal	SB Ramps B NB Ramps D	SB Ramps 14.3 NB Ramps 50.1
16	S. Watt Avenue & Jackson Road	Signal	F	336.6	Yes	Signal	E	67.5	Signal	F	730.1	Yes	Signal	E	68.3
17	S. Watt Avenue & Fruitridge Road	Signal	D	51.4	No	Signal	C	33.3	Signal	E	63.6	Yes	Signal	D	48.4
18	S. Watt Avenue & Elder Creek Road	Signal	F	124.3	Yes	Signal	D	39.6	Signal	F	144.2	Yes	Signal	D	42.7
27	Hedge Avenue & Florin Road	All-way stop	F	221.8	Yes	Signal	D	47.1	All-way stop	E	47.3	No	Signal	B	12.0
31	Mayhew Road & Elder Creek Road	Signal	F	>300	Yes	Signal	C	22.3	Signal	F	269.2	Yes	Signal	C	24.4
32	Woodring Drive & Zinfandel Drive	Two-way stop			Yes	Roundabout	C	18.5	Two-way stop			Yes	Roundabout	C	19.5
	Eastbound		F	86.5						F	79.1				
	Northbound Left Turn		*A*	*9.5*						B	10.1				
36	Bradshaw Road & Old Placerville Road	Signal	E	62.3	Yes	Signal			Signal	E	62.5	Yes	Signal		
37	Bradshaw Road & Kiefer Boulevard	Signal	F	108.6	Yes	Signal	F	102.7	Signal	F	105.4	Yes	Signal	E	78.8
38	Bradshaw Road & Jackson Road	Signal	F	100.6	Yes	Signal	E	77.5	Signal	F	82.4	Yes	Signal	E	69.9
39	Bradshaw Road & Elder Creek Road	Signal	F	81.6	Yes	Signal	D	54.0	Signal	E	71.6	No	Signal	E	63.0
40	Bradshaw Road & Florin Road	Signal	F	112.5	Yes	Signal	E	57.7	Signal	E	74.7	No	Signal	E	74.4

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Table 9.13

Existing Plus FOUR PROJECTS (Proposed Project) Impacted Intersections and Mitigations

	Intersection	AM Peak Hour							PM Peak Hour						
		Existing Plus FOUR ALL OJTS			LOS Impact	Mitigated Existing Plus FOUR ALL OJTS			Existing Plus FOUR ALL OJTS			LOS Impact	Mitigated Existing Plus FOUR ALL OJTS		
		Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)
42	Happy Lane & Old Placerville Road	Two-way stop			No	Signal	B	19.4	Two-way stop			Yes	Signal	B	17.6
	Northbound Left Turn		E	45.9						F	>300				
	Northbound Right Turn		C	15.9						B	13.6				
	Westbound Left Turn		A	9.0						A	9.2				
45	Excelsior Road & Jackson Road	Signal	F	281.1	Yes	Signal	D	47.3	Signal	F	225.2	Yes	Signal	D	38.7
48	Excelsior Road & Gerber Road/Birch Ranch Drive	All-way stop	F	158.8	Yes	Signal	C	31.0	All-way stop	F	104.3	Yes	Signal	A	7.7
51	Mather Field Road & Rockingham Drive	Signal	F	132.2	Yes				Signal	E	62.0	Yes			
61	Eagles Nest Road & Florin Road	Two-way stop			Yes	Signal	C	29.1	Two-way stop			Yes	Signal	C	31.7
	Northbound		*F*	*141.4*						D	25.5				
	Southbound		C	20.3						F	76.6				
	Eastbound Left Turn		*A*	*5.4*						A	8.0				
	Westbound Left Turn		*A*	*0.0*						A	7.6				
69	Sunrise Boulevard & Kiefer Boulevard	Signal	E	60.7	Yes	Signal	C	24.8	Signal	D	39.5	No	Signal	C	29.6
70	Sunrise Boulevard & Jackson Road	Signal	F	123.0	Yes	Signal	D	41.0	Signal	E	72.6	Yes	Signal	D	48.2
80	Grant Line Road & Jackson Road	Signal	F	98.3	Yes	Signal	D	49.7	Signal	E	70.7	No	Signal	E	66.2
90	Excelsior Road & Calvine Rd	All-way stop	F	121.0	Yes	Signal	C	32.7	All-way stop	F	80.4	Yes	Signal	C	22.7
93	Grant Line Rd & Dwy/Wilton Rd	Signal	F	83.2	Yes	Signal	C	32.6	Signal	E	73.0	Yes	Signal	D	35.6
319	Bradshaw Road & Collector WJ-10	Signal	F	96.2	Yes	Signal	C	39.8	Signal	B	14.7	No	Signal	C	24.1

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Table 9.13

Existing Plus FOUR PROJECTS (Proposed Project) Impacted Intersections and Mitigations

Intersection		AM Peak Hour							PM Peak Hour						
		Existing Plus FOUR ALL OJTS			LOS Impact	Mitigated Existing Plus FOUR ALL OJTS			Existing Plus FOUR ALL OJTS			LOS Impact	Mitigated Existing Plus FOUR ALL OJTS		
		Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)
325	Douglas Road & Kiefer Boulevard	Signal	F	117.8	Yes	Signal	D	54.1	Signal	F	137.6	Yes	Signal	D	50.0
331	Routier Ext/Routier Rd & Old Placerville Rd.	Signal	F	242.3	Yes	Signal	E	69.4	Signal	F	192.3	Yes	Signal	E	56.8

Note: Gray shading represents changes in traffic control for which the ALL OJT is responsible to pay a fair share.

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Table 9.14

Existing Plus FOUR PROJECTS (Proposed Project) Intersection Impacts and Mitigations

	Intersection	Traffic Control		Existing Plus FOUR PROJECTS Lane Geometrics				Mitigated Existing Plus FOUR PROJECTS Lane Geometrics				LOS Impact with Mitgation?	High Capacity Intersection?[1]	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
		Existing Plus FOUR PROJECTS	Mitigated Existing Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach				
9	Florin Perkins Road & Jackson Road	Signal	Signal									No	No		
14	S. Watt Avenue & Kiefer Blvd.	Signal	Signal									No	Yes	Tight Diamond Interchange (SB Watt Ramps/Kiefer intersection shown)	
			Signal											Tight Diamond Interchange (NB Watt Ramps/Kiefer intersection shown)	
16	S. Watt Avenue & Jackson Road	Signal	Signal									No	Yes	Free WBR	
											*Free right				
17	S. Watt Avenue & Fruitridge Road	Signal	Signal									No	No		
18	S. Watt Avenue & Elder Creek Road	Signal	Signal									No	No		
27	Hedge Avenue & Florin Road	All-way stop	Signal									No	No		
31	Mayhew Road & Elder Creek Road	Signal	Signal									No	No	Dual SBR	
32	Zinfandel Drive & Woodring Drive	Two-way stop	Roundabout									No	No		
36	Bradshaw Road & Old Placerville Road	Signal	Signal									Yes	No		Existing development
37	Bradshaw Road & Kiefer Boulevard	Signal	Signal									Yes	No	Carry 3 EBT and 3 WBT lanes through intersection	Maximum General Plan lanes
38	Jackson Road & Bradshaw Road	Signal	Signal									No	No	Dual EBR	
39	Bradshaw Road & Elder Creek Road	Signal	Signal									No	No		
40	Bradshaw Road & Florin Road	Signal	Signal									No	No		
42	Happy Lane & Old Placerville Road	Two-way stop	Signal									No	No		
45	Excelsior Road & Jackson Road	Signal	Signal									No	No	NBR overlap	
48	Excelsior Road & Gerber Road/Birch Ranch Drive	All-way stop	Signal										No		
52	Mather Boulevard & Douglas Road	All-way stop	Signal									No	No		
61	Eagles Nest Rd/Eagles Nest Road & Florin Road	Two-way stop	Signal									No	No		

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 9.14

Existing Plus FOUR PROJECTS (Proposed Project) Intersection Impacts and Mitigations

Intersection		Traffic Control		Existing Plus FOUR PROJECTS Lane Geometrics				Mitigated Existing Plus FOUR PROJECTS Lane Geometrics				LOS Impact with Mitgation?	High Capacity Intersection?[1]	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
		Existing Plus FOUR PROJECTS	Mitigated Existing Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach				
69	Sunrise Boulevard & Kiefer Boulevard	Signal	Signal									No	No		
70	Sunrise Boulevard & Jackson Road	Signal	Signal									No	No		
78	Grant Line Road & Douglas Road	Signal	All-way stop									No	No		
80	Grant Line Road & Jackson Road	Signal	Signal									No	No		
90	Excelsior Road & Calvine Rd	All-way stop	Signal									No	No		
93	Grant Line Road & Driveway/Wilton Rd	Signal	Signal									No	No		
319	Tree View Lane & Collector JT-1	Signal	Signal									No	No	Dual WBR	
325	Douglas Road & Kiefer Boulevard	Signal	Signal									No	No	Dual EBR	
331	Routier Ext/Routier Rd & Old Placerville Road	Signal	Signal									No	No	NBR overlap	

[1] High capacity intersections are defined in the Sacramento County General Plan and may include grade separations, additional turn lanes, and/or other features as deemed appropriate by the County.

[2] Alternative mitigations represent proposed mitigations beyond the General Plan, excluding high capacity intersections, as proposed by the County of Sacramento.

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

9.5.3 Existing Plus FOUR PROJECTS U.S. 50 Freeway Mitigation

According to Caltrans' US-50 Transportation Concept Report (TCR) and Corridor System Management Plan (CSMP), all mainline freeway lanes of the 8-lane ultimate facility (4 lanes in each direction) have already been built, with the exception of the segment between Zinfandel Drive and Sunrise Boulevard (where 6 of the 8 ultimate lanes exist today). With the exception of this segment, capacity improvements to widen the freeway mainline are precluded by the ultimate configuration in the TCR/CSMP. The TCR/CSMP does conceptualize other projects that will benefit the US-50 corridor without adding additional mainline travel lanes. These improvements generally fall into one of three categories:

- Intelligent transportation systems (ITS) and integrated corridor management (ICM) projects. Some examples may include ramp metering and multimodal improvements.
- Improvements to parallel local facilities. Such projects are expected to reduce travel demand on US-50.
- Future HOV lanes and auxiliary lanes. These projects would extend, or bridge gaps in, the existing HOV and auxiliary lane network. Constructing these lanes is permissible even when further widening of the mainline is not allowable, and is consistent with the ultimate configuration in the TCR/CSMP.

The FOUR PROJECTS shall participate in one or more of these alternative improvements that could directly reduce the severity of the project's impact and/or provide operational benefits to the US-50 corridor in general.

9.5.3.1 US-50 Eastbound Alternative Improvements

To lessen the impact to the eastbound US-50 mainline between Stockton Boulevard and 59th Street, the project may pay a fair share toward the construction of:

- Ramp meter improvements (Caltrans ITS/OPS Project List)

To lessen the impact to the eastbound US-50 weave between 65th Street and Howe Avenue, the project may pay a fair share toward the construction of:

- Ramp meter improvements (Caltrans ITS/OPS Project List)
- Widen 65th Street to 5 lanes from US-50 to Broadway (2035 SACOG MTP)

To lessen the impact to the eastbound US-50 weave between Mather Field Road and Zinfandel Drive, the project may pay a fair share toward the construction of:

- An interchange modification of US-50 at Mather Field Road (2035 SACOG MTP)

To lessen the impact to the eastbound US-50 mainline between Zinfandel Drive and Hazel Avenue, the project may pay a fair share toward the construction of:

- Auxiliary lanes between Zinfandel Drive and Sunrise Boulevard (2035 SACOG MTP)
- Auxiliary lanes between Sunrise Boulevard and Hazel Avenue (2035 SACOG MTP)
- Widen Sunrise Boulevard to 6 lanes with special treatments, including intersection improvements at White Rock Road, Folsom Boulevard, Coloma Road, Gold Express Drive, and Gold Country Boulevard (2035 SACOG MTP)
- A new interchange at Rancho Cordova Parkway, including a 4-lane arterial from US-50 to White Rock Road (2035 SACOG MTP)

- Multi-modal corridor improvements and interchange improvements at Hazel Avenue (2035 SACOG MTP)

9.5.3.2 US-50 Westbound Alternative Improvements

To lessen the impact to the westbound US-50 mainline between Watt Avenue and SR-51/SR-99, the project may pay a fair share toward the construction of:

- Bus/HOV lanes from Watt Avenue to Downtown Sacramento (2035 SACOG MTP)
- Replacement of existing communication lines with fiber optics to improve performance between SR-51/SR-99 and Watt Avenue (2013 10-Year SHOPP Plan)
- Auxiliary lane between the NB Howe Avenue on-ramp and the SB Howe Avenue on-ramp (2035 SACOG MTP)
- Ramp meter improvements (Caltrans ITS/OPS Project List)

9.5.4 Existing Plus FOUR PROJECTS Pedestrian and Bicycle Facility Mitigation

The FOUR PROJECTS applicants shall coordinate with Sacramento County to identify the necessary on- and off-site pedestrian and bicycle facilities to serve the proposed development. These facilities shall be incorporated into the FOUR PROJECTS and could include sidewalks, stop signs, standard pedestrian and school crossing warning signs, lane striping to provide a bicycle lane, bicycle parking, signs to identify pedestrian and bicycle paths, raised crosswalks, pedestrian signal heads, and all appropriate traffic calming measures as defined in the County's Neighborhood Traffic Management Program (NTMP). Sidewalks would be required as part of the frontage improvements along all new roadway construction in the FOUR PROJECTS vicinity in conformance with County design standards. Circulation and access to all proposed public spaces shall include sidewalks that meet Americans with Disabilities Act standards.

9.5.5 Existing Plus FOUR PROJECTS Transit System Mitigation

The applicants of the FOUR PROJECTS shall coordinate with Regional Transit (or other transit operators) to provide the additional transit facilities and services assumed in transportation analysis (see Section 8.1.2.3), or a cost-effective equivalent level of transit facilities and services.

The assumed transit routes and service frequency would be required at full development of the FOUR PROJECTS. The full level of transit service would not achieve adequate transit ridership during the early stages of development. Thus the ultimate transit service, like the roadway system serving the FOUR PROJECTS, must be phased with development of the FOUR PROJECTS.

9.5.6 Existing Plus FOUR PROJECTS Functionality Mitigation

Table 9.15 summarizes the results of the functionality analysis for the study area rural roadway segments with mitigation.

9.5.7 Existing Plus FOUR PROJECTS Mitigation Summary

Tables 9.16 through 9.21 summarize all of the roadway segments, intersections, and freeway facilities that would exhibit significant LOS impacts along with the mitigation success for these impacts.

Table 9.15
Existing Plus FOUR PROJECTS (Proposed Project) Functionality Mitigations

ID	Roadway	Segment		Existing + FOUR PROJECTS				Mitigation	Impact after Mitigation?
		From	To	Travel Lanes	Substandard? [1]	Forecasted Volume	Functionality Impact? [2]		
19	Eagles Nest Rd	Kiefer Blvd	Jackson Rd	4	No	9,540	Yes[3]	Widen to County standards [5]	No
20	Eagles Nest Rd	Jackson Rd	Florin Rd	2	Yes	6,430	Yes	Widen to County standards [5]	No
25	Elder Creek Rd	South Watt Ave	Hedge Ave	2	Yes	24,330	Yes	Widen to County standards [5]	No
26	Elder Creek Rd	Hedge Ave	Mayhew Rd	2	Yes	23,810	Yes	Widen to County standards [5]	No
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd	3	No	14,060	Yes[3]	Widen to County standards [5]	No
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd	3	No	20,840	Yes[3]	Widen to County standards [5]	No
30	Excelsior Rd	Kiefer Blvd	Jackson Rd	2	Yes	23,640	Yes	Widen to County standards [5]	No
31	Excelsior Rd	Jackson Rd	Elder Creek Rd	3	No	27,200	Yes[3]	Widen to County standards [5]	No
32	Excelsior Rd	Elder Creek Rd	Florin Rd	3	No	11,810	Yes[3]	Widen to County standards [5]	No
33	Excelsior Rd	Florin Rd	Gerber Rd	2	Yes	12,980	Yes	Widen to County standards [5]	No
34	Excelsior Rd	Gerber Rd	Calvine Rd	2	Yes	10,200	Yes	Widen to County standards [5]	No
39	Florin Rd	South Watt Ave	Hedge Ave	2	Yes	16,140	Yes	Widen to County standards [5]	No
40	Florin Rd	Hedge Ave	Mayhew Rd	2	Yes	13,120	Yes	Widen to County standards [5]	No
41	Florin Rd	Mayhew Rd	Bradshaw Rd	2	Yes	13,330	Yes	Widen to County standards [5]	No
42	Florin Rd	Bradshaw Rd	Excelsior Rd	2	Yes	12,770	Yes	Widen to County standards [5]	No
43	Florin Rd	Excelsior Rd	Sunrise Blvd	2	Yes	7,260	Yes	Widen to County standards [5]	No
48	Fruitridge Rd	Fruitridge Rd	Hedge Ave	3	No	14,910	Yes[3]	Widen to County standards [5]	No
49	Fruitridge Rd	Hedge Ave	Mayhew Rd	4	No	15,870	Yes[3]	Widen to County standards [5]	No
50	Grant Line Rd	White Rock Rd	Douglas Rd	2	Yes	9,330	Yes	Widen to County standards [5]	No
58	Happy Ln	Old Placerville Rd	Kiefer Blvd	4	No	7,410	Yes[3]	Widen to County standards [5]	No
59	Hedge Ave	Jackson Rd	Fruitridge Rd	2	Yes	7,630	Yes	Widen to County standards [5]	No
70	Jackson Rd	Bradshaw Rd	Excelsior Rd	6	No	53,130	Yes[3]	Widen to County standards [5]	No
71	Jackson Rd	Excelsior Rd	Eagles Nest Rd	4	No	46,470	Yes[3]	Widen to County standards [5]	No
77	Kiefer Blvd	Bradshaw Rd	Happy Ln	6	No	43,540	Yes[3]	Widen to County standards [5]	No
78	Kiefer Blvd	Zinfandel Dr	Sunrise Blvd	3	No	14,640	Yes[3]	Widen to County standards [5]	No
89	Mayhew Rd	Jackson Rd	Fruitridge Rd	4	No	34,120	Yes[3]	Widen to County standards [5]	No
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd	2	Yes	19,650	Yes	Widen to County standards [5]	No

Red text with light gray shading indicate project impacts.

Table 9.15
Existing Plus FOUR PROJECTS (Proposed Project) Functionality Mitigations

ID	Roadway	Segment		Existing + FOUR PROJECTS				Mitigation	Impact after Mitigation?
		From	To	Travel Lanes	Substandard? [1]	Forecasted Volume	Functionality Impact? [2]		

Note: Gray shading indicates changes in travel lanes or facility type that the project is responsible to provide. For all roadway segments to be widened, the project is responsible to build the entire roadway to County standards.

[1] Substandard rural roads are defined as rural, 2-lane roadway segments with travel lanes narrower than 12 feet and/or roadside shoulders narrower than 6 feet.
[2] Functionality impacts are triggered when a substandard rural road increases over a threshold of 6,000 ADT, or for a roadway already above 6,000 ADT, increases by more than 600 ADT.
[3] The potential for an impact exists should the project generate traffic volumes on the roadway exceeding 6,000 ADT, or increasing more than 600 ADT on a roadway already above 6,000 ADT, prior to the construction of roadway improvements.
[4] Excluding the roadway segment that is within the developed community of Independence at Mather.
[5] The functionality impact is mitigated by improving the roadway to County standards, including widening travel lanes to 12 feet and/or widening or providing paved shoulders to 6 feet.

Red text with light gray shading indicate project impacts.

Table 9.16
Existing Plus FOUR PROJECTS (Prop. Proj.) Summary of Impacted Roadway Segments

ID	Roadway	Segment	
		From	To
Level of Service Impact Fully Mitigated by General Plan Lanes			
5.1	Bradshaw Rd	Goethe Rd	Collector WJ-8
5.2	Bradshaw Rd	Collector WJ-8	Kiefer Blvd
6.1	Bradshaw Rd	Kiefer Blvd	Collector WJ-9
6.2	Bradshaw Rd	Collector WJ-9	Mayhew Rd
23	Elder Creek Rd	Power Inn Rd	Florin-Perkins Rd
24	Elder Creek Rd	Florin Perkins Rd	South Watt Ave
25	Elder Creek Rd	South Watt Ave	Hedge Ave
26	Elder Creek Rd	Hedge Ave	Mayhew Rd
28.1	Elder Creek Rd	Bradshaw Rd	Vineyard Rd
29	Elk Grove-Florin Rd	Florin Rd	Gerber Rd
31.1	Excelsior Rd	Jackson Rd	Collector WJ-6
31.2	Excelsior Rd	Collector WJ-6	Elder Creek Rd
47	Fruitridge Rd	Florin Perkins Rd	South Watt Ave
55.1	Grant Line Rd	Calvine Rd	Elk Grove City Limit
55.2	Grant Line Rd	Elk Grove City Limit	Sheldon Rd
56	Grant Line Rd	Sheldon Rd	Wilton Rd
57	Grant Line Rd	Wilton Rd	Bond Rd
65	Jackson Rd	Folsom Blvd	Florin Perkins Rd
68.1	Jackson Rd	Hedge Ave	Collector WJ-3
68.2	Jackson Rd	Collector WJ-3	Mayhew Rd
71.1	Jackson Rd	Excelsior Rd	Collector JT-3
73	Jackson Rd	Sunrise Blvd	Grant Line Rd
97	South Watt Ave	Kiefer Blvd	Jackson Rd
99	South Watt Ave	Fruitridge Rd	Elder Creek Rd
100	South Watt Ave	Elder Creek Rd	Florin Rd
106	Sunrise Blvd	Kiefer Blvd	Jackson Rd
122	Zinfandel Dr	City Limit	Douglas Rd
123.1	Zinfandel Dr	Douglas Rd	Collector MS-2
200	Kiefer Blvd	Tree View Ln	Eagles Nest Rd
Level of Service Impact Not Fully Mitigated by General Plan Lanes			
2	Bradshaw Rd	US 50	Lincoln Village Dr
3	Bradshaw Rd	Lincoln Village Dr	Old Placerville Rd
4	Bradshaw Rd	Old Placerville Rd	Goethe Rd
44	Folsom Blvd	Howe Ave	Jackson Rd
62	Howe Ave	US 50	Folsom Blvd
66	Jackson Rd	Florin Perkins Rd	South Watt Ave

Note: Refer to Table 4.12 for detailed description of impacts and mitigations.

Table 9.16
Existing Plus FOUR PROJECTS (Prop. Proj.) Summary of Impacted Roadway Segments

ID	Roadway	Segment	
		From	To
67	Jackson Rd	South Watt Ave	Hedge Ave
76	Kiefer Blvd	Mayhew Rd	Bradshaw Rd
95	Rockingham Dr	Old Placerville Rd	Mather Field Rd
96	South Watt Ave	Folsom Blvd	Kiefer Blvd
102	Sunrise Blvd	Folsom Blvd	Trade Center Dr
110	Watt Ave	US 50	Folsom Blvd
118	Zinfandel Dr	US 50	White Rock Rd

Note: Refer to Table 4.12 for detailed description of impacts and mitigations.

Table 9.17
Existing Plus FOUR PROJECTS (Proposed Project) Summary of Impacted Intersections

	Intersection	Alternative Mitigation
Level of Service Impact Fully Mitigated by General Plan Lanes		
9	Florin Perkins Road & Jackson Road	
17	S. Watt Avenue & Fruitridge Road	
18	S. Watt Avenue & Elder Creek Road	
27	Hedge Avenue & Florin Road	
31	Mayhew Road & Elder Creek Road	**
32	Woodring Drive & Zinfandel Drive	
38	Bradshaw Road & Jackson Road	**
39	Bradshaw Road & Elder Creek Road	
40	Bradshaw Road & Florin Road	
42	Happy Lane & Old Placerville Road	
45	Excelsior Road & Jackson Road	**
48	Excelsior Road & Gerber Road/Birch Ranch Drive	
61	Eagles Nest Road & Florin Road	
69	Sunrise Boulevard & Kiefer Boulevard	
70	Sunrise Boulevard & Jackson Road	
80	Grant Line Road & Jackson Road	
90	Excelsior Road & Calvine Rd	
93	Grant Line Rd & Dwy/Wilton Rd	

Table 9.17
Existing Plus FOUR PROJECTS (Proposed Project) Summary of Impacted Intersections

	Intersection	Alternative Mitigation
319	Bradshaw Road & Collector WJ-10	
325	Douglas Road & Kiefer Boulevard	**
331	Routier Ext/Routier Rd & Old Placerville Rd.	**
	Level of Service Impact Not Fully Mitigated by General Plan Lanes But Designated High Capacity Intersection	
14	S. Watt Avenue & Kiefer Blvd.	**
16	S. Watt Avenue & Jackson Road	**
	Level of Service Impact Not Fully Mitigated by General Plan Lanes	
36	Bradshaw Road & Old Placerville Road	
37	Bradshaw Road & Kiefer Boulevard	
51	Mather Field Road & Rockingham Drive	

[1] Alternative mitigations represent proposed mitigations beyond the General Plan, excluding designated high capacity intersections, as proposed by the County of Sacramento.

* denotes alternative mitigations that improve operations but do not fully mitigate the impact.
** denotes alternative mitigations that fully mitigate the impact.

Table 9.18

Existing Plus FOUR PROJECTS (Proposed Project)
Summary of Impacted Freeway Basic Segments

Direction	Location
Level of Service Impact Not Mitigated	
Eastbound US-50	Stockton Boulevard to 59th Street
	Zinfandel Drive to Sunrise Boulevard
	Sunrise Boulevard to Hazel Avenue
Westbound US-50	Watt Avenue to Howe Avenue
	Howe Avenue to 65th Street
	65th Street to 59th Street
	59th Street to Stockton Boulevard
	Stockton Boulevard to SR 99 / SR 51

Source: *DKS Associates, 2018.*

Table 9.19

Existing Plus FOUR PROJECTS (Proposed Project)
Summary of Impacted Freeway Merge/Diverge/Weave Segments

Direction	Location	Junction Type
Level of Service Impact Not Mitigated		
Eastbound US-50	Northbound 65th Street Slip Entrance	Weave
	Howe Avenue / Hornet Drive Exit	
	Northbound Mather Field Road Slip Entrance	Weave
	Zinfandel Drive Exit	

Source: *DKS Associates, 2018.*

Table 9.20
Existing Plus FOUR PROJECTS (Prop. Proj.) Functionality Impact Summary

ID	Roadway	Segment	
		From	To
Functionality Impact Fully Mitigated			
15	Douglas Rd	Mather Blvd	Zinfandel Dr
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd
19	Eagles Nest Rd	Kiefer Blvd	Jackson Rd
20	Eagles Nest Rd	Jackson Rd	Florin Rd
25	Elder Creek Rd	South Watt Ave	Hedge Ave
26	Elder Creek Rd	Hedge Ave	Mayhew Rd
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd
30	Excelsior Rd	Kiefer Blvd	Jackson Rd
31	Excelsior Rd	Jackson Rd	Elder Creek Rd
32	Excelsior Rd	Elder Creek Rd	Florin Rd
33	Excelsior Rd	Florin Rd	Gerber Rd
34	Excelsior Rd	Gerber Rd	Calvine Rd
39	Florin Rd	South Watt Ave	Hedge Ave
40	Florin Rd	Hedge Ave	Mayhew Rd
41	Florin Rd	Mayhew Rd	Bradshaw Rd
42	Florin Rd	Bradshaw Rd	Excelsior Rd
43	Florin Rd	Excelsior Rd	Sunrise Blvd
48	Fruitridge Rd	Fruitridge Rd	Hedge Ave
49	Fruitridge Rd	Hedge Ave	Mayhew Rd
50	Grant Line Rd	White Rock Rd	Douglas Rd
58	Happy Ln	Old Placerville Rd	Kiefer Blvd
59	Hedge Ave	Jackson Rd	Fruitridge Rd
70	Jackson Rd	Bradshaw Rd	Excelsior Rd
71	Jackson Rd	Excelsior Rd	Eagles Nest Rd
77	Kiefer Blvd	Bradshaw Rd	Happy Ln
78	Kiefer Blvd	Zinfandel Dr	Sunrise Blvd

Table 9.20
Existing Plus FOUR PROJECTS (Prop. Proj.) Functionality Impact Summary

ID	Roadway	Segment	
		From	To
83	Mather Blvd-Excelsior Rd[4]	Douglas Rd	Kiefer Blvd
89	Mayhew Rd	Jackson Rd	Fruitridge Rd
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd

10. CEQA CUMULATIVE PLUS FOUR PROJECTS SCENARIO (JACKSON TOWNSHIP PROPOSED PROJECT)

10.1 FOUR PROJECTS DESCRIPTION

The CEQA Cumulative plus FOUR PROJECTS scenario evaluates the effects of the traffic of four developments added to CEQA Cumulative conditions. Figure 9.1 illustrates the location of the FOUR PROJECTS:

- West Jackson Highway Master Plan (West Jackson)
- Jackson Township Specific Plan (Jackson Township)
- NewBridge Specific Plan (NewBridge)
- Mather South Specific Plan Amendment (Mather South)

10.1.1 CEQA Cumulative Land Use

Outside the FOUR PROJECTS area (see Figure 10.1), SACOG's 2035 development forecasts (the amount and location of housing and employment) for the adopted 2012 Metropolitan Transportation Plan (MTP) were used to prepare travel demand forecasts for this scenario. In addition, full build out of all reasonably foreseeable development projects was assumed within the study area, including the following major developments:

- Unincorporated Sacramento County
  - Vineyard Springs Comprehensive Plan
  - North Vineyard Station Specific Plan
  - Florin Vineyard Gap Community Plan
  - Mather Airport Specific Plan
  - Cordova Hills
  - Easton
  - Glenborough
  - East County Quarries

- City of Ranch Cordova
  - Arboretum
  - Suncreek
  - Sunridge Ranch
  - Rio del Oro
  - Westborough

- City of Folsom
  - Folsom South of 50 Specific Plan

- City of Sacramento
  - Aspen 1

10.1.2 Transportation Network

Figure 10.1 illustrates the transportation network associated with the CEQA Cumulative without FOUR PROJECTS scenario. Outside the FOUR PROJECTS area (see Figure 9.1), it consists of the improvements through 2035 in the adopted 2012 Metropolitan Transportation Plan (MTP). Within the FOUR PROJECTS area, it includes roadway improvements beyond those in the MTP, which would be fully funded by the developments assumed in this scenario or by other committed funding sources. Sacramento County staff helped define such improvements and the number of roadway lanes for this scenario.

Figure 10.2 illustrates the transportation network associated with the CEQA Cumulative with FOUR PROJECTS scenario. The FOUR PROJECTS would construct new roadways within their sites, and widen many existing roadways within or on the borders of their sites. Details of this expansion of the roadway system is included in Section 10.2.1.

10.1.2.3 Pedestrian and Bicycle Facilities

The roadways within the FOUR PROJECTS would meet County standards, which would provide sidewalks and on-street (Class II) bike lanes on all collector, arterial and thoroughfare roadways. The FOUR PROJECTS also provide several off-street (Class I) multi-purpose trails.

10.1.2.4 Transit System

The FOUR PROJECTS are designed with significant amounts of higher density and mixed uses to help support transit use but transit service within walking distances of those uses is required to achieve a significant transit ridership. An accurate estimation of transit use requires the definition of specific transit routes and frequency of service on those routes. A separate planning effort, involving staff from Sacramento County and Sacramento Regional Transit (RT), was conducted to define an appropriate transit system for the transportation analysis. That effort is described in Section 8.1.2.3.

The planning effort resulted in four transit lines that would serve the FOUR PROJECTS at a frequency of 15 minutes during the peak commute hours (approximately 6-9 AM and 3-6 PM) and 30 minutes during off-peak service hours (approximately 9AM-3PM and 6PM-8PM) on weekdays. Another key characteristic of the proposed transit system built into the modeling assumptions is the targeted use of queue jumps on portions of key corridors (Bradshaw Road from Kiefer Boulevard to Rock Creek Parkway, and Jackson Road from Watt Avenue to Excelsior Road). Queue jumps ensure that buses are not excessively delayed at signals along congested corridors, and therefore not too heavily penalized from a travel time perspective. This is necessary to achieve the adequate ridership levels that were forecast and ensure reliable operations. **Figure 10.3** shows the assumed transit routes for this scenario.

The assumed transit routes, service frequency, and supporting infrastructure (i.e. queue jumps) would be required at full development of the FOUR PROJECTS. The full level of transit service would not achieve adequate transit ridership during the early stages of development. Thus the

ultimate transit service, like the roadway system serving the FOUR PROJECTS, must be phased with development of the FOUR PROJECTS.

FIGURE 10.1
CEQA CUMULATIVE NO PROJECT
ROADWAY NETWORK

Legend

- 2 Lanes
- 3 Lanes
- 4 Lanes
- 5 Lanes
- 6 Lanes
- 7 Lanes
- Cities
- Mather Airport

FIGURE 10.2
CEQA CUM PLUS FOUR PROJECTS
ROADWAY NETWORK

Legend

- 2 Lanes
- 3 Lanes
- 4 Lanes
- 5 Lanes
- 6 Lanes
- 7 Lanes
- Cities
- Mather Airport

FIGURE 10.3
PROJECT TRANSIT NETWORK
CEQA CUM PLUS FOUR PROJECTS
(JT PROPOSED PROJECT)

Legend

- Jackson Express Route
- Kiefer Jackson Local Route
- West Jackson Local Route A
- West Jackson Local Route B
- Cities
- Mather Airport

10.2 TRIP GENERATION

The SACSIM model that has been utilized for the transportation forecasts in this analysis estimated trip generation of the Jackson Township project. **Table 10.2** summarizes the person trip generation. The Jackson Township project would generate over 95,000 daily work person trip ends, and over 804,000 daily person trip ends for all trip purposes.

Table 10.3 summarizes the estimated mode choice for the Existing plus Jackson Township project scenario. About 90.4 percent of all person trips are expected to be accommodated by automobile. Transit will serve about 2.0 percent of all trips, while walk and bike modes will accommodate about 7.7 percent of all trips. The mode choice assumes full implementation of the project's pedestrian and bicycle systems.

Table 10.4 summarizes the vehicular (auto) trip generation of the Jackson Township project. The Jackson Township project is estimated to generate over 541,000 daily vehicle trip ends. It should be noted that more than one person trip may be accommodated by a vehicle trip (e.g. carpooling). Over 107,000 of the daily vehicle trip ends will be associated with trips with both an origin and destination within the Jackson Township project, about 20 percent of the trip ends. The internal trip ends represent over 53,500 daily vehicle trips (one-half the number of internal trip ends). The Jackson Township project will generate about 434,000 external vehicle trips that have an origin or destination inside the Jackson Township project but the other end of the trip is outside the Jackson Township project. Table 10.4 also shows the vehicle trips generated during the a.m. and p.m. peak hours.

10.3 TRIP DISTRIBUTION

The distribution of trips associated with development of the FOUR PROJECTS was derived utilizing SACSIM, incorporating the proposed land use and access locations associated with the FOUR PROJECTS. Trip distribution varies by land use and time period. **Figure 10.4** illustrates the overall trip distribution of daily FOUR PROJECTS trips with the CEQA Plus FOUR PROJECTS scenario. The highest percentages of FOUR PROJECTS traffic are accommodated on Jackson Road, Bradshaw Road, Kiefer Boulevard, and Vineyard Road.

Table 10.1: Estimated Daily Person Trip Generation
CEQA Cumulative Plus FOUR PROJECTS (Proposed Project)

Trip Purpose	Daily Person Trip Ends
Work Trips	95,402
Non-Work Trips	708,805
All Trip Purposes	804,206

Source: *DKS Associates, 2018.*

Table 10.2: Mode Split
CEQA Cumulative Plus FOUR PROJECTS (Proposed Project)

Mode	Percentage of Person Trips by Trip Purpose		
	Work Trips	Non-Work Trips	All Trip Purposes
Auto - SOV	83.2%	47.0%	51.3%
Auto - HOV	10.0%	43.0%	39.1%
Transit	4.6%	1.7%	2.0%
Walk	1.3%	7.4%	6.7%
Bike	0.1%	1.0%	1.0%

Source: *DKS Associates, 2018.*

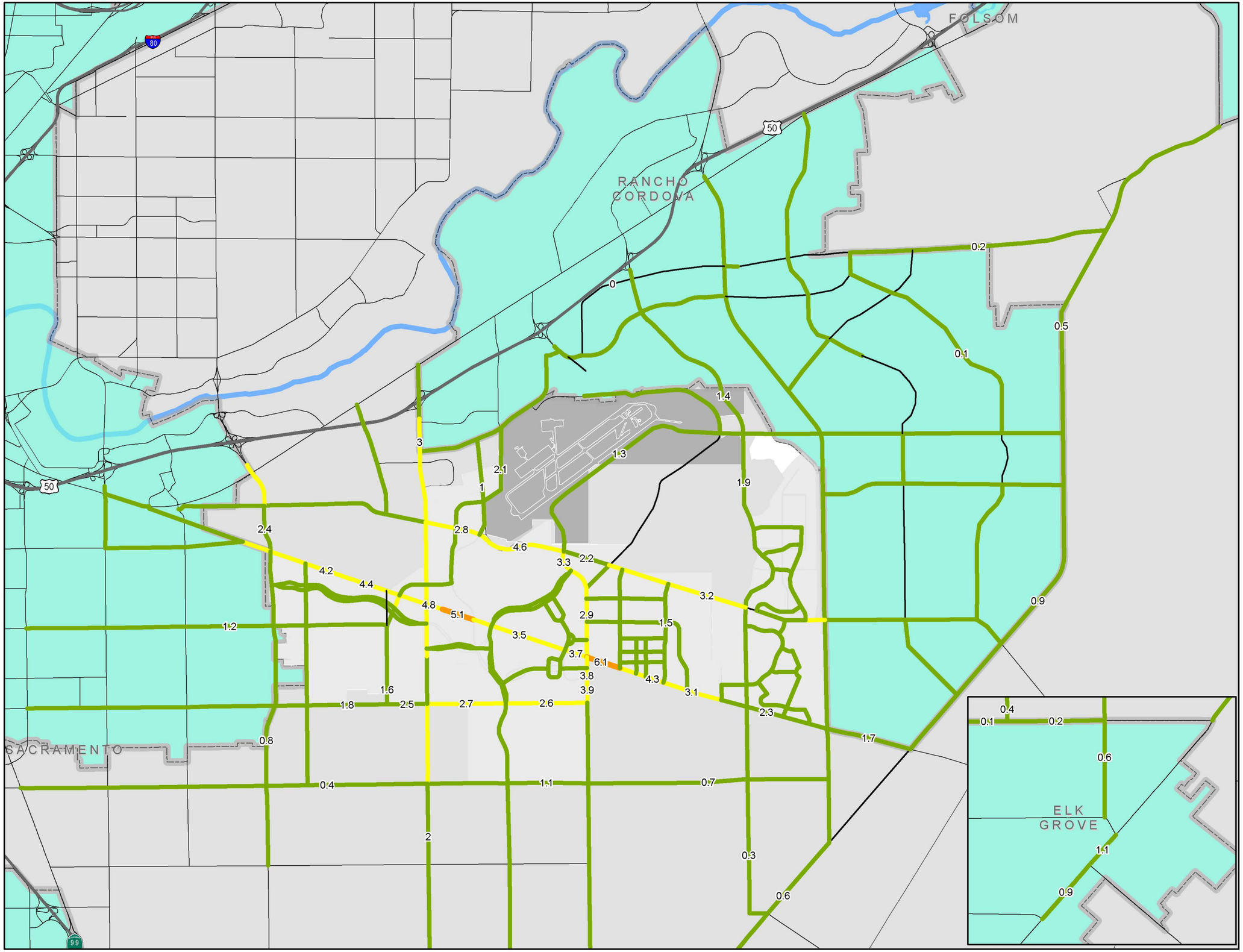
Table 10.3: Estimated Daily Vehicle Trip Generation
CEQA Cumulative Plus FOUR PROJECTS (Proposed Project)

Trip Type		AM Peak Hour	PM Peak Hour	Daily
Total Vehicle Trip Ends		46,032	50,381	541,167
Percent Internal Trip Ends[1]		16.7%	20.4%	19.8%
Vehicle Trips	Internal to Project	3,851	5,132	53,638
	External to Project	38,331	40,118	433,891
	Total	42,182	45,249	487,529

[1.] Both trip ends within the project.

Source: *DKS Associates, 2018.*

FIGURE 10.4
CEQA CUM PLUS FOUR PROJECTS
FOUR PROJECTS TRIP DISTRIBUTION
(JT PROPOSED PROJECT)



10.4 OPERATIONS ANALYSIS AND IMPACTS

Cumulative scenario impacts are determined by comparing the traffic operating conditions associated with the FOUR PROJECTS with the traffic operating conditions associated with the cumulative (without FOUR PROJECTS) conditions, and comparing the change to the thresholds of significance. **Figure 10.5** illustrates the resultant traffic operating conditions associated with the CEQA Cumulative (without FOUR PROJECTS) scenario. **Figure 10.6** illustrates the resultant traffic operating conditions associated with the CEQA Cumulative Plus FOUR PROJECTS scenario.

10.4.1 CEQA Cumulative Plus FOUR PROJECTS Roadway Segment Impacts

Table 10.4 summarizes the results of the operations analysis for the study area roadway segments. The table includes the number of lanes assumed with the implementation of the FOUR PROJECTS. The shaded table cells under the "Travel Lanes" and "Facility Type" headings illustrate new roadways or widened roadways. The last column of the table shows the project(s) responsible for the increase in the number of roadway lanes. The shaded table cells under the "Level of Service" heading indicate those locations with an LOS impact.

10.4.2 CEQA Cumulative Plus FOUR PROJECTS Intersection Impacts

Table 10.5 and 10.6 summarize the results of the operations analysis for the study area intersections. The tables include the implementation of intersection changes associated with the FOUR PROJECTS. Table 10.6 illustrates the type of traffic control and number of lanes by type on each study area intersection approach. Shaded table cells indicate those locations where changes in traffic control and / or number of approach lanes by type would be fully funded by the project(s) shown in the last column. Shaded table cells in Table 10.5 illustrate those locations with an LOS impact. Detailed analysis information is included in the technical appendix.

Signal warrant analysis was conducted for all unsignalized intersections along Jackson Road, and other unsignalized intersections in close proximity to the project. The project is considered to have a significant impact at an unsignalized location if both the impact criteria in Table 1.6 are met, and one or more of the signal warrants specified in the California Manual on Uniform Traffic Control Devices (CAMUTCD) are met. The following unsignalized intersections exhibit significant impacts and meet one or more traffic signal warrants:

- Happy Lane and Old Placerville Road
- Eagles Nest Road and Florin Road

10.4.3 CEQA Cumulative Plus FOUR PROJECTS U.S. 50 Freeway Impacts

10.4.3.1 Freeway Basic Segments

Table 10.7 summarizes a.m. and p.m. peak hour US 50 freeway mainline operations. Details of the analysis are included in the technical appendix. The following locations exhibit significant impacts:

- Eastbound
    - Stockton Boulevard to 59th Street - a.m. peak hour

10.4.3.2 Freeway Ramp Junctions / Weaving

Table 10.8 summarizes a.m. and p.m. peak hour freeway operations at ramp junctions and weaving areas. Details of the analysis are included in the technical appendix. The following locations exhibit significant impacts:

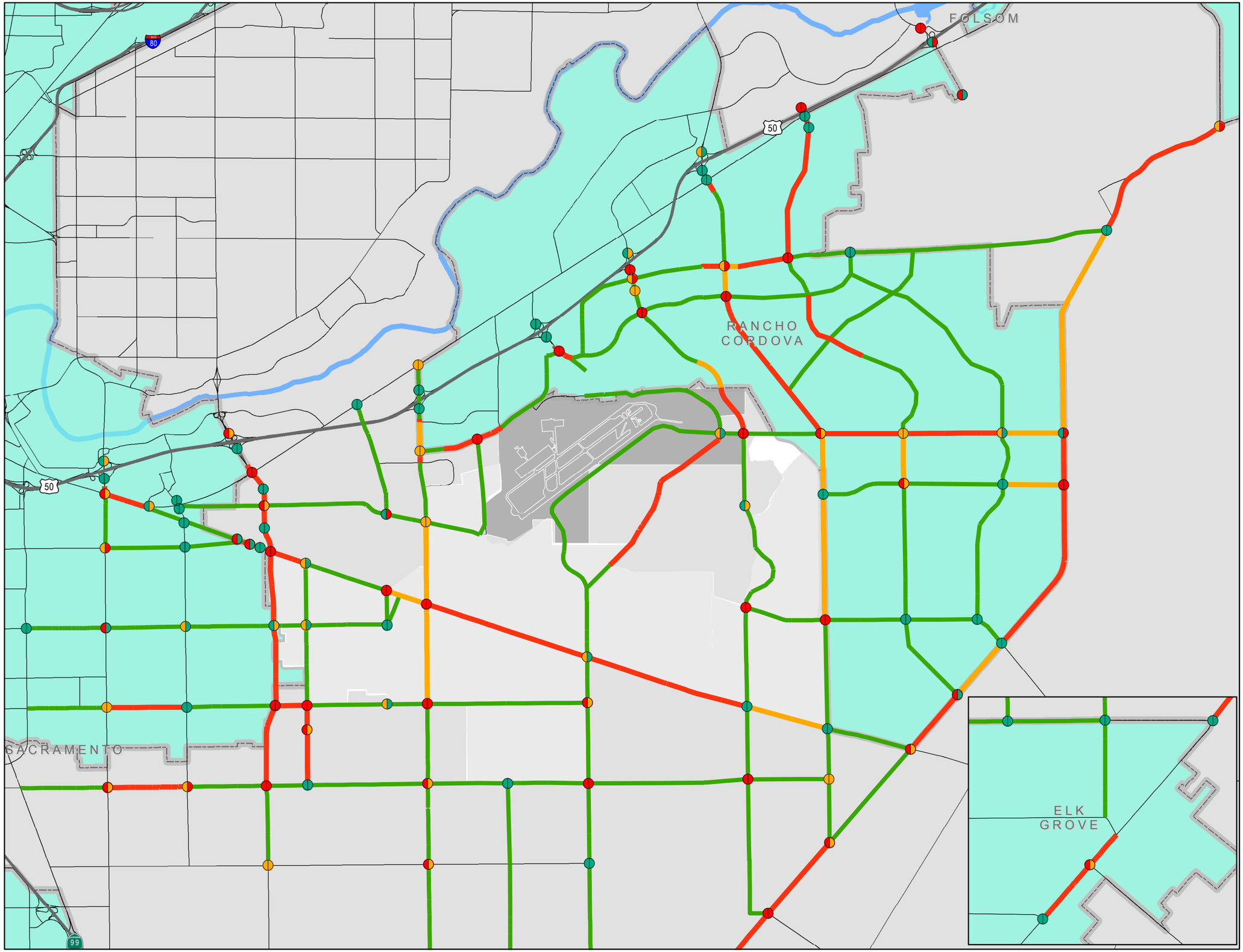
- Westbound
    - Hazel Avenue to Rancho Cordova Parkway weave - a.m. peak hour

10.4.3.3 Freeway Ramp Intersection Queuing

Tables 10.9 and 10.10 summarize a.m. and p.m. peak hour freeway ramp intersection queuing. The following locations exhibit a significant impact:

- Eastbound
    - Exit ramp to Howe Avenue - right turn queue length exceeds available storage – a.m. peak hour
    - Exit ramp to Zinfandel Drive-right turn and through queue length exceeds available storage – a.m. peak hour
- Westbound
    - Exit ramp to Rancho Cordova Parkway - left turn queue length exceeds available storage – a.m. and p.m. peak hours

FIGURE 10.5
CEQA CUMULATIVE NO PROJECT ROADWAY SEGMENT AND INTERSECTION LOS



Legend

Intersections (AM Peak Hour)
- LOS A-D
- LOS E
- LOS F

Intersections (PM Peak Hour)
- LOS A-D
- LOS E
- LOS F

Roadway Segments
- LOS A-D
- LOS E
- LOS F
- Cities
- Mather Airport

DKS

FOLSOM

RANCHO CORDOVA

SACRAMENTO

ELK GROVE

FIGURE 10.6
CEQA CUM PLUS FOUR PROJECTS (JT PROPOSED PROJECT) ROADWAY SEGMENT AND INTERSECTION LOS AND IMPACTS

Legend

Intersections (AM Peak Hour)

- LOS A-D (84)
- LOS E (14)
- LOS F (56)

Intersections (PM Peak Hour)

- LOS A-D
- LOS E
- LOS F
- Mitigable Intersection Impact
- Unavoidable Intersection impact

Study_Area_Segments

- LOS A-D
- LOS E
- LOS F
- Cities
- Mather Airport

DKS

Table 10.4
CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Roadway Segment Levels of Service

ID	Roadway	Segment		CEQA Cumulative No Project					CEQA Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
1	Bradshaw Rd	Folsom Blvd	US 50	6	Arterial M	27,240	0.50	A	6	Arterial M	24,420	0.45	A	
2	Bradshaw Rd	US 50	Lincoln Village Dr	6	Arterial M	66,770	1.24	**F**	6	Arterial M	85,400	1.58	**F**	
3	Bradshaw Rd	Lincoln Village Dr	Old Placerville Rd	6	Arterial M	52,940	0.98	**E**	6	Arterial M	77,570	1.44	**F**	
4	Bradshaw Rd	Old Placerville Rd	Goethe Rd	6	Arterial M	62,600	1.16	**F**	6	Arterial M	74,760	1.38	**F**	
5.1	Bradshaw Rd	Goethe Rd	Collector WJ-8	6	Arterial M	47,100	0.87	D	6	Arterial M	63,620	1.18	**F**	
5.2	Bradshaw Rd	Collector WJ-8	Kiefer Blvd	6	Arterial M	45,320	0.84	D	6	Arterial M	59,990	1.11	**F**	
6.1	Bradshaw Rd	Kiefer Blvd	Collector WJ-9	6	Arterial M	51,270	0.95	E	6	Arterial M	54,800	1.01	**F**	
6.2	Bradshaw Rd	Collector WJ-9	Mayhew Rd	6	Arterial M	52,070	0.96	E	6	Arterial M	55,140	1.02	**F**	
6.3	Bradshaw Rd	Mayhew Rd	Jackson Rd	6	Arterial M	52,020	0.96	E	6	Arterial M	52,240	0.97	E	
7.1	Bradshaw Rd	Jackson Rd	Rock Creek Pkwy	6	Arterial M	52,190	0.97	E	6	Arterial M	48,640	0.90	E	
7.2	Bradshaw Rd	Rock Creek Pkwy	Collector WJ-10	6	Arterial M	52,220	0.97	E	6	Arterial M	51,500	0.95	E	
7.3	Bradshaw Rd	Collector WJ-10	Collector WJ-11	6	Arterial M	52,390	0.97	E	6	Arterial M	47,570	0.88	D	
7.4	Bradshaw Rd	Collector WJ-11	Elder Creek Rd	6	Arterial M	52,410	0.97	E	6	Arterial M	43,850	0.81	D	
8	Bradshaw Rd	Elder Creek Rd	Florin Rd	6	Arterial M	44,990	0.83	D	6	Arterial M	47,860	0.89	D	
9	Bradshaw Rd	Florin Rd	Gerber Rd	6	Arterial M	42,300	0.78	C	6	Arterial M	45,520	0.84	D	
10	Bradshaw Rd	Gerber Rd	Calvine Rd	6	Arterial M	29,810	0.55	A	6	Arterial M	33,570	0.62	B	
11	Calvine Rd	Waterman Rd	Bradshaw Rd	6	Arterial M	16,370	0.30	A	6	Arterial M	18,040	0.33	A	
12	Calvine Rd	Bradshaw Rd	Vineyard Rd	6	Arterial M	14,540	0.27	A	6	Arterial M	14,770	0.27	A	
13	Calvine Rd	Vineyard Rd	Excelsior Rd	4	Arterial M	8,500	0.24	A	4	Arterial M	9,630	0.27	A	
14	Chrysanthy Blvd	Sunrise Blvd	Rancho Cordova Pkwy	4	Arterial M	8,010	0.22	A	4	Arterial M	9,680	0.27	A	
15	Douglas Rd	Mather Blvd	Zinfandel Dr	4	Arterial M	21,870	0.61	B	4	Arterial M	34,000	0.94	E	
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd	6	Arterial M	37,550	0.70	B	6	Arterial M	50,410	0.93	**E**	
17	Douglas Rd	Sunrise Blvd	Rancho Cordova Pkwy	5	Arterial M	42,770	1.19	**F**	5	Arterial M	43,300	1.20	**F**	
18.1	Douglas Rd	Rancho Cordova Pkwy	Americanos Blvd	5	Arterial M	42,630	1.18	**F**	5	Arterial M	42,980	1.19	**F**	
18.2	Douglas Rd	Americanos Blvd	Grant Line Rd	5	Arterial M	33,520	0.93	**E**	5	Arterial M	31,870	0.89	D	
19.1	Eagles Nest Rd	Kiefer Blvd	N Bridgewater Dr	2	Arterial M	4,620	0.26	A	4	Arterial M	10,850	0.30	A	NewBridge
19.2	Eagles Nest Rd	N Bridgewater Dr	S Bridgewater Dr	2	Arterial M	4,620	0.26	A	4	Arterial M	11,320	0.31	A	NewBridge
19.3	Eagles Nest Rd	S Bridgewater Dr	Jackson Rd	2	Arterial M	4,710	0.26	A	4	Arterial M	13,170	0.37	A	NewBridge
20	Eagles Nest Rd	Jackson Rd	Florin Rd	2	Arterial M	3,670	0.20	A	2	Arterial M	9180	0.51	A	
21	Eagles Nest Rd	Florin Rd	Grant Line Rd	2	Arterial M	3,300	0.18	A	2	Arterial M	4470	0.25	A	
22	Elder Creek Rd	65th St	Power Inn Rd	4	Arterial M	24,130	0.67	B	4	Arterial M	27,810	0.77	C	
23	Elder Creek Rd	Power Inn Rd	Florin-Perkins Rd	2	Arterial M	25,170	1.40	**F**	2	Arterial M	28,490	1.58	**F**	
24	Elder Creek Rd	Florin Perkins Rd	South Watt Ave	4	Arterial M	27,840	0.77	C	4	Arterial M	30,330	0.84	D	
25	Elder Creek Rd	South Watt Ave	Hedge Ave	4	Arterial M	40,860	1.14	**F**	4	Arterial M	48,190	1.34	**F**	

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Table 10.4
CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Roadway Segment Levels of Service

ID	Roadway	Segment		CEQA Cumulative No Project					CEQA Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
26	Elder Creek Rd	Hedge Ave	Mayhew Rd	4	Arterial M	29,970	0.83	D	4	Arterial M	33,950	0.94	E	
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd	4	Arterial M	17,980	0.50	A	4	Arterial M	40,630	1.13	**F**	
28.1	Elder Creek Rd	Bradshaw Rd	Vineyard Rd	2	Arterial M	9,230	0.51	A	3	Arterial M	33,740	1.87	**F**	West Jackson
28.2	Elder Creek Rd	Vineyard Rd	Excelsior Rd	2	Arterial M	9,430	0.52	A	4	Arterial M	27,000	0.75	C	West Jackson
29	Elk Grove-Florin Rd	Florin Rd	Gerber Rd	6	Arterial M	48,390	0.90	D	6	Arterial M	48,930	0.91	E	
30.1	Excelsior Rd	Kiefer Blvd	Douglas Rd	2	Arterial M	4,150	0.23	A	2	Arterial M	5,600	0.31	A	
30.2	Excelsior Rd	Douglas Rd	Collector WJ-1/ Collector JT-1	4	Arterial M	11,290	0.31	A	4	Arterial M	27,590	0.77	C	
30.3	Excelsior Rd	Collector WJ-1/ Collector JT-1	Collector WJ-2/ Collector JT-2	4	Arterial M	11,840	0.33	A	4	Arterial M	25,990	0.72	C	
30.4	Excelsior Rd	Collector WJ-2/ Collector JT-2	Jackson Rd	4	Arterial M	11,840	0.33	A	4	Arterial M	25,560	0.71	C	
31.1	Excelsior Rd	Jackson Rd	Collector WJ-6	2	Arterial M	11,960	0.66	B	3	Arterial M	37,780	2.10	**F**	West Jackson
31.2	Excelsior Rd	Collector WJ-6	Elder Creek Rd	2	Arterial M	11,960	0.66	B	3	Arterial M	37,130	2.06	**F**	West Jackson
32	Excelsior Rd	Elder Creek Rd	Florin Rd	2	Arterial M	4,670	0.26	A	3	Arterial M	12,510	0.70	B	West Jackson
33	Excelsior Rd	Florin Rd	Gerber Rd	2	Arterial M	5,970	0.33	A	2	Arterial M	12,810	0.71	C	
34	Excelsior Rd	Gerber Rd	Calvine Rd	2	Arterial M	2,520	0.14	A	2	Arterial M	8,160	0.45	A	
35	Excelsior Rd	Calvine Rd	Sheldon Rd	2	Arterial M	2,960	0.16	A	2	Arterial M	9,000	0.50	A	
36	Florin Rd	Stockton Blvd	Power Inn Rd	6	Arterial M	42,720	0.79	C	6	Arterial M	48,190	0.89	D	
37	Florin Rd	Power Inn Rd	Florin-Perkins Rd	4	Arterial M	37,240	1.03	**F**	4	Arterial M	43,980	1.22	**F**	
38	Florin Rd	Florin-Perkins Rd	So Watt Ave/ Elk Grove Florin Rd	6	Arterial M	29,890	0.55	A	6	Arterial M	37,130	0.69	B	
39	Florin Rd	South Watt Ave	Hedge Ave	4	Arterial M	9,760	0.27	A	4	Arterial M	14,880	0.41	A	
40	Florin Rd	Hedge Ave	Mayhew Rd	4	Arterial M	10,420	0.29	A	4	Arterial M	17,360	0.48	A	
41	Florin Rd	Mayhew Rd	Bradshaw Rd	4	Arterial M	30,290	0.84	D	4	Arterial M	23,450	0.65	B	
42.1	Florin Rd	Bradshaw Rd	Vineyard Rd	4	Arterial M	19,680	0.55	A	4	Arterial M	25,600	0.71	C	
42.2	Florin Rd	Vineyard Rd	Excelsior Rd	2	Arterial M	11,650	0.65	B	3	Arterial M	19,620	1.09	**F**	West Jackson
43	Florin Rd	Excelsior Rd	Sunrise Blvd	2	Arterial M	14,020	0.78	C	2	Arterial M	17,620	0.98	E	
44	Folsom Blvd	Howe Ave	Jackson Rd	4	Arterial M	50,520	1.40	**F**	4	Arterial M	55,790	1.55	**F**	
45	Fruitridge Rd	65th St	Power Inn Rd	4	Arterial M	23,040	0.64	B	4	Arterial M	26,980	0.75	C	
46	Fruitridge Rd	Power Inn Rd	Florin Perkins Rd	4	Arterial M	20,400	0.57	A	4	Arterial M	30,040	0.83	D	

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Table 10.4
CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Roadway Segment Levels of Service

ID	Roadway	Segment		CEQA Cumulative No Project					CEQA Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
47	Fruitridge Rd	Florin Perkins Rd	South Watt Ave	2	Arterial M	13,770	0.77	C	2	Arterial M	26,960	1.50	**F**	
48	Fruitridge Rd	South Watt Ave	Hedge Ave	2	Arterial M	5,770	0.32	A	3	Arterial M	20,600	1.14	**F**	West Jackson
49.1	Fruitridge Rd	Hedge Ave	Collector WJ-12	2	Arterial M	2,140	0.12	A	4	Arterial M	19,590	0.54	A	West Jackson
49.2	Fruitridge Rd	Collector WJ-12	Mayhew Rd	2	Arterial M	2,110	0.12	A	4	Arterial M	17,810	0.49	A	West Jackson
50	Grant Line Rd	White Rock Rd	Douglas Rd	4	Arterial H	39,480	0.99	**E**	4	Arterial H	41,060	1.03	**F**	
51.1	Grant Line Rd	Douglas Rd	Chrysanthy Blvd	4	Arterial M	58,610	1.63	**F**	4	Arterial M	57,770	1.60	**F**	
51.2	Grant Line Rd	Chrysanthy Blvd	Kiefer Blvd	4	Arterial M	44,930	1.25	**F**	4	Arterial M	47,740	1.33	**F**	
52.1	Grant Line Rd	Kiefer Blvd	Rancho Cordova Pkwy	4	Arterial M	34,170	0.95	**E**	4	Arterial M	37,000	1.03	**F**	
52.2	Grant Line Rd	Rancho Cordova Pkwy	Jackson Rd	4	Arterial M	43,400	1.21	**F**	4	Arterial M	41,720	1.16	**F**	
53	Grant Line Rd	Jackson Rd	Sunrise Blvd	4	Arterial H	33,180	0.83	D	4	Arterial H	30,250	0.76	C	
54	Grant Line Rd	Sunrise Blvd	Calvine Rd	4	Arterial H	42,840	1.07	**F**	4	Arterial H	43,790	1.09	**F**	
55.1	Grant Line Rd	Calvine Rd	Elk Grove City Limit	4	Arterial M	36,290	1.01	**F**	4	Arterial M	36,860	1.02	**F**	
55.2	Grant Line Rd	Elk Grove City Limit	Sheldon Rd	4	Arterial M	36,380	1.01	**F**	4	Arterial M	36,970	1.03	**F**	
56	Grant Line Rd	Sheldon Rd	Wilton Rd	4	Arterial M	40,570	1.13	**F**	4	Arterial M	45,270	1.26	**F**	
57	Grant Line Rd	Wilton Rd	Bond Rd	4	Arterial M	36,110	1.00	**F**	4	Arterial M	40,140	1.12	**F**	
58.1	Happy Lane	Old Placerville Road	Routier Ext	2	Arterial M	3,980	0.22	A	2	Arterial M	13,720	0.76	C	West Jackson
58.2	Happy Lane	Routier Ext	Kiefer Boulevard	2	Arterial M	4,970	0.28	A	2	Arterial M	20,770	1.15	**F**	West Jackson
59.1	Hedge Ave	Jackson Rd	Rock Creek Pkwy	2	Arterial M	7,060	0.39	A	2	Arterial M	9,920	0.55	A	
59.2	Hedge Ave	Rock Creek Pkwy	Fruitridge Rd	2	Arterial M	7,180	0.40	A	2	Arterial M	5,690	0.32	A	
60	Hedge Ave	Fruitridge Rd	Elder Creek Rd	2	Arterial M	8,460	0.47	A	2	Arterial M	6,870	0.38	A	
61	Hedge Ave	Elder Creek Rd	Florin Rd	2	Arterial M	22,520	1.25	**F**	2	Arterial M	21,920	1.22	**F**	
62	Howe Ave	US 50	Folsom Blvd	6	Arterial M	67,180	1.24	**F**	6	Arterial M	71,330	1.32	**F**	
63	International Dr	Mather Field Rd	Zinfandel Dr	6	Arterial M	48,380	0.90	D	6	Arterial M	47,380	0.88	D	
64	International Dr	Zinfandel Dr	Sunrise Blvd	6	Arterial M	35,840	0.66	B	6	Arterial M	40,130	0.74	C	
65	Jackson Rd	Folsom Blvd	Florin Perkins Rd	4	Arterial M	30,450	0.85	D	4	Arterial M	35,630	0.99	E	
66.1	Jackson Rd	Florin Perkins Rd	14th Ave	4	Arterial M	30,980	0.86	D	4	Arterial M	43,840	1.22	**F**	
66.2	Jackson Rd	14th Ave	Rock Creek Pkwy	4	Arterial M	40,320	1.12	**F**	4	Arterial M	61,500	1.71	**F**	
66.3	Jackson Rd	Rock Creek Pkwy	Aspen 1 Dwy	4	Arterial M	34,630	0.96	E	4	Arterial M	57,370	1.59	**F**	
66.4	Jackson Rd	Aspen 1 Dwy	South Watt Ave	4	Arterial M	32,480	0.90	E	4	Arterial M	55,060	1.53	**F**	

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Table 10.4
CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Roadway Segment Levels of Service

ID	Roadway	Segment		CEQA Cumulative No Project					CEQA Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
67	Jackson Rd	South Watt Ave	Hedge Ave	4	Arterial M	38,240	1.06	**F**	4	Arterial M	67,850	1.88	**F**	
68.1	Jackson Rd	Hedge Ave	Collector WJ-3	4	Arterial M	31,080	0.86	D	4	Arterial M	60,230	1.67	**F**	
68.2	Jackson Rd	Collector WJ-3	Mayhew Rd	4	Arterial M	31,040	0.86	D	4	Arterial M	60,910	1.69	**F**	
69	Jackson Rd	Mayhew Rd	Bradshaw Rd	4	Arterial M	33,920	0.94	E	6	Arterial M	59,440	1.10	**F**	West Jackson
70.1	Jackson Rd	Bradshaw Rd	Collector WJ-4	2	Rural Hwy	23,120	1.01	**F**	6	Arterial M	59,220	1.10	**F**	West Jackson
70.2	Jackson Rd	Collector WJ-4	Happy Ln	2	Rural Hwy	23,190	1.01	**F**	6	Arterial M	59,210	1.10	**F**	West Jackson
70.3	Jackson Rd	Happy Ln	Rock Creek Pkwy	2	Rural Hwy	23,000	1.00	**F**	6	Arterial M	41,240	0.76	C	West Jackson
70.4	Jackson Rd	Rock Creek Pkwy	Collector WJ-5	2	Rural Hwy	23,000	1.00	**F**	6	Arterial M	40,890	0.76	C	West Jackson
70.5	Jackson Rd	Collector WJ-5	Collector WJ-6	2	Rural Hwy	23,010	1.00	**F**	6	Arterial M	38,420	0.71	C	West Jackson
70.6	Jackson Rd	Collector WJ-6	Excelsior Rd	2	Rural Hwy	23,010	1.00	**F**	6	Arterial M	38,840	0.72	C	West Jackson
71.1	Jackson Rd	Excelsior Rd	Collector JT-3	2	Rural Hwy	23,020	1.01	**F**	4	Arterial M	62,440	1.73	**F**	Jackson Township
71.2	Jackson Rd	Collector JT-3	Tree View Ln	2	Rural Hwy	23,020	1.01	**F**	4	Arterial M	46,480	1.29	**F**	Jackson Township
71.3	Jackson Rd	Tree View Ln	Collector JT-4	2	Rural Hwy	22,990	1.00	**F**	4	Arterial M	40,520	1.13	**F**	Jackson Township
71.4	Jackson Rd	Collector JT-4	Eagles Nest Rd	2	Rural Hwy	23,020	1.01	**F**	4	Arterial M	37,510	1.04	**F**	Jackson Township
72.1	Jackson Rd	Eagles Nest Rd	Rockbridge Dr	2	Rural Hwy	21,910	0.96	E	4	Arterial M	37,200	1.03	**F**	NewBridge
72.2	Jackson Rd	Rockbridge Dr	Sunrise Blvd	2	Rural Hwy	22,630	0.99	E	4	Arterial M	38,040	1.06	**F**	NewBridge
73	Jackson Rd	Sunrise Blvd	Grant Line Rd	4	Arterial M	31,730	0.88	D	4	Arterial M	45,430	1.26	**F**	
74	Kiefer Blvd	Florin Perkins Rd	South Watt Ave	2	Arterial M	3,290	0.18	A	2	Arterial M	4,940	0.27	A	
75	Kiefer Blvd	South Watt Ave	Mayhew Rd	4	Arterial M	21,620	0.60	B	4	Arterial M	32,720	0.91	E	
76	Kiefer Blvd	Mayhew Rd	Bradshaw Rd	4	Arterial M	13,290	0.37	A	4	Arterial M	42,880	1.19	**F**	
77.1	Kiefer Boulevard	Bradshaw Road	Collector WJ-14	2	Arterial M	5,940	0.33	A	6	Arterial M	51,510	0.95	E	West Jackson
77.2	Kiefer Boulevard	Collector WJ-14	Routier Ext	2	Arterial M	6,100	0.34	A	6	Arterial M	47,760	0.88	D	West Jackson
77.3	Kiefer Boulevard	Routier Ext	Happy Lane	2	Arterial M	6,100	0.34	A	6	Arterial M	50,290	0.93	E	West Jackson
78.1	Kiefer Blvd	Eagles Nest Rd	W Collector MS-1	2	Arterial M	10,210	0.57	A	4	Arterial M	31,860	0.89	D	NewBridge; Mather South
78.2	Kiefer Blvd	W Collector MS-1	Northbridge Dr	2	Arterial M	10,210	0.57	A	4	Arterial M	29,600	0.82	D	NewBridge; Mather South
78.3	Kiefer Blvd	Northbridge Dr	E Collector MS-1	2	Arterial M	10,210	0.57	A	4	Arterial M	31,310	0.87	D	NewBridge; Mather South
78.4	Kiefer Blvd	E Collector MS-1	Sunrise Blvd	2	Arterial M	10,150	0.56	A	3	Arterial M	39,640	2.20	**F**	NewBridge
79	Kiefer Blvd	Sunrise Blvd	Rancho Cordova Pkwy	4	Arterial M	20,760	0.58	A	4	Arterial M	33,480	0.93	**E**	
80	Mather Blvd / Norden Ave	Von Karman St	Bleckely St	4	Arterial M	14,470	0.40	A	4	Arterial M	14,800	0.41	A	
81	Mather Blvd	Bleckely St	Femoyer St	4	Arterial M	14,470	0.40	A	4	Arterial M	14,800	0.41	A	

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ID	Roadway	Segment		CEQA Cumulative No Project					CEQA Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
82	Mather Blvd	Femoyer St	Douglas Rd	2	Arterial M	14,510	0.81	D	2	Arterial M	14,830	0.82	D	
83	Mather Blvd-Excelsior Rd	Douglas Rd	Kiefer Blvd	2	Res Collector F	8,260	1.03	**F**	2	Res Collector F	6,350	0.79	D	
84	Mather Field Rd	US 50	Rockingham Dr	6	Arterial M	65,530	1.21	**F**	6	Arterial M	63,640	1.18	**F**	
85	Mather Field Rd	Rockingham Dr	International Dr	6	Arterial M	71,740	1.33	**F**	6	Arterial M	73,220	1.36	**F**	
86	Mather Field Rd	International Dr	Peter A McCuen Blvd	6	Arterial M	15,810	0.29	A	6	Arterial M	16,640	0.31	A	
87	Mayhew Rd	Folsom Blvd	Goethe Rd	2	Arterial M	7,280	0.40	A	2	Arterial M	14,530	0.81	D	
88	Mayhew Rd	Goethe Rd	Kiefer Blvd	2	Arterial M	10,630	0.59	A	2	Arterial M	13,740	0.76	C	
89.1	Mayhew Rd	Jackson Rd	Rock Creek Pkwy	2	Arterial L	1,930	0.13	A	4	Arterial M	53,200	1.48	**F**	West Jackson
89.2	Mayhew Rd	Rock Creek Pkwy	Fruitridge Rd	2	Arterial L	1,930	0.13	A	4	Arterial M	52,650	1.46	**F**	West Jackson
90	Old Placerville Rd	Bradshaw Rd	Granby Dr	4	Arterial M	30,190	0.84	D	4	Arterial M	23,370	0.65	B	
91	Old Placerville Rd	Granby Dr	Happy Ln	2	Arterial M	26,590	1.48	**F**	2	Arterial M	21,070	1.17	**F**	
92	Old Placerville Rd	Happy Ln	Routier Rd	2	Arterial M	22,820	1.27	**F**	2	Arterial M	18,020	1.00	**F**	
93	Old Placerville Rd	Routier Rd	Rockingham Dr	4	Arterial M	24,070	0.67	B	4	Arterial M	36,370	1.01	**F**	
94	Power Inn Rd	Folsom Blvd	14th Ave	6	Arterial M	43,320	0.80	D	6	Arterial M	47,240	0.87	D	
95	Rockingham Dr	Old Placerville Rd	Mather Field Rd	4	Arterial M	31,970	0.89	D	4	Arterial M	40,120	1.11	**F**	
96	South Watt Ave	Folsom Blvd	Kiefer Blvd	6	Arterial M	68,980	1.28	**F**	6	Arterial M	81,710	1.51	**F**	
97	South Watt Ave	Kiefer Blvd	Jackson Rd	6	Arterial M	67,470	1.25	**F**	6	Arterial M	70,440	1.30	**F**	
98.1	South Watt Ave	Jackson Rd	Rock Creek Pkwy	6	Arterial M	61,290	1.14	**F**	6	Arterial M	57,810	1.07	**F**	
98.2	South Watt Ave	Rock Creek Pkwy	Fruitridge Rd	6	Arterial M	64,380	1.19	**F**	6	Arterial M	57,430	1.06	**F**	
99	South Watt Ave	Fruitridge Rd	Elder Creek Rd	6	Arterial M	61,240	1.13	**F**	6	Arterial M	56,130	1.04	**F**	
100	South Watt Ave	Elder Creek Rd	Florin Rd	6	Arterial M	55,580	1.03	**F**	6	Arterial M	61,020	1.13	**F**	
101	Sunrise Blvd	US 50	Folsom Blvd	7	Arterial M	64,250	1.19	**F**	7	Arterial M	62,970	1.17	**F**	
102	Sunrise Blvd	Folsom Blvd	Trade Center Dr	6	Arterial M	61,340	1.14	**F**	6	Arterial M	60,650	1.12	**F**	
103	Sunrise Blvd	Trade Center Dr	White Rock Rd	6	Arterial M	38,330	0.71	C	6	Arterial M	37,900	0.70	C	
104.1	Sunrise Blvd	White Rock Rd	International Dr	6	Arterial M	49,020	0.91	**E**	6	Arterial M	49,750	0.92	**E**	
104.2	Sunrise Blvd	International Dr	Rio Del Oro Pkwy	6	Arterial M	54,190	1.00	**F**	6	Arterial M	54,030	1.00	**F**	
104.3	Sunrise Blvd	Rio Del Oro Pkwy	Douglas Rd	6	Arterial M	54,110	1.00	**F**	6	Arterial M	64,030	1.19	**F**	
105	Sunrise Blvd	Douglas Rd	Kiefer Blvd	5	Arterial M	34,760	0.97	**E**	5	Arterial M	43,840	1.22	**F**	
106	Sunrise Blvd	Kiefer Blvd	Jackson Rd	4	Arterial M	30,000	0.83	D	4	Arterial M	34,190	0.95	**E**	
107	Sunrise Blvd	Jackson Rd	Florin Rd	4	Arterial M	28,280	0.79	C	4	Arterial M	30,710	0.85	D	
108	Sunrise Blvd	Florin Rd	Grant Line Rd	4	Arterial M	15,030	0.42	A	4	Arterial M	18,210	0.51	A	
109	Vineyard Rd	Gerber Rd	Calvine Rd	2	Arterial M	7,900	0.44	A	2	Arterial M	10,380	0.58	A	

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		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
110	Watt Ave	US 50	Folsom Blvd	6	Arterial H	98,040	1.63	**F**	6	Arterial H	106,270	1.77	**F**	
111	White Rock Rd	International Rd	Quality Dr	2	Arterial M	5,420	0.30	A	2	Arterial M	5,550	0.31	A	
112	White Rock Rd	Quality Dr	Zinfandel Dr	4	Arterial M	18,300	0.51	A	4	Arterial M	18,180	0.51	A	
113	White Rock Rd	Zinfandel Dr	Kilgore Rd	6	Arterial M	31,760	0.59	A	6	Arterial M	31,210	0.58	A	
114	White Rock Rd	Kilgore Rd	Sunrise Blvd	5	Arterial M	40,310	1.12	**F**	5	Arterial M	39,610	1.10	**F**	
115	White Rock Rd	Sunrise Blvd	Fitzgerald Rd	4	Arterial M	34,470	0.96	**E**	4	Arterial M	35,590	0.99	**E**	
116.1	White Rock Rd	Fitzgerald Rd	Rancho Cordova Pkwy	4	Arterial M	56,320	1.56	**F**	4	Arterial M	55,990	1.56	**F**	
116.2	White Rock Rd	Rancho Cordova Pkwy	Americanos Blvd	4	Arterial M	22,050	0.61	B	4	Arterial M	21,380	0.59	A	
116.3	White Rock Rd	Americanos Blvd	Grant Line Rd	4	Arterial M	15,870	0.44	A	4	Arterial M	16,610	0.46	A	
117	White Rock Rd	Grant Line Rd	Prairie City Rd	4	Arterial H	53,780	1.34	**F**	4	Arterial H	55,950	1.40	**F**	
118	Zinfandel Dr	US 50	White Rock Rd	7	Arterial M	82,790	1.53	**F**	7	Arterial M	81,490	1.51	**F**	
119	Zinfandel Dr	White Rock Rd	International Rd	6	Arterial M	40,800	0.76	C	6	Arterial M	42,380	0.78	C	
120	Zinfandel Dr	International Rd	Baroque Dr	6	Arterial M	32,660	0.60	B	6	Arterial M	33,430	0.62	B	
121	Zinfandel Dr	Baroque Dr	City Limit	4	Arterial M	32,660	0.91	**E**	4	Arterial M	33,430	0.93	**E**	
122	Zinfandel Dr	City Limit	Douglas Rd	2	Arterial M	32,660	1.81	**F**	2	Arterial M	33,430	1.86	**F**	
123.1	Zinfandel Dr	Douglas Rd	Collector MS-2	4	Arterial M	14,770	0.41	A	4	Arterial M	22,240	0.62	B	
123.2	Zinfandel Dr	Collector MS-2	Collector MS-3	4	Arterial M	12,590	0.35	A	4	Arterial M	17,090	0.47	A	
123.3	Zinfandel Dr	Collector MS-3	Collector MS-4	4	Arterial M	0	0.00	A	4	Arterial M	17,220	0.48	A	
123.4	Zinfandel Dr	Collector MS-4	Kiefer Blvd	4	Arterial M	12,590	0.35	A	4	Arterial M	17,070	0.47	A	
124	14th Ave	Power Inn Rd	Florin Perkins Rd	4	Arterial M	15,910	0.44	A	4	Arterial M	27,490	0.76	C	
125	14th Ave	Florin Perkins Rd	Jackson Rd	4	Arterial M	9,360	0.26	A	4	Arterial M	17,700	0.49	A	
126	Chrysanthy Blvd	Rancho Cordova Pkwy	Americanos Blvd	4	Arterial M	22,200	0.62	B	4	Arterial M	21,600	0.60	B	
127	Chrysanthy Blvd	Americanos Blvd	Grant Line Rd	2	Arterial M	16,570	0.92	**E**	2	Arterial M	15,820	0.88	D	
128	Douglas Rd (Extension)	Mather Blvd	Kiefer Blvd	4	Arterial M	7,380	0.21	A	4	Arterial M	21,530	0.60	A	
129	International Dr	Sunrise Blvd	Rancho Cordova Pkwy	6	Arterial M	31,010	0.57	A	6	Arterial M	31,830	0.59	A	
130	International Dr	Rancho Cordova Pkwy	Americanos Blvd	6	Arterial M	19,350	0.36	A	6	Arterial M	18,590	0.34	A	
131	Kiefer Blvd	Rancho Cordova Pkwy	Americanos Blvd	2	Arterial M	3,870	0.22	A	2	Arterial M	9,730	0.54	A	
132	Kiefer Blvd	Americanos Blvd	Grant Line Rd	2	Arterial M	10,250	0.57	A	2	Arterial M	19,150	1.06	**F**	
133	Rancho Cordova Pkwy	US 50	Easton Valley Pkwy	6	Arterial M	70,390	1.30	**F**	6	Arterial M	69,520	1.29	**F**	
134	Rancho Cordova Pkwy	Easton Valley Pkwy	White Rock Rd	6	Arterial M	72,220	1.34	**F**	6	Arterial M	72,130	1.34	**F**	
135	Rancho Cordova Pkwy	White Rock Rd	International Dr	6	Arterial M	46,590	0.86	D	6	Arterial M	49,910	0.92	**E**	
136	Rancho Cordova Pkwy	International Dr	Rio Del Oro Pkwy	6	Arterial M	55,520	1.03	**F**	6	Arterial M	59,780	1.11	**F**	
137	Rancho Cordova Pkwy	Rio Del Oro Pkwy	Villagio Dr	4	Arterial M	37,890	1.05	**F**	4	Arterial M	38,100	1.06	**F**	
138	Rancho Cordova Pkwy	Villagio Dr	Douglas Rd	4	Arterial M	32,060	0.89	D	4	Arterial M	32,170	0.89	D	

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Table 10.4
CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Roadway Segment Levels of Service

ID	Roadway	Segment		CEQA Cumulative No Project					CEQA Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
139	Rancho Cordova Pkwy	Douglas Rd	Chrysanthy Blvd	4	Arterial M	34,220	0.95	**E**	4	Arterial M	33,210	0.92	**E**	
140	Rancho Cordova Pkwy	Chrysanthy Blvd	Kiefer Blvd	4	Arterial M	20,780	0.58	A	4	Arterial M	19,120	0.53	A	
141	Rancho Cordova Pkwy	Kiefer Blvd	Grant Line Rd	2	Arterial M	15,510	0.86	D	2	Arterial M	14,080	0.78	C	
142	Americanos Blvd	White Rock Rd	Douglas Rd	2	Arterial M	5,630	0.31	A	2	Arterial M	6,070	0.34	A	
143	Americanos Blvd	Douglas Rd	Chrysanthy Blvd	2	Arterial M	9,560	0.53	A	2	Arterial M	8,980	0.50	A	
144	Americanos Blvd	Chrysanthy Blvd	Kiefer Blvd	2	Arterial M	9,030	0.50	A	2	Arterial M	8,230	0.46	A	
145	Vineyard Rd	Florin Rd	Gerber Rd	4	Arterial M	1,500	0.04	A	4	Arterial M	9,160	0.25	A	
146	Rio Del Oro Pkwy	Sunrise Blvd	Rancho Cordova Pkwy	6	Arterial M	24,000	0.44	A	6	Arterial M	32,210	0.60	A	
147	Rio Del Oro Pkwy	Rancho Cordova Pkwy	White Rock Rd	2	Arterial M	8,220	0.46	A	2	Arterial M	8,600	0.48	A	
200	Kiefer Blvd	Tree View Ln	Eagles Nest Rd						4	Arterial M	37,540	1.04	**F**	West Jackson; Jackson Township; NewBridge; Mather South
300	Douglas Rd	Excelsior Rd	Rock Creek Pkwy	4	Arterial M	7,380	0.21	A	4	Arterial M	27,610	0.77	C	
301	Douglas Rd	Rock Creek Pkwy	Kiefer Blvd	4	Arterial M	7,380	0.21	A	4	Arterial M	37,470	1.04	**F**	
302	Kiefer Blvd	Happy Ln	Douglas Rd						6	Arterial M	62,910	1.17	**F**	West Jackson
303	Kiefer Blvd	Douglas Rd	Excelsior Rd						4	Arterial M	33,240	0.92	E	West Jackson
304	Mayhew Rd	Routier Ext	Bradshaw Rd						4	Arterial M	39,790	1.11	**F**	West Jackson
305	Mayhew Rd	Bradshaw Rd	Jackson Rd						4	Arterial M	47,420	1.32	**F**	West Jackson
306	Mayhew Rd	Fruitridge Rd	Collector WJ-13						4	Arterial M	39,410	1.09	**F**	West Jackson
307	Mayhew Rd	Collector WJ-13	Elder Creek Rd						3	Arterial M	42,630	2.37	**F**	West Jackson
308	Rock Creek Pkwy	South Watt Ave	Hedge Ave						2	Arterial M	6,140	0.34	A	West Jackson
309	Rock Creek Pkwy	Hedge Ave	Mayhew Rd						2	Arterial M	11,590	0.64	B	West Jackson
310	Rock Creek Pkwy	Mayhew Rd	Bradshaw Rd						2	Arterial M	6,840	0.38	A	West Jackson
311	Rock Creek Pkwy East	Excelsior Road	Collector WJ-16						2	Arterial M	13,750	0.76	C	West Jackson
312	Rock Creek Pkwy East	Collector WJ-16	Jackson Road						2	Arterial M	19,410	1.08	**F**	West Jackson
313	Vineyard Rd	Jackson Road	New Collector						4	Arterial M	31,230	0.87	D	West Jackson
314	Vineyard Rd	New Collector	Collector WJ-18						4	Arterial M	26,470	0.74	C	West Jackson
315	Vineyard Rd	Collector WJ-18	Elder Creek Road						4	Arterial M	25,960	0.72	C	West Jackson
316	Vineyard Rd	Elder Creek Road	Florin Road						4	Arterial M	14,250	0.40	A	West Jackson
317	Routier Ext	Old Placerville Road	Happy Lane						4	Arterial H	41,580	1.04	**F**	West Jackson
318	Routier Ext	Happy Lane	Kiefer Boulevard						4	Arterial H	34,490	0.86	D	West Jackson
319	Routier Ext	Kiefer Boulevard	Mayhew Road						4	Arterial H	39,540	0.99	E	West Jackson

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Table 10.4
CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Roadway Segment Levels of Service

ID	Roadway	Segment		CEQA Cumulative No Project					CEQA Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
320	Collector WJ-16	Rock Creek Pkwy	Collector WJ-6						2	Res Collector F	980	0.12	A	West Jackson
321	Collector WJ-17	Rock Creek Pkwy	Collector WJ-6						2	Res Collector F	850	0.11	A	West Jackson
322	Collector WJ-6	Collector WJ-16/WJ-17	Jackson Road						2	Res Collector F	2,740	0.34	B	West Jackson
323	Collector WJ-6	Jackson Road	Collector WJ-18						2	Res Collector F	3,680	0.46	C	West Jackson
324	Collector WJ-2	Excelsior Road	Collector WJ-6						2	Res Collector F	2,940	0.37	B	West Jackson
325	Collector WJ-18	Vineyard Rd	Collector WJ-6						2	Res Collector F	3,430	0.43	C	West Jackson
326	Collector WJ-18	Collector WJ-6	Excelsior Road						2	Res Collector F	3,200	0.40	C	West Jackson
327	Collector WJ-19	Bradshaw Road	Vineyard Road						2	Arterial M	7,730	0.43	A	West Jackson
400	Collector JT-1	Excelsior Rd	Collector JT-3						2	Res Collector F	5,430	0.68	D	Jackson Township
401	Collector JT-1	Collector JT-3	Tree View Ln						2	Res Collector F	1,720	0.22	B	Jackson Township
402	Collector JT-3	Kiefer Blvd	Collector JT-1						2	Res Collector F	1,290	0.16	A	Jackson Township
403	Collector JT-3	Collector JT-1	Collector JT-6						2	Res Collector F	1,280	0.16	A	Jackson Township
404	Collector JT-3	Collector JT-6	Collector JT-5						2	Res Collector F	2,920	0.37	B	Jackson Township
405	Collector JT-3	Collector JT-5	Jackson Rd						2	Arterial M	20,320	1.13	**F**	Jackson Township
406	Collector JT-4	Jackson Rd	Bridgewater Dr						2	Arterial M	2,860	0.16	A	Jackson Township
407	Collector JT-5	Collector JT-3	Tree View Ln						2	Arterial M	10,040	0.56	A	Jackson Township
408	Collector JT-6	Excelsior Rd	Collector JT-3						2	Res Collector F	4,760	0.60	C	Jackson Township
409	Collector JT-6	Collector JT-3	Tree View Ln						2	Res Collector F	720	0.09	A	Jackson Township
410	Kiefer Blvd	Excelsior Rd	Tree View Ln						4	Arterial M	31,550	0.88	D	Jackson Township

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Table 10.4
CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Roadway Segment Levels of Service

ID	Roadway	Segment		CEQA Cumulative No Project					CEQA Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
411	Tree View Ln	Kiefer Blvd	Collector JT-1						4	Arterial M	11,780	0.33	A	Jackson Township
412	Tree View Ln	Collector JT-1	Collector JT-6						4	Arterial M	11,530	0.32	A	Jackson Township
413	Tree View Ln	Collector JT-6	Collector JT-5						4	Arterial M	11,460	0.32	A	Jackson Township
414	Tree View Ln	Collector JT-5	Jackson Rd						4	Arterial M	8,420	0.23	A	Jackson Township
415	Collector JT-7	Collector JT-3	Tree View Ln						2	Arterial M	1,800	0.10	A	Jackson Township
416	Collector JT-8	Collector JT-3	Tree View Ln						2	Arterial M	1,900	0.11	A	Jackson Township
417	Collector JT-9	Jackson Rd	Collector JT-8						2	Arterial M	3,830	0.21	A	Jackson Township
418	Collector JT-10	Jackson Rd	Collector JT-8						2	Arterial M	1,680	0.09	A	Jackson Township
419	Collector JT-6	Tree View Ln	Jackson Rd						2	Res Collector F	2,400	0.30	B	Jackson Township
500	S Bridgewater Dr	Collector JT-4	Eagles Nest Rd						2	Res Collector F	4,540	0.57	C	NewBridge
501	S Bridgewater Dr	Eagles Nest Rd	Northbridge Dr						2	Res Collector F	4,550	0.57	C	NewBridge
502	N Bridgewater Dr	Northbridge Dr	Eagles Nest Rd						2	Res Collector F	1,270	0.16	A	NewBridge
503	Northbridge Dr	Kiefer Blvd	Bridgewater Dr						2	Arterial M	4,150	0.23	A	NewBridge
504	Street A	S Bridgewater Dr	Street B						2	Res Collector F	1,790	0.22	B	NewBridge
505	Street B	S Bridgewater Dr	Street A						2	Res Collector F	1,390	0.17	A	NewBridge
506	Rockbridge Dr	Street B	Stonebridge Dr						2	Res Collector F	1,840	0.23	B	NewBridge
507	Rockbridge Dr	Stonebridge Dr	Jackson Rd						2	Arterial M	7,660	0.43	A	NewBridge
508	Stonebridge Dr	S Bridgewater Dr	Rockbridge Dr						2	Arterial M	2,490	0.14	A	NewBridge
509	Stonebridge Dr	Rockbridge Dr	Jackson Rd						2	Res Collector F	4,520	0.57	C	NewBridge
600	Collector MS-1	Kiefer Boulevard	Collector MS-5						2	Arterial M	16,820	0.93	E	Mather South
601	Collector MS-1	Collector MS-5	Collector MS-4						2	Arterial M	7,640	0.42	A	Mather South
602	Collector MS-1	Collector MS-4	Collector MS-3						2	Res Collector F	6,430	0.80	E	Mather South
603	Collector MS-1	Collector MS-3	Collector MS-2						2	Arterial M	3,130	0.17	A	Mather South
604	Collector MS-2	Eagles Nest Road	Collector MS-5						2	Arterial M	8,930	0.50	A	Mather South
605	Collector MS-3	Eagles Nest Road	Collector MS-5						2	Arterial M	6,730	0.37	A	Mather South
606	Collector MS-4	Eagles Nest Road	Collector MS-5						2	Arterial M	7,090	0.39	A	Mather South

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Table 10.4
CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Roadway Segment Levels of Service

ID	Roadway	Segment		CEQA Cumulative No Project					CEQA Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
607	Collector MS-5	Kiefer Boulevard	Collector MS-1						2	Arterial M	8,870	0.49	A	Mather South

Note: Gray shading indicates changes in travel lanes or facility type that the project is responsible to provide.

[1] The following classifications are used to determine daily roadway capacity:
Arterial L - Arterial, Low Access Control
Arterial M - Arterial, Moderate Access Control
Arterial H - Arterial, High Access Control
Rural Hwy - Rural 2-lane Highway
Rural S - Rural 2-lane Road, 24'-36' of pavement, Paved Shoulders
Rural NS - Rural 2-lane Road, 24'-36' of pavement, No Shoulders
Res Collector F - Residential Collector with Frontage
Res Collector NF - Residential Collector with No Frontage

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Table 10.5

CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS (OJT)			LOS Impact	CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS (OJT)			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
1	Howe Avenue & College Town Drive/US 50 WB Ramps	Signal	D	45.6	Signal	D	40.0	No	Signal	E	77.0	Signal	E	64.9	No
2	Howe Avenue & US 50 EB Ramps	Signal	C	34.6	Signal	D	49.1	No	Signal	B	16.5	Signal	C	22.5	No
3	Power Inn Road/Howe Avenue & Folsom Blvd	Signal	**F**	**88.0**	Signal	**F**	**91.7**	No	Signal	E	66.5	Signal	**F**	**84.6**	Yes
4	Power Inn Road & 14th Avenue	Signal	**E**	**61.0**	Signal	**F**	**157.9**	Yes	Signal	**E**	**72.6**	Signal	**F**	**116.5**	Yes
5	Power Inn Road & Fruitridge Road	Signal	**F**	**114.5**	Signal	**F**	**113.5**	No	Signal	D	47.4	Signal	D	48.8	No
6	Jackson Road/Notre Dame Dr. & Folsom Blvd.	Signal	C	27.7	Signal	C	32.1	No	Signal	C	24.1	Signal	D	40.6	No
7	Florin Perkins Road/Julliard Dr. & Folsom Boulevard	Signal	C	20.8	Signal	C	28.6	No	Signal	D	41.2	Signal	C	30.1	No
8	Florin Perkins Road & Kiefer Blvd.	Two-way stop			Two-way stop			No	Two-way stop			Two-way stop			No
	Westbound Left Turn		*C*	*16.4*		*C*	*20.9*			*C*	*20.7*		*D*	*32.6*	
	Westbound Right Turn		*C*	*10.9*		*B*	*12.3*			*B*	*11.2*		*B*	*13.0*	
	Southbound Left Turn		*A*	*9.3*		*B*	*10.1*			*B*	*10.4*		*B*	*12.8*	
9	Florin Perkins Road & Jackson Road	Signal	C	25.1	Signal	D	42.9	No	Signal	D	38.5	Signal	D	46.5	No
10	Florin Perkins Road & Fruitridge Road	Signal	C	26.7	Signal	D	37.1	No	Signal	D	50.3	Signal	C	30.1	No
11	Florin Perkins Road & Elder Creek Road	Signal	C	31.7	Signal	C	27.5	No	Signal	C	30.0	Signal	C	32.8	No
12	Watt Avenue & Folsom Blvd.	Signal	**F**	**169.1**	Signal	**F**	**180.3**	Yes	Signal	**F**	**140.0**	Signal	**F**	**203.6**	Yes
13	S. Watt Ave. & Reith Ct/Manlove Road	Signal	B	15.7	Signal	B	12.7	No	Signal	A	9.8	Signal	B	11.0	No
14	S. Watt Avenue & Kiefer Blvd.	Signal	E	62.2	Signal	**F**	**101.5**	Yes	Signal	D	41.7	Signal	E	75.9	No

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Table 10.5

CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS (OJT)			LOS Impact	CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS (OJT)			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
15	S. Watt Avenue & Canberra Dr.	Signal	B	13.4	Signal	B	13.1	No	Signal	A	9.1	Signal	A	9.0	No
16	S. Watt Avenue & Jackson Road	Signal	**F**	**135.9**	Signal	**F**	**234.0**	Yes	Signal	**F**	**98.2**	Signal	**F**	**191.8**	Yes
17	S. Watt Avenue & Fruitridge Road	Signal	D	44.4	Signal	**E**	**71.5**	Yes	Signal	**E**	**79.3**	Signal	**F**	**102.4**	Yes
18	S. Watt Avenue & Elder Creek Road	Signal	**F**	**222.9**	Signal	**F**	**139.9**	No	Signal	**F**	**177.7**	Signal	**F**	**106.4**	No
20	Elk Grove Florin Road/S. Watt Ave. & Florin Road	Signal	**F**	**199.7**	Signal	**F**	**277.4**	Yes	Signal	**F**	**137.1**	Signal	**F**	**204.3**	Yes
21	Elk Grove Florin Road & Gerber Road	Signal	E	56.7	Signal	E	71.0	No	Signal	E	74.9	Signal	E	79.7	No
23	Hedge Avenue & Jackson Road	Signal	C	34.7	Signal	**F**	**128.3**	Yes	Signal	B	16.3	Signal	D	40.4	40.4
24	Hedge Avenue & Fruitridge Road	All-way stop	E	44.2	All-way stop	C	25.5	No	All-way stop	D	30.7	All-way stop	B	18.6	No
25	Hedge Avenue & Elder Creek Road	Signal	**F**	**103.7**	Signal	**F**	**109.3**	Yes	Signal	**F**	**103.2**	Signal	**F**	**122.4**	Yes
26	Hedge Avenue & Tokay Lane	Two-way stop			Two-way stop			No	Two-way stop			Two-way stop			No
	Northbound Left Turn		*A*	*0.0*		*A*	*0.0*			*A*	*0.0*		*A*	*0.0*	
	Southbound Left Turn		*B*	*10.9*		*B*	*10.6*			*A*	*9.3*		*A*	*9.3*	
	Eastbound		***F***	***99.5***		***F***	***92.7***			*E*	*47.3*		*E*	*45.0*	
	Westbound		***F***	***52.9***		*E*	*49.4*			*E*	*38.3*		*E*	*36.3*	
27	Hedge Avenue & Florin Road	All-way stop	B	15.8	Signal	B	11.7	No	All-way stop	B	12.6	Signal	A	5.7	No
28	Mayhew Road & Kiefer Boulevard	Signal	C	27.7	Signal	**F**	**97.5**	Yes	Signal	D	44.9	Signal	E	72.8	No

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Table 10.5

CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS (OJT)			LOS Impact	CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS (OJT)			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
29	Mayhew Road & Jackson Road	Two-way stop			Signal	F	160.2	Yes	Two-way stop			Signal	F	129.9	Yes
	Northbound Through - Left Turn		***F***	***114.1***						***F***	***>300***				
	Northbound Right Turn		*C*	*16.1*						*C*	*18.5*				
	Southbound		***F***	***99.2***						***F***	***>300***				
	Eastbound Left Turn		*B*	*13.5*						*B*	*11.0*				
	Westbound Left Turn		*B*	*11.2*						*C*	*17.6*				
30	Mayhew Road & Fruitridge Road	Two-way stop			Signal	B	18.8	No	Two-way stop		3.5	Signal	B	19.5	No
	Northbound Left Turn		*A*	*0.0*						*A*	*7.5*				
	Eastbound		*A*	*9.8*						*A*	*9.3*				
31	Mayhew Road & Elder Creek Road	Signal	A	7.0	Signal	F	>300	Yes	Signal	A	6.0	Signal	F	>300	Yes
32	Woodring Drive & Zinfandel Drive	Two-way stop			Two-way stop			Yes	Two-way stop			Two-way stop			Yes
	Eastbound		*C*	*20.1*		F	85.7			*A*	*9.0*		F	247.0	
	Northbound Left Turn		*A*	*8.0*		*B*	*10.6*			*A*	*0.0*		*B*	*12.4*	
33	Bradshaw Road & Folsom Blvd.	Signal	C	31.9	Signal	C	26.0	No	Signal	C	25.3	Signal	C	22.3	No
34	Bradshaw Road & US 50 WB Ramps	Signal	A	7.8	Signal	B	11.5	No	Signal	A	8.9	Signal	B	12.6	No
35	Bradshaw Road & US 50 EB Ramps	Signal	C	24.5	Signal	E	56.8	Yes	Signal	B	15.1	Signal	D	39.7	No
36	Bradshaw Road & Old Placerville Road	Signal	**F**	**81.9**	Signal	F	103.0	Yes	Signal	**E**	**68.1**	Signal	F	84.8	Yes
37	Bradshaw Road & Kiefer Boulevard	Signal	C	27.6	Signal	F	146.6	Yes	Signal	D	54.1	Signal	F	140.2	Yes
38	Bradshaw Road & Jackson Road	Signal	**F**	**186.0**	Signal	**F**	**161.3**	No	Signal	**F**	**118.2**	Signal	F	161.2	Yes
39	Bradshaw Road & Elder Creek Road	Signal	**F**	**122.6**	Signal	F	210.1	Yes	Signal	**F**	**98.8**	Signal	F	226.7	Yes

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Table 10.5

CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS (OJT)			LOS Impact	CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS (OJT)			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
40	Bradshaw Road & Florin Road	Signal	**F**	**129.5**	Signal	**F**	**112.4**	No	Signal	E	59.7	Signal	E	57.0	No
41	Bradshaw Road & Gerber Road	Signal	**F**	**83.1**	Signal	**F**	**84.3**	No	Signal	D	43.0	Signal	D	49.2	No
42	Happy Lane & Old Placerville Road	Two-way stop			Two-way stop			Yes	Two-way stop			Two-way stop			Yes
	Northbound Left Turn		***F***	***>300***		***F***	***>300***			*F*	*294.1*		***F***	***>300***	
	Northbound Right Turn		***E***	***40.9***		***F***	***243.1***			*C*	*16.9*		***F***	***61.9***	
	Westbound Left Turn		*C*	*16.0*		*C*	*22.5*			*C*	*15.3*		E	42.4	
43	Happy Lane & Kiefer Boulevard	Free Turn			Signal	F	140.2	Yes	Free Turn			Signal	E	70.8	No
44	Excelsior Road & Kiefer Boulevard	Two-way stop			Signal	A	9.9	No	Two-way stop			Signal	B	14.8	No
45	Excelsior Road & Jackson Road	Signal	E	59.9	Signal	F	>300	Yes	Signal	D	39.0	Signal	F	280.2	Yes
46	Excelsior Road & Elder Creek Road	Two-way stop			Signal	F	88.7	Yes	Two-way stop			Signal	E	60.6	No
	Northbound Left Turn		*A*	*7.9*						*A*	*7.9*				
	Eastbound		***F***	***>300***						*D*	*30.0*				
47	Excelsior Road & Florin Road	All-way stop	**F**	**62.4**	Signal	F	109.4	Yes	All-way stop	**F**	**67.3**	Signal	E	68.0	No
48	Excelsior Road & Gerber Road/Birch Ranch Drive	All-way stop	B	13.6	Signal	E	43.6	No	All-way stop	B	14.3	Signal	E	38.8	No
49	Mather Field Road & US 50 WB Ramps	Signal	B	14.4	Signal	B	18.4	No	Signal	A	8.6	Signal	A	9.8	No
50	Mather Field Road & US 50 EB Ramps	Signal	B	19.2	Signal	B	17.8	No	Signal	C	21.1	Signal	B	14.2	No
51	Mather Field Road & Rockingham Drive	Signal	**F**	**156.5**	Signal	F	304.1	Yes	Signal	**F**	**119.4**	Signal	F	169.0	Yes
52	Mather Boulevard & Douglas Road	All-way stop	E	55.6	Signal	E	57.6	No	All-way stop	C	27.2	Signal	D	41.0	No

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Table 10.5

CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS (OJT)			LOS Impact	CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS (OJT)			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
53	Zinfandel Drive & US 50 WB Ramps	Signal	C	20.9	Signal	B	10.9	No	Signal	**E**	**65.0**	Signal	D	49.7	No
54	Zinfandel Drive & US 50 EB Ramps/Gold Center Drive	Signal	**F**	**120.8**	Signal	**F**	**112.6**	No	Signal	**F**	**95.0**	Signal	**F**	**81.5**	No
55	Zinfandel Drive & White Rock Road	Signal	**E**	**76.3**	Signal	**E**	**68.8**	No	Signal	**F**	**117.3**	Signal	**F**	**115.5**	No
56	Zinfandel Drive & Data Drive	Signal	B	18.9	Signal	B	18.9	No	Signal	C	25.6	Signal	C	26.6	No
57	Zinfandel Drive & International Dr	Signal	**E**	**77.2**	Signal	**E**	**80.0**	No	Signal	**F**	**97.3**	Signal	**F**	**81.7**	No
58	Zinfandel Drive & Douglas Road	Signal	**F**	**156.8**	Signal	**F**	**219.8**	Yes	Signal	E	73.1	Signal	**F**	**218.2**	Yes
59	Eagles Nest Road/Zinfandel Drive & Kiefer Boulevard	Two-way stop			Signal	D	45.7	No	Two-way stop			Signal	D	41.7	No
	Southbound Left Turn		*A*	*8.1*						*A*	*9.2*				
	Westbound		***F***	***85.8***						***F***	***208.0***				
60	Eagles Nest Road & Jackson Road	Signal	C	23.0	Signal	E	67.6	No	Signal	C	23.3	Signal	E	62.5	No
61	Eagles Nest Road & Florin Road	Two-way stop			Two-way stop			Yes	Two-way stop			Two-way stop			Yes
	Northbound		***F***	***>300***		***F***	***>300***			***F***	***>300***		***F***	***>300***	
	Southbound		***F***	***>300***		***F***	***>300***			***F***	***>300***		***F***	***>300***	
	Eastbound Left Turn		*B*	*10.2*		*B*	*11.1*			*A*	*8.5*		*A*	*9.4*	
	Westbound Left Turn		*A*	*0.0*		*A*	*8.3*			*A*	*9.4*		*A*	*8.7*	
62	Sunrise Boulevard & US 50 WB Ramps	Signal	**E**	**68.1**	Signal	**E**	**71.2**	No	Signal	C	22.7	Signal	B	19.8	No
63	Sunrise Boulevard & US 50 EB Ramps	Signal	B	10.2	Signal	A	9.9	No	Signal	B	12.7	Signal	B	13.4	No
64	Sunrise Boulevard & Folsom Boulevard	Signal	D	43.5	Signal	D	45.7	No	Signal	D	40.5	Signal	D	43.6	No

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Table 10.5

CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS (OJT)			LOS Impact	CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS (OJT)			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
65	Sunrise Boulevard & White Rock Road	Signal	**E**	**69.3**	Signal	**E**	**67.9**	No	Signal	**F**	**127.3**	Signal	**F**	**128.3**	No
66	Sunrise Boulevard & International Drive/Monier Circle	Signal	**F**	**109.1**	Signal	**F**	**111.4**	No	Signal	**F**	**81.3**	Signal	**E**	**79.1**	No
67	Sunrise Boulevard & Douglas Road	Signal	**F**	**140.5**	Signal	**F**	**192.2**	Yes	Signal	**E**	**73.5**	Signal	**F**	**107.9**	Yes
68	Sunrise Boulevard & Chrysanthy Boulevard	Signal	C	21.4	Signal	B	17.7	No	Signal	A	9.4	Signal	B	10.7	No
69	Sunrise Boulevard & Kiefer Boulevard	Signal	**F**	**151.0**	Signal	**F**	**>300**	Yes	Signal	**F**	**138.0**	Signal	**F**	**259.2**	Yes
70	Sunrise Boulevard & Jackson Road	Signal	D	39.6	Signal	**F**	**90.3**	Yes	Signal	D	45.4	Signal	**E**	**78.3**	Yes
71	Sunrise Boulevard & Florin Road	Signal	D	50.3	Signal	C	22.1	No	Signal	E	57.4	Signal	D	46.1	No
72	Sheldon Lake Drive/Sunrise Boulevard & Grant Line Road	Signal	**F**	**91.2**	Signal	**F**	**127.9**	Yes	Signal	C	33.1	Signal	**E**	**65.0**	Yes
73	Hazel Avenue & Tributary Point Drive/US 50 WB Off-ramp	Signal	**F**	**148.3**	Signal	**F**	**149.0**	No	Signal	**F**	**103.3**	Signal	**F**	**102.5**	No
74	Hazel Avenue & US 50 EB Ramps	Signal	B	16.4	Signal	B	17.7	No	Signal	**F**	**83.6**	Signal	**F**	**85.2**	No
76	Prairie City Road & White Rock Road	Signal	C	32.8	Signal	**D**	**37.8**	No	Signal	**D**	**35.2**	Signal	**D**	**36.0**	No
77	Grant Line Road & White Rock Road	Signal	C	26.1	Signal	B	16.0	No	Signal	C	29.8	Signal	C	24.3	No
78	Grant Line Road & Douglas Road	Signal	**D**	**44.8**	Signal	**D**	**39.6**	No	Signal	**F**	**107.9**	Signal	**F**	**93.8**	No
79	Grant Line Road & Kiefer Boulevard	Signal	B	12.5	Signal	B	14.9	No	Signal	B	10.6	Signal	B	16.7	No
80	Grant Line Road & Jackson Road	Signal	**F**	**88.9**	Signal	**F**	**117.3**	Yes	Signal	**E**	**67.4**	Signal	**F**	**106.5**	Yes

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Table 10.5

CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS (OJT)			LOS Impact	CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS (OJT)			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
81	Watt Avenue & US-50 EB Ramps	Signal	C	23.3	Signal	C	29.4	No	Signal	B	15.6	Signal	B	19.5	No
82	Watt Avenue & US-50 WB Ramps	Signal	**F**	**82.8**	Signal	**E**	**64.6**	No	Signal	**E**	**57.1**	Signal	**E**	**61.3**	No
83	Mayhew Rd & Folsom Blvd.	Signal	B	12.8	Signal	C	20.7	No	Signal	B	15.8	Signal	B	19.6	No
84	65th Street Expy & Fruitridge Road	Signal	D	44.3	Signal	D	42.3	No	Signal	D	41.1	Signal	D	45.4	No
85	Power Inn Road & Elder Creek Road	Signal	E	67.3	Signal	E	75.1	No	Signal	D	45.0	Signal	E	61.8	No
86	Power Inn Road & Florin Rd	Signal	**F**	**97.4**	Signal	**F**	**116.1**	Yes	Signal	E	65.8	Signal	E	72.5	No
87	Florin Perkins Road & Florin Rd	Signal	D	44.2	Signal	E	59.3	No	Signal	**F**	**107.4**	Signal	**F**	**113.8**	Yes
88	Bradshaw Rd & Calvine Rd	Signal	C	26.4	Signal	D	38.6	No	Signal	C	20.9	Signal	C	23.1	No
89	Vineyard Rd & Calvine Rd	Signal	B	18.5	Signal	B	19.0	No	Signal	B	17.6	Signal	B	19.1	No
90	Excelsior Road & Calvine Rd	All-way stop	B	12.8	All-way stop	C	21.2	No	All-way stop	B	12.9	All-way stop	B	17.5	No
91	Grant Line Rd & Eagles Nest Rd/Sloughhouse Rd	Signal	C	34.4	Signal	**D**	**44.1**	Yes	Signal	**D**	**44.8**	Signal	**D**	**50.5**	Yes
92	Grant Line Rd & Calvine Rd	Signal	C	32.4	Signal	**D**	**37.0**	Yes	Signal	C	33.3	Signal	C	27.4	No
93	Grant Line Rd & Dwy/Wilton Rd	Signal	**E**	**78.8**	Signal	**F**	**83.4**	No	Signal	**E**	**69.8**	Signal	**F**	**97.4**	Yes
94	Grant Line Rd & Bond Rd/Wrangler Dr	Signal	B	14.8	Signal	B	16.8	No	Signal	B	15.5	Signal	B	16.9	No
95	Florin Perkins Road & 14th Avenue	Signal	D	44.1	Signal	**E**	**65.6**	Yes	Signal	C	30.9	Signal	D	45.3	No

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Table 10.5

CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS (OJT)			LOS Impact	CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS (OJT)			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
96	Jackson Road & 14th Avenue	Signal	**F**	**91.0**	Signal	**F**	**119.8**	Yes	Signal	B	15.3	Signal	D	54.7	No
98	Aspen 1 Access Road & Jackson Road	Signal	A	0.0	Signal	A	0.0	No	Signal	A	6.6	Signal	A	0.0	No
99	Rancho Cordova Pkwy & US-50 WB Ramps	Signal	**F**	**147.0**	Signal	**F**	**146.3**	No	Signal	**F**	**117.9**	Signal	**F**	**101.0**	No
100	Rancho Cordova Pkwy & US-50 EB Ramps	Signal	C	24.0	Signal	B	17.1	No	Signal	C	28.3	Signal	C	27.3	No
101	Rancho Cordova Pkwy & Easton Valley Pkwy	Signal	C	24.2	Signal	C	25.5	No	Signal	B	11.2	Signal	B	14.3	No
102	Rancho Cordova Pkwy & White Rock Road	Signal	**F**	**221.3**	Signal	**F**	**209.0**	No	Signal	**F**	**135.5**	Signal	**F**	**125.2**	No
103	Rancho Cordova Pkwy & Douglas Road	Signal	**E**	**67.2**	Signal	**E**	**57.4**	No	Signal	**E**	**58.0**	Signal	**E**	**77.2**	Yes
104	Rancho Cordova Pkwy & Chrysanthy Boulevard/Chrysanthy Blvd	Signal	**F**	**105.7**	Signal	**F**	**91.1**	No	Signal	D	54.9	Signal	D	54.5	No
105	Rancho Cordova Pkwy & Kiefer Blvd	Signal	B	17.9	Signal	C	20.7	No	Signal	B	16.1	Signal	B	19.5	No
106	Rancho Cordova Pkwy & Grant Line Road	Signal	**E**	**78.8**	Signal	**D**	**39.9**	No	Signal	C	28.8	Signal	B	14.3	No
107	Americanos Blvd & White Rock Road	Signal	A	9.5	Signal	A	8.7	No	Signal	A	9.5	Signal	A	8.6	No
108	Americanos Blvd & Douglas Road	Signal	C	34.9	Signal	D	47.3	No	Signal	C	22.4	Signal	C	22.7	No
109	Americanos Blvd & Chrysanthy Blvd	Signal	C	24.7	Signal	C	22.5	No	Signal	C	22.2	Signal	C	25.5	No
110	Americanos Blvd & Kiefer Blvd	Signal	A	7.6	Signal	A	8.7	No	Signal	A	7.3	Signal	B	10.1	No
111	Grant Line Road & Chrysanthy Blvd	Signal	**E**	**72.0**	Signal	**E**	**64.0**	Yes	Signal	**E**	**57.5**	Signal	D	52.4	No

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Table 10.5

CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS (OJT)			LOS Impact	CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS (OJT)			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
112	Hazel Avenue & Easton Valley Pkwy	Signal	B	10.3	Signal	A	8.7	No	Signal	A	6.0	Signal	A	6.0	No
200	Excelsior Road & Collector WJ-1/Collector JT-1	West Jackson/Jackson Township Project Int.			Signal	C	26.3	No	West Jackson/Jackson Township Project Int.			Signal	C	21.4	No
201	Excelsior Road & Collector WJ-2/Collector JT-2	West Jackson/Jackson Township Project Int.			Signal	B	14.1	No	West Jackson/Jackson Township Project Int.			Signal	B	16.7	No
202	W Collector MS-1 & Kiefer Boulevard	Mather South Project Int.			Signal	B	16.8	No	Mather South Project Int.			Signal	B	12.8	No
203	Northbridge Dr & Kiefer Boulevard	NewBridge Project Int.			Signal	A	6.6	No	NewBridge Project Int.			Signal	A	6.7	No
204	E Collector MS-1 & Kiefer Boulevard	Mather South Project Int.			Signal	B	19.5	No	Mather South Project Int.			Signal	C	30.1	No
300	Collector WJ-3 & Jackson Road	West Jackson Project Int.			Signal	B	16.7	No	West Jackson Project Int.			Signal	B	12.9	No
301	Collector WJ-4 & Jackson Road	West Jackson Project Int.			Signal	C	24.8	No	West Jackson Project Int.			Signal	C	20.7	No
303	Rock Creek Pkwy & Jackson Road	West Jackson Project Int.			Signal	**F**	**128.3**	Yes	West Jackson Project Int.			Signal	**F**	**96.4**	Yes
304	Collector WJ-5 & Jackson Road	West Jackson Project Int.			Signal	B	14.0	No	West Jackson Project Int.			Signal	B	15.0	No
305	Collector WJ-6 & Jackson Road	West Jackson Project Int.			Signal	B	17.5	No	West Jackson Project Int.			Signal	B	15.8	No
306	Excelsior Road & Collector WJ-6	West Jackson Project Int.			Signal	D	46.1	No	West Jackson Project Int.			Signal	B	16.5	No
307	S. Watt Avenue & Rock Creek Pkwy	West Jackson Project Int.			Signal	B	16.1	No	West Jackson Project Int.			Signal	B	13.5	No
308	Hedge Avenue & Rock Creek Pkwy Westbound	West Jackson Project Int.			Round	E	49.0	No	West Jackson Project Int.			Round	A	9.9	No
309	Hedge Avenue & Rock Creek Pkwy Eastbound	West Jackson Project Int.			Round	B	12.3	No	West Jackson Project Int.			Round	D	28.5	No

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Table 10.5

CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS (OJT)			LOS Impact	CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS (OJT)			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
310	Mayhew Road & Rock Creek Pkwy Westbound	West Jackson Project Int.			Round	**F**	**297.2**	Yes	West Jackson Project Int.			Round	**F**	**210.1**	Yes
311	Mayhew Road & Rock Creek Pkwy Eastbound	West Jackson Project Int.			Round	**F**	**191.0**	Yes	West Jackson Project Int.			Round	**F**	**>300**	Yes
312	Bradshaw Road & Rock Creek Pkwy	West Jackson Project Int.			Signal	B	17.8	No	West Jackson Project Int.			Signal	D	50.3	No
314	Vineyard Road & Rock Creek Pkwy	West Jackson Project Int.			Signal	B	10.1	No	West Jackson Project Int.			Signal	C	22.4	No
315	Douglas Road & Rock Creek Pkwy	West Jackson Project Int.			Signal	D	35.8	No	West Jackson Project Int.			Signal	E	62.2	No
316	Bradshaw Road & Collector WJ-8	West Jackson Project Int.			Signal	B	12.5	No	West Jackson Project Int.			Signal	A	6.4	No
317	Bradshaw Road & Collector WJ-9	West Jackson Project Int.			Signal	B	10.2	No	West Jackson Project Int.			Signal	A	5.7	No
318	Bradshaw Road & Mayhew Road	West Jackson Project Int.			Signal	**F**	**163.9**	Yes	West Jackson Project Int.			Signal	**F**	**128.4**	Yes
319	Bradshaw Road & Collector WJ-10	West Jackson Project Int.			Signal	**F**	**190.9**	Yes	West Jackson Project Int.			Signal	C	28.5	No
320	Bradshaw Road & Collector WJ-11	West Jackson Project Int.			Signal	A	8.1	No	West Jackson Project Int.			Signal	B	15.0	No
321	Collector WJ-12 & Fruitridge Road	West Jackson Project Int.			Signal	A	6.6	No	West Jackson Project Int.			Signal	A	6.6	No
322	Mayhew Road & Collector WJ-13	West Jackson Project Int.			Signal	D	41.7	No	West Jackson Project Int.			Signal	C	31.9	No
323	Collector WJ-14 & Kiefer Boulevard	West Jackson Project Int.			Signal	C	28.2	No	West Jackson Project Int.			Signal	C	23.9	No
325	Douglas Road & Kiefer Boulevard	West Jackson Project Int.			Signal	**F**	**162.1**	Yes	West Jackson Project Int.			Signal	**F**	**103.1**	Yes
327	Vineyard Road & Elder Creek Road	West Jackson Project Int.			Signal	D	37.2	No	West Jackson Project Int.			Signal	C	29.0	No

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Table 10.5

CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Intersection Levels of Service

Intersection		AM Peak Hour							PM Peak Hour						
		CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS (OJT)			LOS Impact	CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS (OJT)			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
328	Vineyard Road & Florin Road	West Jackson Project Int.			Signal	C	25.2	No	West Jackson Project Int.			Signal	C	32.8	No
329	Routier Ext & Kiefer Boulevard	West Jackson Project Int.			Signal	**F**	**88.4**	Yes	West Jackson Project Int.			Signal	E	71.4	No
330	Happy Ln/Happy Lane & Routier Ext	West Jackson Project Int.			Signal	E	78.9	No	West Jackson Project Int.			Signal	E	79.9	No
331	Routier Ext/Routier Rd & Old Placerville Road	West Jackson Project Int.			Signal	**F**	**168.4**	Yes	West Jackson Project Int.			Signal	**F**	**118.4**	Yes
400	Collector JT-3 & Jackson Road	Jackson Township Project Int.			Signal	**F**	**83.6**	Yes	Jackson Township Project Int.			Signal	D	48.2	No
401	Tree View Lane & Jackson Road	Jackson Township Project Int.			Signal	D	38.0	No	Jackson Township Project Int.			Signal	B	13.4	No
402	Collector JT-4 & Jackson Road	Jackson Township Project Int.			Signal	B	14.5	No	Jackson Township Project Int.			Signal	A	9.0	No
403	Tree View Lane & Collector JT-5	Jackson Township Project Int.			Signal	B	14.0	No	Jackson Township Project Int.			Signal	B	13.7	No
404	Tree View Lane & Collector JT-6	Jackson Township Project Int.			Signal	B	19.1	No	Jackson Township Project Int.			Signal	C	25.6	No
405	Tree View Lane & Collector JT-1	Jackson Township Project Int.			Signal	B	14.5	No	Jackson Township Project Int.			Signal	B	14.3	No
406	Tree View Lane & Kiefer Boulevard	Jackson Township Project Int.			Signal	B	11.6	No	Jackson Township Project Int.			Signal	B	14.0	No
407	HS/MS Dwy & Kiefer Boulevard	Jackson Township Project Int.			Signal	A	8.1	No	Jackson Township Project Int.			Signal	A	7.9	No
500	Rockbridge Dr & Jackson Road	NewBridge Project Int.			Signal	C	32.2	No	NewBridge Project Int.			Signal	B	18.3	No
501	Eagles Nest Road & N Bridgewater Dr	NewBridge Project Int.			Signal	A	3.4	No	NewBridge Project Int.			Signal	A	3.1	No
502	Eagles Nest Road & S Bridgewater Dr	NewBridge Project Int.			Signal	B	15.2	No	NewBridge Project Int.			Signal	B	13.4	No

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 10.5

CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Intersection Levels of Service

	Intersection	AM Peak Hour							PM Peak Hour						
		CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS (OJT)			LOS Impact	CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS (OJT)			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
600	Zinfandel Drive & Collector MS-2	Mather South Project Int.			Round	B	11.4	No	Mather South Project Int.			Round	B	12.1	No
601	Zinfandel Drive & Collector MS-3	Mather South Project Int.			Round	A	8.3	No	Mather South Project Int.			Round	A	9.2	No
602	Zinfandel Drive & Collector MS-4	Mather South Project Int.			Round	A	9.0	No	Mather South Project Int.			Round	A	9.2	No
603	Collector MS-5 & Collector MS-2	Mather South Project Int.			Two-way stop			No	Mather South Project Int.			Two-way stop			No
	Northbound Left Turn					*A*	*7.8*						*A*	*7.5*	
	Eastbound Left Turn					*B*	*10.2*						*B*	*10.7*	
604	Collector MS-5 & Collector MS-3	Mather South Project Int.			Two-way stop			No	Mather South Project Int.			Two-way stop			No
	Northbound Left Turn					A	7.8						*A*	*7.5*	
	Eastbound					B	10.1						*A*	*9.7*	
605	Collector MS-5 & Collector MS-4	Mather South Project Int.			Two-way stop			No	Mather South Project Int.			Two-way stop			No
	Northbound Left Turn					*A*	*8.5*						*A*	*8.2*	
	Eastbound					*C*	*18.2*						*D*	*33.3*	
606	Collector MS-5 & W Collector MS-1/E Collector MS-1	Mather South Project Int.			Two-way stop			No	Mather South Project Int.			Two-way stop			No
	Northbound Left Turn					*A*	*7.6*						*A*	*7.7*	
	Eastbound Left Turn					*B*	*11.8*						*B*	*12.4*	
	Eastbound					*A*	*9.4*						*A*	*9.3*	

Note: Gray shading represents changes in traffic control that the project is responsible to provide.

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 10.6

Super Cumulative and Super Cumulative Plus FOUR PROJECTS (Proposed Project) Intersection Geometrics

	Intersection	Traffic Control		Super Cumulative No Project Lane Geometrics				Super Cumulative Plus FOUR PROJECTS Lane Geometrics				Project(s) Responsible for Change
		Existing	Existing Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
1	Howe Avenue & College Town Drive/US 50 Westbound Ramps	Signal	Signal	↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↓ ↓	⌝ ⌜ ⌜	⌝ ⌝ ↰ ↱ ⌜	↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↓ ↓	⌝ ⌜ ⌜	⌝ ⌝ ↰ ↱ ⌜	
2	Howe Avenue & US 50 Eastbound Ramps/US 50 Eastbound Entrance	Signal	Signal	↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↓	⌝ ⌝ ⌜ ⌜		↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↓	⌝ ⌝ ⌜ ⌜		
3	Power Inn Road/Howe Avenue & Folsom Blvd.	Signal	Signal	⌝ ⌝ ↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↓ ↳ ↳	⌝ ⌝ ↑ ↱	⌝ ⌝ ↑ ↑ ⌜ ⌜	⌝ ⌝ ↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↓ ↳ ↳	⌝ ⌝ ↑ ↱	⌝ ⌝ ↑ ↑ ⌜ ⌜	
4	Power Inn Road & 14th Avenue	Signal	Signal	⌝ ↑ ↑ ↱	⌟ ↓ ↓ ↓ ↳	⌝ ↑ ↱	⌝ ↑ ⌜	⌝ ↑ ↑ ↱	⌟ ↓ ↓ ↓ ↳	⌝ ↑ ↱	⌝ ↑ ⌜	
5	Power Inn Road & Fruitridge Road	Signal	Signal	⌝ ⌝ ↑ ↱	⌟ ↓ ↓ ↳ ↳	⌝ ↑ ↱	⌝ ↑ ↑ ⌜	⌝ ⌝ ↑ ↱	⌟ ↓ ↓ ↳ ↳	⌝ ↑ ↱	⌝ ↑ ↑ ⌜	
6	Jackson Road/Notre Dame Dr. & Folsom Blvd.	Signal	Signal	⌝ ↰ ⌜	⌟ ↰	⌝ ↑ ↑ ⌜	⌝ ↑ ↑ ⌜	⌝ ↰ ⌜	⌟ ↰	⌝ ↑ ↑ ⌜	⌝ ↑ ↑ ⌜	
7	Florin Perkins Road/Julliard Dr. & Folsom Boulevard	Signal	Signal	⌝ ↰ ⌜	⌟ ↰	⌝ ↑ ↑ ⌜	⌝ ↑ ↱	⌝ ↰ ⌜	⌟ ↰	⌝ ↑ ↑ ⌜	⌝ ↑ ↱	
8	Florin Perkins Road & Kiefer Blvd.	Two-way stop	Two-way stop	↑ ↱	↓ ↓ ↳		⌝ ⌜	↑ ↱	↓ ↓ ↳		⌝ ⌜	
9	Florin Perkins Road & Jackson Road	Signal	Signal	⌝ ↑ ↑ ⌜	⌟ ↓ ↓ ↳	⌝ ↑ ↑ ⌜	⌝ ↑ ↱	⌝ ↑ ↑ ⌜	⌟ ↓ ↓ ↳	⌝ ↑ ↑ ⌜	⌝ ↑ ↱	
10	Florin Perkins Road & Fruitridge Road	Signal	Signal	⌝ ↑ ↑ ⌜	⌟ ↓ ↓ ↳	⌝ ↑ ↑ ⌜	⌝ ↑ ↱	⌝ ↑ ↑ ⌜	⌟ ↓ ↓ ↳	⌝ ↑ ↑ ⌜	⌝ ↑ ↱	
11	Florin Perkins Road & Elder Creek Road	Signal	Signal	⌝ ↑ ↑ ⌜	⌟ ↓ ↓ ↳	⌝ ↑ ↑ ⌜	⌝ ↑ ↑ ⌜	⌝ ↑ ↑ ⌜	⌟ ↓ ↓ ↳	⌝ ↑ ↑ ⌜	⌝ ↑ ↑ ⌜	
12	S. Watt Ave./Watt Avenue & Folsom Blvd.	Signal	Signal	⌝ ⌝ ↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↓ ↳ ↳	⌝ ⌝ ↑ ↑ ⌜	⌝ ⌝ ↑ ↑ ⌜	⌝ ⌝ ↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↓ ↳ ↳	⌝ ⌝ ↑ ↑ ⌜	⌝ ⌝ ↑ ↑ ⌜	
13	S. Watt Ave. & Reith Ct/Manlove Road	Signal	Signal	⌝ ↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↳	⌖	⌝ ↱ ⌜	⌝ ↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↳	⌖	⌝ ↱ ⌜	
14	S. Watt Avenue & Kiefer Blvd.	Signal	Signal	⌝ ⌝ ↑ ↑ ↱	⌟ ↓ ↓ ↳ ↳	⌝ ⌝ ↑ ↑ ⌜	⌝ ⌝ ↑ ↑ ⌜	⌝ ⌝ ↑ ↑ ↱	⌟ ↓ ↓ ↳ ↳	⌝ ⌝ ↑ ↑ ⌜	⌝ ⌝ ↑ ↑ ⌜	
15	S. Watt Avenue & Canberra Dr.	Signal	Signal	↑ ↑ ↱	↓ ↓ ↓ ↳		⌝ ⌜	↑ ↑ ↱	↓ ↓ ↳		⌝ ⌜	
16	S. Watt Avenue & Jackson Road	Signal	Signal	⌝ ⌝ ↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↓ ↳ ↳	⌝ ⌝ ↑ ↑ ⌜	⌝ ⌝ ↑ ↑ ⌜	⌝ ⌝ ↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↓ ↳ ↳	⌝ ⌝ ↑ ↑ ⌜	⌝ ⌝ ↑ ↑ ⌜	West Jackson
17	S. Watt Avenue & Fruitridge Road	Signal	Signal	⌝ ↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↓ ↳	⌝ ↑ ⌜	⌝ ↱	⌝ ↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↓ ↳	⌝ ↑ ⌜	⌝ ⌝ ↑ ↑ ⌜	West Jackson
18	S. Watt Avenue & Elder Creek Road	Signal	Signal	⌝ ⌝ ↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↓ ↳ ↳	⌝ ⌝ ↑ ⌜	⌝ ↑ ↑ ⌜	⌝ ⌝ ↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↓ ↳ ↳	⌝ ⌝ ↑ ⌜	⌝ ↑ ↑ ⌜	
20	Elk Grove Florin Road/S. Watt Ave. & Florin Road	Signal	Signal	⌝ ⌝ ↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↓ ↳ ↳	⌝ ↑ ↑ ⌜	⌝ ↑ ↑ ⌜	⌝ ⌝ ↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↓ ↳ ↳	⌝ ↑ ↑ ⌜	⌝ ↑ ↑ ⌜	
21	Elk Grove Florin Road & Gerber Rd./Gerber Road	Signal	Signal	⌝ ⌝ ↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↓ ↳ ↳	⌝ ⌝ ↑ ↑ ⌜	⌝ ⌝ ↑ ↑ ⌜	⌝ ⌝ ↑ ↑ ↑ ⌜	⌟ ↓ ↓ ↓ ↳ ↳	⌝ ⌝ ↑ ↑ ⌜	⌝ ⌝ ↑ ↑ ⌜	
23	Hedge Avenue & Jackson Road	Signal	Signal	⌝ ↱	⌟ ↰	⌝ ↑ ↑ ⌜	⌝ ↑ ↑ ⌜	⌝ ↑ ⌜	⌟ ↰	⌝ ↑ ↑ ⌜	⌝ ↑ ↑ ⌜	West Jackson
24	Hedge Avenue & Fruitridge Road	All-way stop	Signal	⌖	⌖	⌖	⌖	⌝ ↑ ⌜	⌟ ↓ ↳	⌝ ↑ ↱	⌝ ↑ ↱	West Jackson
25	Hedge Avenue & Elder Creek Road	All-way stop	Signal	⌝ ↑ ⌜	⌟ ↓ ↳	⌝ ↑ ↱	⌝ ↑ ↱	⌝ ↑ ⌜	⌟ ↓ ↳	⌝ ↑ ↱	⌝ ↑ ↱	West Jackson
26	Hedge Avenue & Tokay Lane	Two-way stop	Two-way stop	⌖	⌖	⌖	⌖	⌖	⌖	⌖	⌖	
27	Hedge Avenue & Florin Road	All-way stop	All-way stop	⌖	⌖	⌝ ↑ ↱	⌝ ↑ ↱	⌖	⌖	⌝ ↑ ↱	⌝ ↑ ↱	
28	Mayhew Road & Kiefer Boulevard	Signal	Signal	⌝ ↑ ⌜	⌟ ↓ ↳	⌝ ↑ ↱	⌝ ↑ ↱	⌝ ↑ ⌜	⌟ ↓ ↳	⌝ ↑ ↱	⌝ ↑ ↱	

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 10.6

Super Cumulative and Super Cumulative Plus FOUR PROJECTS (Proposed Project) Intersection Geometrics

	Intersection	Traffic Control		Super Cumulative No Project Lane Geometrics				Super Cumulative Plus FOUR PROJECTS Lane Geometrics				Project(s) Responsible for Change
		Existing	Existing Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
29	Mayhew Road & Jackson Road	Two-way stop	Signal									West Jackson
30	Mayhew Road & Fruitridge Road	Two-way stop	Signal									West Jackson
31	Mayhew Road & Elder Creek Road	Two-way stop	Signal									West Jackson
32	Zinfandel Drive & Woodring Drive	Two-way stop	Two-way stop									Mather South
33	Bradshaw Road & Folsom Blvd.	Signal	Signal									
34	Bradshaw Road & US 50 Westbound Ramps	Signal	Signal									
35	Bradshaw Road & US 50 Eastbound Ramps	Signal	Signal									
36	Bradshaw Road & Old Placerville Road	Signal	Signal									
37	Bradshaw Road & Kiefer Boulevard	Signal	Signal									West Jackson
38	Jackson Road & Bradshaw Road	Signal	Signal									West Jackson
39	Bradshaw Road & Elder Creek Road	Signal	Signal									West Jackson
40	Bradshaw Road & Florin Road	Signal	Signal									
41	Bradshaw Road & Gerber Road	Signal	Signal									
42	Happy Lane & Old Placerville Road	Two-way stop	Signal									
43	Kiefer Boulevard & Happy Ln		Signal									West Jackson
44	Excelsior Road & Kiefer Boulevard	Two-way stop	Signal									West Jackson; Jackson Township
45	Excelsior Road & Jackson Road	Signal	Signal									West Jackson; Jackson Township
46	Excelsior Road & Elder Creek Road	Two-way stop	Signal									West Jackson
47	Excelsior Road & Florin Road	All-way stop	Signal									West Jackson
48	Excelsior Road & Gerber Road/Birch Ranch Drive	All-way stop	All-way stop									
49	Mather Field Road & US 50 Westbound Ramps	Signal	Signal									
50	Mather Field Road & US 50 Eastbound Ramps	Signal	Signal									
51	Mather Field Road & Rockingham Drive	Signal	Signal									
52	Mather Boulevard & Douglas Road	All-way stop	All-way stop									
53	Zinfandel Drive & US 50 Westbound	Signal	Signal									
54	Zinfandel Drive & US 50 Eastbound Ramps/Gold Center Drive	Signal	Signal									

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 10.6

Super Cumulative and Super Cumulative Plus FOUR PROJECTS (Proposed Project) Intersection Geometrics

	Intersection	Traffic Control		Super Cumulative No Project Lane Geometrics				Super Cumulative Plus FOUR PROJECTS Lane Geometrics				Project(s) Responsible for Change
		Existing	Existing Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
55	Zinfandel Drive & White Rock Road	Signal	Signal									
56	Zinfandel Drive & Data Drive	Signal	Signal									
57	Zinfandel Dr & International Dr	Signal	Signal									
58	Zinfandel Drive & Douglas Road	Signal	Signal									
59	Eagles Nest Road/Zinfandel Drive & Kiefer Boulevard		Signal									NewBridge; Mather South
60	Eagles Nest Road & Jackson Road	Two-way stop	Signal									NewBridge
61	Eagles Nest Rd/Eagles Nest Road & Florin Road	Two-way stop	Signal									
62	Sunrise Boulevard & US 50 Westbound Ramps	Signal	Signal									
63	Sunrise Boulevard & US 50 Eastbound Ramps	Signal	Signal									
64	Sunrise Boulevard & Folsom Boulevard	Signal	Signal									
65	Sunrise Boulevard & White Rock Road	Signal	Signal									
66	Sunrise Boulevard & International Drive/Monier Circle	Signal	Signal									
67	Sunrise Boulevard & Douglas Road	Signal	Signal									
68	Sunrise Boulevard & Chrysanthy Boulevard	Signal	Signal									
69	Sunrise Boulevard & Kiefer Boulevard	Signal	Signal									NewBridge; Mather South
70	Sunrise Boulevard & Jackson Road	Signal	Signal									
71	Sunrise Boulevard & Florin Road	Signal	Signal									
72	Sheldon Lake Drive/Sunrise Boulevard & Grant Line Road	Signal	Signal									
73	Hazel Avenue & Tributary Point Drive/US 50 Westbound Off-ramp	Signal	Signal									
74	Hazel Aveneu/Hazel Avenue & US 50 Eastbound Ramps	Signal	Signal									
76	White Rock Road & Prairie City Road	Signal	Signal									
77	Grant Line Road & White Rock Road	Signal	Signal									
78	Grant Line Road & Douglas Road	All-way stop	All-way stop									
79	Grant Line Road & Kiefer Boulevard	All-way stop	All-way stop									
80	Grant Line Road & Jackson Road	Signal	Signal									
81	Watt Avenue & US-50 EB Ramps	Signal	Signal									

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 10.6

Super Cumulative and Super Cumulative Plus FOUR PROJECTS (Proposed Project) Intersection Geometrics

	Intersection	Traffic Control		Super Cumulative No Project Lane Geometrics				Super Cumulative Plus FOUR PROJECTS Lane Geometrics				Project(s) Responsible for Change
		Existing	Existing Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
82	Watt Avenue & US-50 WB Ramps	Signal	Signal									
83	Mayhew Rd & Folsom Blvd.	Signal	Signal									
84	65th Street Expy & Fruitridge Road	Signal	Signal									
85	Power Inn Road & Elder Creek Road	Signal	Signal									
86	Power Inn Road & Florin Rd	Signal	Signal									
87	Florin Perkins Road & Florin Rd	Signal	Signal									
88	Bradshaw Rd & Calvine Rd	Signal	Signal									
89	Vineyard Rd & Calvine Rd	Signal	Signal									
90	Excelsior Road & Calvine Rd	All-way stop	Signal									
91	Grant Line Road & Eagles Nest Rd/Sloughhouse Rd	Signal	Signal									
92	Grant Line Road & Calvine Rd	Signal	Signal									
93	Grant Line Road & Driveway/Wilton Rd	Signal	Signal									
94	Bond Rd/Wrangler Dr & Grant Line Road	Signal	Signal									
95	Florin Perkins Road & 14th Avenue		Signal									
96	14th Avenue & Jackson Road		Signal									
97	Rock Creek Pkwy & Jackson Road		Signal									
98	Aspen 1 Access Road & Jackson Road		Signal									
99	Rancho Cordova Pkwy & US-50 WB Ramps		Signal									
100	Rancho Cordova Pkwy & US-50 EB Ramps		Signal									
101	Rancho Cordova Pkwy & Easton Valley Pkwy		Signal									
102	Rancho Cordova Pkwy & White Rock Road		Signal									
103	Rancho Cordova Pkwy & Douglas Road		Signal									
104	Rancho Cordova Pkwy & Chrysanthy Blvd		Signal									
105	Rancho Cordova Pkwy & Kiefer Blvd		Signal									
106	Grant Line Road & Rancho Cordova Pkwy		Signal									
107	Americanos Blvd & White Rock Road		Signal									
108	Americanos Blvd & Douglas Road		Signal									

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 10.6

Super Cumulative and Super Cumulative Plus FOUR PROJECTS (Proposed Project) Intersection Geometrics

Intersection		Traffic Control		Super Cumulative No Project Lane Geometrics				Super Cumulative Plus FOUR PROJECTS Lane Geometrics				Project(s) Responsible for Change
		Existing	Existing Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
109	Americanos Blvd & Chrysanthy Blvd		Signal									
110	Kiefer Blvd & Americanos Blvd		Signal									
111	Grant Line Road & Chrysanthy Blvd		Signal									
112	Easton Valley Pkwy & Hazel Avenue		Signal									
200	Excelsior Road & Collector WJ-1/Collector JT-1		Signal									West Jackson; Jackson Township
201	Excelsior Road & Collector WJ-2/Collector JT-2		Signal									West Jackson; Jackson Township
202	Kiefer Boulevard & W Collector MS-1		Signal									Mather South
203	Northbridge Dr & Kiefer Boulevard		Signal									NewBridge
204	Kiefer Boulevard & E Collector MS-1		Signal									Mather South
300	Collector WJ-3 & Jackson Road		Signal									West Jackson
301	Collector WJ-4 & Jackson Road		Signal									West Jackson
303	Vineyard Road & Jackson Road		Signal									West Jackson
304	Collector WJ-5 & Jackson Road		Signal									West Jackson
305	Collector WJ-6 & Jackson Road		Signal									West Jackson
306	Excelsior Road & Collector WJ-6		Signal									West Jackson
307	S. Watt Avenue & Rock Creek Pkwy		Signal									West Jackson
308	Hedge Avenue & Rock Creek Pkwy Westbound		Roundabout									West Jackson
309	Hedge Avenue & Rock Creek Pkwy Eastbound		Roundabout									West Jackson
310	Mayhew Road & Rock Creek Pkwy Westbound		Roundabout									West Jackson
311	Mayhew Road & Rock Creek Pkwy Eastbound		Roundabout									West Jackson
312	Bradshaw Road & Rock Creek Pkwy		Signal									West Jackson
314	Vineyard Road & Rock Creek Pkwy		Signal									West Jackson
315	Douglas Road & Rock Creek Pkwy		Signal									West Jackson
316	Bradshaw Road & Collector WJ-8		Signal									West Jackson
317	Bradshaw Road & Collector WJ-9		Signal									West Jackson

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 10.6

Super Cumulative and Super Cumulative Plus FOUR PROJECTS (Proposed Project) Intersection Geometrics

Intersection		Traffic Control		Super Cumulative No Project Lane Geometrics				Super Cumulative Plus FOUR PROJECTS Lane Geometrics				Project(s) Responsible for Change
		Existing	Existing Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
318	Bradshaw Road & Mayhew Road		Signal									West Jackson
319	Bradshaw Road & Collector WJ-10		Signal									West Jackson
320	Bradshaw Road & Collector WJ-11		Signal									West Jackson
321	Collector WJ-12 & Fruitridge Road		Signal									West Jackson
322	Mayhew Road & Collector WJ-13		Signal									West Jackson
323	Collector WJ-14 & Kiefer Boulevard		Signal									West Jackson
325	Douglas Road Extension & Kiefer Boulevard		Signal									West Jackson
327	Vineyard Road & Elder Creek Road		Signal									West Jackson
328	Vineyard Road & Florin Road	Signal	Signal									West Jackson
329	Routier Ext & Kiefer Boulevard		Signal									West Jackson
330	Happy Lane & Routier Ext		Signal									West Jackson
331	Routier Ext/Routier Rd & Old Placerville Road		Signal									West Jackson
400	Jackson Road & Collector JT-3		Signal									Jackson Township
401	Jackson Road & Tree View Lane		Signal									Jackson Township
402	Jackson Road & Collector JT-4		Signal									Jackson Township
403	Tree View Lane & Collector JT-5		Signal									Jackson Township
404	Tree View Lane & Collector JT-6		Signal									Jackson Township
405	Tree View Lane & Collector JT-1		Signal									Jackson Township
406	Tree View Lane & Kiefer Boulevard		Signal									Jackson Township
407	HS/MS Dwy & Kiefer Boulevard		Signal									Jackson Township
500	Jackson Road & Rockbridge Dr		Signal									NewBridge
501	Eagles Nest Road & N Bridgewater Dr		Signal									NewBridge
502	Eagles Nest Road & S Bridgewater Dr		Signal									NewBridge
600	Zinfandel Drive & Collector MS-2		Roundabout									Mather South
601	Zinfandel Drive & Collector MS-3		Roundabout									Mather South
602	Zinfandel Drive & Collector MS-4		Roundabout									Mather South
603	Collector MS-5 & Collector MS-2		Two-way stop									Mather South

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 10.6

Super Cumulative and Super Cumulative Plus FOUR PROJECTS (Proposed Project) Intersection Geometrics

Intersection		Traffic Control		Super Cumulative No Project Lane Geometrics				Super Cumulative Plus FOUR PROJECTS Lane Geometrics				Project(s) Responsible for Change
		Existing	Existing Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
604	Collector MS-5 & Collector MS-3		Two-way stop					1	1	2		Mather South
605	Collector MS-5 & Collector MS-4		Two-way stop					1	1	2		Mather South
606	E Collector MS-1/Collector MS-5 & W Collector MS-1		Two-way stop					1 1	2 1	1 1		Mather South

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 10.7: CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Peak Hour Freeway Mainline Level of Service									
Direc-tion	**Location**	**CEQA Cumulative**				**CEQA Cumulative Plus FOUR PROJECTS**			
		AM Peak Hour		**PM Peak Hour**		**AM Peak Hour**		**PM Peak Hour**	
		Volume	**LOS**	**Volume**	**LOS**	**Volume**	**LOS**	**Volume**	**LOS**
East-bound US 50	SR 99 / SR 51 to Stockton Boulevard	8,751	D	8,621	D	9,283	D	8,855	D
	Stockton Boulevard to 59th Street	8,168	**F**	7,811	**F**	8,622	**F**	8,051	**F**
	59th Street to 65th Street	7,637	D	7,341	D	8,092	E	7,521	D
	65th Street to Howe Avenue	8,019	D	7,658	D	8,284	D	7,812	D
	Howe Avenue to Watt Avenue	7,213	C	6,680	C	7,350	C	6,679	C
	Watt Avenue to Bradshaw Road	9,633	**F**	8,976	E	9,853	**F**	9,056	E
	Bradshaw Rd to Mather Field Rd	9,467	**F**	9,033	C	9,492	**F**	9,015	C
	Mather Field Rd to Zinfandel Drive	9,072	D	8,765	D	9,251	D	8,916	D
	Zinfandel Drive to Sunrise Blvd	6,313	C	6,367	**F**	6,426	C	6,551	**F**
	Sunrise Bl to Rancho Cordova Pkwy	5,835	C	5,875	**F**	5,918	C	6,121	**F**
	Rancho Cordova Pkwy to Hazel Ave	7,170	D	6,651	**F**	7,270	D	6,929	**F**
West-bound US 50	Hazel Ave to Rancho Cordova Pkwy	5,376	B	5,168	C	5,642	B	5,218	C
	Rancho Cordova Pkwy to Sunrise Bl	6,906	C	4,367	B	7,074	C	4,461	B
	Sunrise Blvd to Zinfandel Drive	8,587	D	5,211	B	8,789	D	5,378	B
	Zinfandel Drive to Mather Field Rd	9,480	D	7,384	C	9,503	D	7,454	C
	Mather Field Rd to Bradshaw Road	9,560	**F**	8,696	D	9,424	**F**	8,544	D
	Bradshaw Road to Watt Avenue	9,001	**F**	7,871	D	8,902	**F**	8,099	E
	Watt Avenue to Howe Avenue	7,880	**F**	5,864	**F**	7,704	**F**	6,132	**F**
	Howe Avenue to 65th Street	8,761	**F**	8,080	**F**	9,014	**F**	8,384	**F**
	65th Street to 59th Street	8,809	**F**	7,970	**F**	9,037	**F**	8,296	**F**
	59th Street to Stockton Boulevard	9,692	D	8,290	**F**	9,903	D	8,656	**F**
	Stockton Boulevard to SR 99 / SR 51	10,187	E	9,660	**F**	10,330	E	9,916	**F**

Bold values denote level of service "F" conditions.

Red shaded values indicate project impacts.

Source: *DKS Associates, 2018.*

10.4.4 CEQA Cumulative Plus FOUR PROJECTS Pedestrian and Bicycle Facility Impacts

The FOUR PROJECTS would not remove any existing or planned pedestrian facility that is planned in the Bikeway Master Plan. The FOUR PROJECTS would add pedestrian and bicycle demands within the FOUR PROJECTS site and to and from nearby land uses. Specific information on improvements to on- and off-site bicycle and pedestrian facilities is not available at this time. Because the FOUR PROJECTS would add demand for pedestrian and bicycle facilities that may not be available, the impact of the FOUR PROJECTS on pedestrian and bicycle circulation is potentially significant.

Table 10.8 CEQA Cumulative Plus FOUR PROJECTS (Prop. Proj.) Peak Hour Freeway Ramp Junction/Weaving Level of Service										
Direc-tion	**Location**	**Junction Type**	**CEQA Cumulative**				**CEQA Cumulative Plus FOUR PROJECTS**			
			A.M. Peak Hour		**P.M. Peak Hour**		**A.M. Peak Hour**		**P.M. Peak Hour**	
			Ramp Volume	**LOS**	**Ramp Volume**	**LOS**	**Ramp Volume**	**LOS**	**Ramp Volume**	**LOS**
East-bound US 50	Northbound 65th Street Slip Entrance	Weave	945	**F**	777	**F**	928	**F**	724	**F**
	Howe Avenue / Hornet Drive Exit		2,088		2,140		2,125		2,267	
	Southbound Howe Avenue Loop Entrance	One-Lane Merge	729	D	1,342	D	722	D	1,338	D
	Northbound Howe Avenue Slip Entrance	One-Lane Merge	609	D	532	D	520	D	519	D
	Watt Avenue Exit	Two-Lane Diverge	1,538	B	1,705	B	1,530	B	1,604	A
	Southbound Watt Avenue Loop Entrance	One-Lane Merge	1,615	D	1,368	C	1,546	D	1,213	C
	Northbound Watt Avenue Slip Entrance	One-Lane Merge	682	D	588	C	642	D	597	C
	Bradshaw Road Exit	Two-Lane Diverge	2,068	**F**	1,631	B	2,255	**F**	1,835	C
	Southbound Bradshaw Road Loop Entrance	One-Lane Merge	268	D	422	D	272	D	505	D
	Northbound Bradshaw Road Slip Entrance	One-Lane Merge	1,486	D	1,029	C	1,491	D	1,102	C

Table 10.8
CEQA Cumulative Plus FOUR PROJECTS (Prop. Proj.) Peak Hour Freeway Ramp Junction/Weaving Level of Service

Direc-tion	Location	Junction Type	CEQA Cumulative				CEQA Cumulative Plus FOUR PROJECTS			
			A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
			Ramp Volume	LOS	Ramp Volume	LOS	Ramp Volume	LOS	Ramp Volume	LOS
	Mather Field Road Exit	Two-Lane Diverge	1,490	B	1,530	B	1,481	B	1,489	B
	Southbound Mather Field Road Loop Entrance	One-Lane Merge	252	C	222	C	251	C	169	C
	Northbound Mather Field Road Slip Entrance	Weave	431	**F**	894	**F**	607	**F**	1,123	**F**
	Zinfandel Drive Exit		3,083		1,861		3,090		1,797	
	Southbound Zinfandel Drive Loop Entrance	One-Lane Merge	183	C	173	C	186	C	151	C
	Northbound Zinfandel Drive Slip Entrance	Lane Addition	665	A	714	B	667	B	784	B
	Sunrise Boulevard Exit	Major Diverge	1,878	C	2,308	C	1,923	C	2,364	C
	Sunrise Boulevard Entrance	Lane Addition / Weave	1,233	D	1,122	C	1,185	B	1,162	C
	Rancho Cordova Parkway Exit	Major Diverge / Weave	374		763		330	C	816	
	Rancho Cordova Parkway Entrance	Weave	1,787	**F**	1,748	**F**	1,747	**F**	1,823	**F**
	Hazel Avenue Exit		1,904		2,611		1,915		2,718	

Table 10.8
CEQA Cumulative Plus FOUR PROJECTS (Prop. Proj.) Peak Hour Freeway Ramp Junction/Weaving Level of Service

Direc-tion	Location	Junction Type	CEQA Cumulative				CEQA Cumulative Plus FOUR PROJECTS			
			A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
			Ramp Volume	LOS	Ramp Volume	LOS	Ramp Volume	LOS	Ramp Volume	LOS
	Hazel Avenue Entrance	Weave	1,174	E	2,148	**F**	1,070	D	2,091	D
	Aerojet Road Exit		584		203		625		171	
West-bound US 50	Hazel Avenue Exit	Two-Lane Diverge	1,098	B	1,031	C	1,058	B	1,032	C
	Northbound Hazel Avenue Loop Entrance	One-Lane Merge	69	B	434	C	89	B	434	C
	Southbound Hazel Avenue Slip Entrance	Weave	2,306	**F**	2,263	**F**	2,374	**F**	2,302	**F**
	Rancho Cordova Parkway Exit		1,800		2,225		1,882		2,173	
	Rancho Cordova Parkway Entrance	Lane Addition / Weave	1,428	C	1,165	B	1,380	C	1,138	B
	Sunrise Boulevard Exit	Major Diverge / Weave	729		751	C	736		729	C
	Northbound Sunrise Boulevard Loop Entrance	Lane Addition	169	A	259	A	174	A	234	A
	Southbound Sunrise Boulevard Slip Entrance	Lane Addition	2,323	**F**	1,524	C	2,355	**F**	1,613	C
	Zinfandel Drive Exit	One-Lane Diverge	1,384	E	1,183	D	1,409	E	1,200	D

Table 10.8 CEQA Cumulative Plus FOUR PROJECTS (Prop. Proj.) Peak Hour Freeway Ramp Junction/Weaving Level of Service										
Direc-tion	**Location**	**Junction Type**	**CEQA Cumulative**				**CEQA Cumulative Plus FOUR PROJECTS**			
			A.M. Peak Hour		**P.M. Peak Hour**		**A.M. Peak Hour**		**P.M. Peak Hour**	
			Ramp Volume	**LOS**	**Ramp Volume**	**LOS**	**Ramp Volume**	**LOS**	**Ramp Volume**	**LOS**
	Northbound Zinfandel Drive Loop Entrance	Lane Addition	909	C	1,443	D	797	C	1,295	C
	Southbound Zinfandel Drive Slip Entrance	One-Lane Merge	1,544	D	663	B	1,400	D	663	B
	Mather Field Road Exit	One-Lane Drop	1,350	D	826	C	1,586	D	1,025	C
	Northbound Mather Field Road Loop Entrance	One-Lane Merge	626	C	1,192	C	507	C	1,193	C
	Southbound Mather Field Road Slip Entrance	One-Lane Merge	303	C	504	C	423	C	428	B
	Bradshaw Road Exit	Two-Lane Diverge	1,533	C	1,756	B	1,704	C	1,809	B
	Northbound Bradshaw Road Loop Entrance	One-Lane Merge	999	**F**	927	D	1,381	**F**	1,593	D
	Southbound Bradshaw Road Slip Entrance	One-Lane Merge	385	**F**	851	D	393	**F**	816	D
	Watt Avenue Exit	Major Diverge	1,568	E	1,112	D	1,407	E	991	D
	Northbound Watt Avenue Loop Entrance	One-Lane Merge	774	D	1,125	D	742	D	1,100	D
	Southbound Watt Avenue Slip Entrance	Lane Addition	1,134	D	1,062	C	912	D	1,006	D
	Howe Avenue Exit	Major Diverge	1,879	E	1,687	D	1,701	E	1,695	D
	Northbound Howe Avenue	One-Lane Merge	613	D	572	D	608	D	563	D

Table 10.8 CEQA Cumulative Plus FOUR PROJECTS (Prop. Proj.) Peak Hour Freeway Ramp Junction/Weaving Level of Service

Direc-tion	Location	Junction Type	CEQA Cumulative				CEQA Cumulative Plus FOUR PROJECTS			
			A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
			Ramp Volume	LOS	Ramp Volume	LOS	Ramp Volume	LOS	Ramp Volume	LOS
	Loop Entrance									
	Southbound Howe Avenue Slip Entrance	One-Lane Merge	668	**F**	699	C	812	**F**	646	C

Bold values denote level of service "F" conditions.

Red shaded values indicate project impacts.

Source: *DKS Associates, 2018.*

Table 10.9: CEQA Cumulative Peak Hour Freeway Ramp Termini Queuing

Direction	US 50 Exit Ramp	Available Storage Length (feet / lane)			Maximum Queue Length (feet / lane)					
					AM Peak Hour			PM Peak Hour		
		L	T	R	L	T	R	L	T	R
Eastbound US-50	Howe Avenue	765	-	765	136	-	**797**	137	-	346
	Watt Avenue	1,500	-	1,500	210	-	403	244	-	242
	Bradshaw Road	1,250	-	1,250	149	-	566	159	-	317
	Mather Field Road	1,385	-	1,385	132	-	383	241	-	453
	Zinfandel Drive	1,025	1,025	1,025	163	**1,416**	1,306	396	368	930
	Sunrise Boulevard	1,695	-	1,695	106	-	199	196	-	114
	Rancho Cordova Pkwy.	-	-	1,850	-	-	394	-	-	528
	Hazel Avenue	1,310	-	1,310	305	-	23	711	-	18
Westbound US-50	Hazel Avenue	1,995		1,995	302		855	300		669
	Rancho Cordova Pkwy	1,065	-	-	**1,651**	-	-	**1,746**	-	-
	Sunrise Boulevard	1,540	-	1,540	52	-	198	23	-	442
	Zinfandel Drive	1,065	-	1,065	245	-	70	143	-	197
	Mather Field Road	1,335	-	1,335	362	-	331	176	-	183
	Bradshaw Road	1,330	-	1,330	177	-	122	265	-	47
	Watt Avenue	1,480	-	1,480	230	-	778	164	-	567
	Howe Avenue	1,355	1,355	1,355	85	412	804	199	412	684

Bold values exceed storage capacity.
L = left turn movement, T = through movement, R = right turn movement
Source: *DKS Associates, 2018.*

Table 10.10: CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Peak Hour Freeway Ramp Termini Queuing											
		Available Storage Length (feet / lane)			Maximum Queue Length (feet / lane)						
					AM Peak Hour			PM Peak Hour			
Direction	US 50 Exit Ramp	L	T	R	L	T	R	L	T	R	
Eastbound US-50	Howe Avenue	765	-	765	148	-	**1,065**	167	-	510	
	Watt Avenue	1,500	-	1,500	273	-	567	213	-	373	
	Bradshaw Road	1,250	-	1,250	189	-	1132	119	-	764	
	Mather Field Road	1,385	-	1,385	165	-	383	315	-	285	
	Zinfandel Drive	1,025	1,025	1,025	150	**1,407**	**1,341**	448	371	675	
	Sunrise Boulevard	1,695	-	1,695	109	-	196	211	-	105	
	Rancho Cordova Pkwy.	-	-	1,850	-	-	369	-	-	521	
	Hazel Avenue	1,310	-	1,310	302	-	27	770	-	18	
Westbound US-50	Hazel Avenue	1,995		1,995	320		801	343		654	
	Rancho Cordova Pkwy	1,065	-	-	**1,736**	-	-	**1,703**	-	-	
	Sunrise Boulevard	1,540	-	1,540	58	-	165	44	-	403	
	Zinfandel Drive	1,065	-	1,065	271	-	58	177	-	202	
	Mather Field Road	1,335	-	1,335	512	-	474	264	-	238	
	Bradshaw Road	1,330	-	1,330	237	-	119	324	-	54	
	Watt Avenue	1,480	-	1,480	271	-	764	174	-	606	
	Howe Avenue	1,355	1,355	1,355	43	412	707	175	412	742	

Red shaded values indicate project impacts.
L = left turn movement, T = through movement, R = right turn movement
Source: *DKS Associates, 2018.*

10.4.5 CEQA Cumulative Plus FOUR PROJECTS Transit System Impacts

Public transit would not be provided to the sites of the FOUR PROJECTS under CEQA Cumulative scenario without development of the FOUR PROJECTS. In the preparation of this analysis, a transit system to serve the FOUR PROJECTS was developed (see Section 8.1.2.3). However, the timing and implementation of the transit system are uncertain at this time. The FOUR PROJECTS would increase demands for public transit facilities. Therefore, the impact of the FOUR PROJECTS on the transit system is potentially significant.

10.4.6 CEQA Cumulative Plus FOUR PROJECTS Functionality Impacts

Table 10.11 summarizes the results of the rural roadway segment functionality analysis. Figure 10.7 illustrates the resultant functionality impacts. The table includes the number of lanes assumed with the implementation of the FOUR PROJECTS, which in many cases is greater than the number of lanes in the existing condition. The shaded table cells under the "Travel Lanes" heading illustrates new roadways and widened roadways that are assumed part of the FOUR PROJECTS. The "Substandard?" heading indicates whether or not a roadway meets the County standards of 12-foot lanes and 6-foot shoulders. If the FOUR PROJECTS make improvements to a roadway segment such as widening, they would be required to reconstruct the entire substandard roadway segment to County standards. The shaded table cells under the "Functionality Impact?" heading indicate those locations with a functionality impact.

As stated above, the traffic analysis assumed that the FOUR PROJECTS would construct a number of travel lanes on roadway segments that are internal to or on the boundary of the FOUR PROJECTS, and the entire roadway segment would be reconstructed to County standards at that time. The timing of implementation of such additional traffic lanes on these internal or boundary roadway segments will affect whether or not impacts would exist at some time prior to full build out of the FOUR PROJECTS.

Table 10.11
CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Functionality Impacts

ID	Roadway	Segment		Jurisdiction	Existing Substandard Roadways				CEQA Cumulative + FOUR PROJECTS			
		From	To		Travel Lanes	Pavement (ft)	Substandard? [1]	Existing Volume	Travel Lanes	Facility Type[1]	Forecasted Volume	Functionality Impact? [2]
15	Douglas Rd	Mather Blvd	Zinfandel Dr	County	2	23	Yes	6,635	4	Arterial M	34,000	Yes[3]
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd	Rancho Cordova/County	2	23	Yes	8,369	6	Arterial M	50,410	Yes[3]
19	Eagles Nest Rd	Kiefer Blvd	Jackson Rd	County	2	20	Yes	740	4	Arterial M	13,170	Yes[3]
20	Eagles Nest Rd	Jackson Rd	Florin Rd	County	2	<21	Yes	517	2	Arterial M	9,180	Yes
21	Eagles Nest Rd	Florin Rd	Grant Line Rd	County	2	<21	Yes	189	2	Arterial M	4,470	No
25	Elder Creek Rd	South Watt Ave	Hedge Ave	County	2	23	Yes	5,576	4	Arterial M	48,190	Yes[3]
26	Elder Creek Rd	Hedge Ave	Mayhew Rd	County	2	23	Yes	5,797	4	Arterial M	33,950	Yes[3]
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd	County	2	23	Yes	5,355	4	Arterial M	40,630	Yes[3]
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd	County	2	23	Yes	2,158	3	Arterial M	33,740	Yes[3]
30	Excelsior Rd	Kiefer Blvd	Jackson Rd	County	2	22	Yes	3,716	2	Arterial M	27,590	Yes
31	Excelsior Rd	Jackson Rd	Elder Creek Rd	County	2	<21	Yes	5,075	3	Arterial M	37,130	Yes[3]
32	Excelsior Rd	Elder Creek Rd	Florin Rd	County	2	<21	Yes	4,203	3	Arterial M	12,510	Yes[3]
33	Excelsior Rd	Florin Rd	Gerber Rd	County	2	<21	Yes	5,423	2	Arterial M	12,810	Yes
34	Excelsior Rd	Gerber Rd	Calvine Rd	County	2	<21	Yes	4,229	2	Arterial M	8,160	Yes
39	Florin Rd	South Watt Ave	Hedge Ave	County	2	22	Yes	7,718	4	Arterial M	14,880	Yes[3]
40	Florin Rd	Hedge Ave	Mayhew Rd	County	2	22	Yes	6,312	4	Arterial M	17,360	Yes[3]
41	Florin Rd	Mayhew Rd	Bradshaw Rd	County	2	22	Yes	6,317	4	Arterial M	23,450	Yes[3]
42	Florin Rd	Bradshaw Rd	Excelsior Rd	County	2	22	Yes	3,478	4	Arterial M	25,600	Yes[3]
43	Florin Rd	Excelsior Rd	Sunrise Blvd	County	2	22	Yes	3,835	2	Arterial M	17,620	Yes
48	Fruitridge Rd	Fruitridge Rd	Hedge Ave	City of Sacramento/ County	2	22	Yes	2,890	3	Arterial M	20,600	Yes[3]
49	Fruitridge Rd	Hedge Ave	Mayhew Rd	County	2	22	Yes	1,790	4	Arterial M	17,810	Yes[3]
50	Grant Line Rd	White Rock Rd	Douglas Rd	Rancho Cordova/County	2	22	Yes	7,189	4	Arterial M	41,060	Yes[3]
58	Happy Ln	Old Placerville Rd	Kiefer Blvd	County	2	22	Yes	4,635	4	Arterial M	13,720	Yes[3]
59	Hedge Ave	Jackson Rd	Fruitridge Rd	County	2	22	Yes	3,061	2	Arterial M	9,920	Yes
60	Hedge Ave	Fruitridge Rd	Elder Creek Rd	City of Sacramento/County	2	22	Yes	3,737	2	Arterial M	6,870	Yes
61	Hedge Ave	Elder Creek Rd	Florin Rd	County	2	22	Yes	2,722	2	Arterial M	21,920	Yes
70	Jackson Rd	Bradshaw Rd	Excelsior Rd	County	2	26	Yes	13,030	6	Arterial M	59,220	Yes[3]

Red text with light gray shading indicate project impacts.

Table 10.11
CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Functionality Impacts

ID	Roadway	Segment		Jurisdiction	Existing Substandard Roadways				CEQA Cumulative + FOUR PROJECTS			
		From	To		Travel Lanes	Pavement (ft)	Substandard? [1]	Existing Volume	Travel Lanes	Facility Type[1]	Forecasted Volume	Functionality Impact? [2]
71	Jackson Rd	Excelsior Rd	Eagles Nest Rd	County	2	26	Yes	10,478	4	Arterial M	62,440	Yes[3]
74	Kiefer Blvd	Florin Perkins Rd	South Watt Ave	City of Sacramento/County	2	22	Yes	4,616	2	Arterial M	4,940	No
77	Kiefer Blvd	Bradshaw Rd	Happy Ln	County	2	22	Yes	4,618	6	Arterial M	51,510	Yes[3]
78	Kiefer Blvd	Zinfandel Dr	Sunrise Blvd	County	2	22	Yes	656	3	Arterial M	39,640	Yes[3]
83	Mather Blvd-Excelsior Rd[4]	Douglas Rd	Kiefer Blvd	County	2	22	Yes	6,751	2	Res Collector E	6,350	No
89	Mayhew Rd	Jackson Rd	Fruitridge Rd	County	2	22	Yes	1,616	4	Arterial M	53,200	Yes[3]
116	White Rock Rd	Fitzgerald Rd	Grant Line Rd	Rancho Cordova/County	2	20	Yes	2,490	4	Arterial M	55,990	Yes[3]
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd	County	2	<21	Yes	2,848	4	Arterial M	22,240	Yes[3]

Note: Gray shading indicates changes in travel lanes or facility type that the project is responsible to provide. For all roadway segments to be widened, the project is responsible to build the entire roadway to County standards.

[1] Substandard rural roads are defined as rural, 2-lane roadway segments with travel lanes narrower than 12 feet and/or roadside shoulders narrower than 6 feet.

[2] Functionality impacts are triggered when a substandard rural road increases over a threshold of 6,000 ADT, or for a roadway already above 6,000 ADT, increases by more than 600 ADT.

[3] The potential for an impact exists should the project generate traffic volumes on the roadway exceeding 6,000 ADT, or increasing more than 600 ADT on a roadway already above 6,000 ADT, prior to the construction of roadway improvements.

[4] Excluding the roadway segment that is within the developed community of Independence at Mather.

[5] The functionality impact is mitigated by improving the roadway to County standards, including widening travel lanes to 12 feet and/or widening or providing paved shoulders to 6 feet.

Red text with light gray shading indicate project impacts.

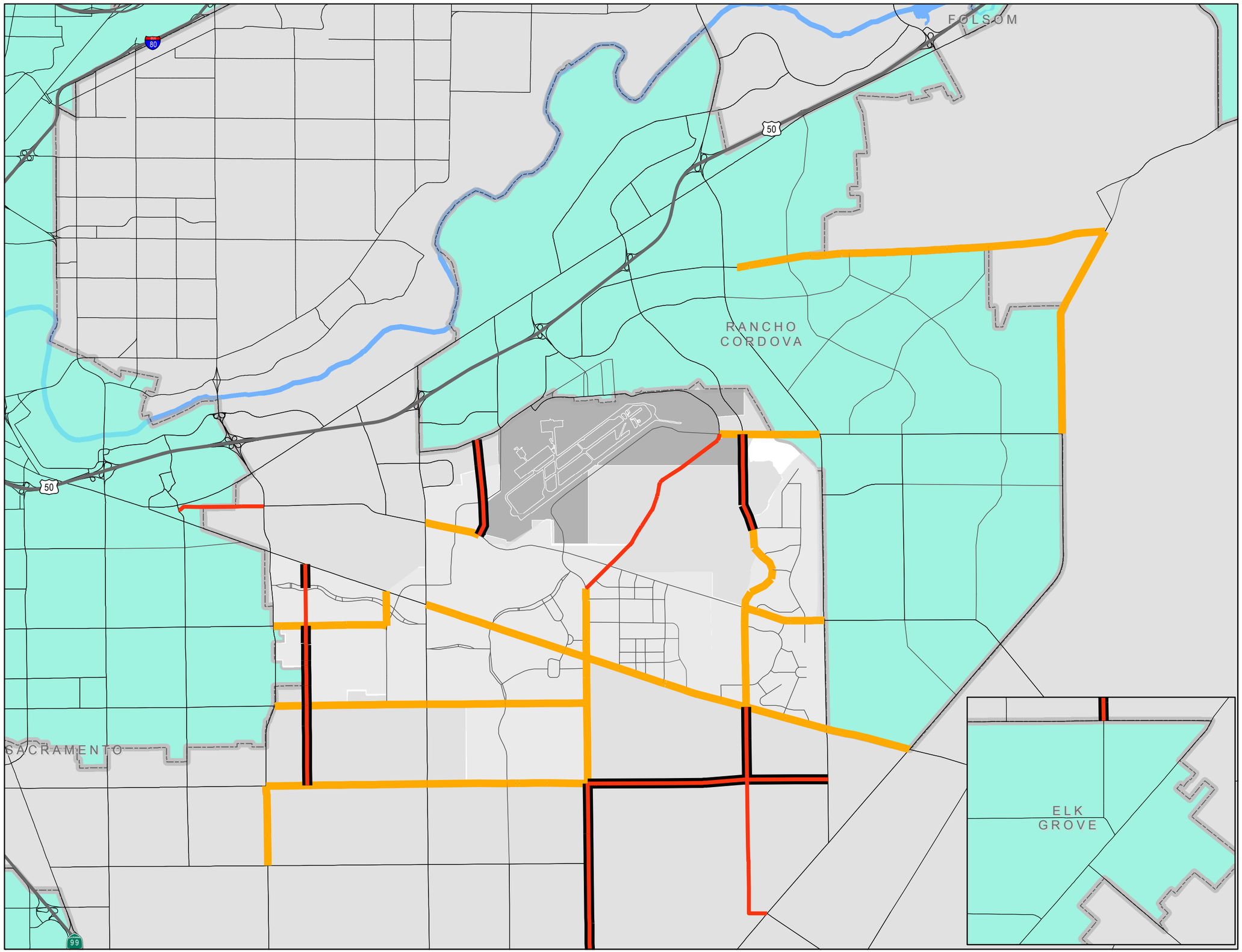

FIGURE 10.7
CEQA CUM PLUS FOUR PROJECTS
JT PROPOSED PROJECT
FUNCTIONALITY IMPACTS

Legend

- Substandard Roadways
- Functionality Impact
- Functionality Impact if Roadway is Not Already Improved
- Cities
- Mather Airport

DKS

10.5 MITIGATION

10.5.1 CEQA Cumulative Plus FOUR PROJECTS Roadway Segment Mitigation

Table 10.12 summarizes the results of the operations analysis for the study area roadway segments with mitigation. Where feasible, the number of roadway lanes was increased to mitigate the impact. However, the increased number of lanes could not exceed the maximum General Plan designations of the appropriate jurisdictions. The shaded table cells under the "Travel Lanes" and "Facility Type" headings illustrate widened roadways for mitigation purposes, which would be the responsibility of the FOUR PROJECTS to fund. The Jackson Township project would contribute a fair share. The shaded table cells under the "Level of Service" heading indicate those locations that would continue to have LOS impacts after mitigation. The table also includes the constraint that precluded full mitigation of the LOS impact.

The "LOS Impact with Mitigation?" column shows whether there is still an LOS impact after the mitigation measure is applied. In other words, this column shows whether a mitigation measure successfully mitigates the impact or not. In several locations where the improvements allowed under the General Plan would not mitigate an LOS impact, the County has proposed alternative mitigation measures, which are shown in the "Alternative Mitigation" column. These alternative mitigation measures will either fully mitigate the impact or substantially reduce the level of impact.

10.5.2 CEQA Cumulative Plus FOUR PROJECTS Intersection Mitigation

Tables 10.13a and 10.14a summarize the results of the operations analysis for the study area intersections with mitigation. However, the increased number of lanes on each approach does not exceed the County's standard number of approach lanes. **Tables 10.13b and 10.14b** summarize the results of the operations analysis for the study area intersections with the ultimate mitigation, which may exceed the County's standard number of approach lanes. Shaded table cells indicate those locations where changes in traffic control and / or number of approach lanes by type have been made to mitigate impacts, which would be the responsibility of the FOUR PROJECTS to fund. The Jackson Township project would contribute a fair share. The shaded table cells under the "Level of Service" heading indicate those locations with an LOS impact after mitigation. Table 10.14a and Table 10.14b also identify those intersections that would continue to have LOS impacts after mitigation, along with the constraint that precluded full mitigation. Detailed analysis information is included in the technical appendix.

The "LOS Impact with Mitigation?" column shows whether there is still an LOS impact after the mitigation measure is applied. In other words, this column shows whether a mitigation measure successfully mitigates the impact or not. In several locations where the LOS impact could not be mitigated by implementing the County's standard number of approach lanes, the County has proposed alternative mitigation measures, which are shown in the "Alternative Mitigation" column. These generally include providing additional turn lanes, carrying an additional through lane past the intersection, or designating the intersection as a High Capacity Intersection. These

alternative mitigation measures will either fully mitigate the impact or substantially reduce the level of impact.

High Capacity Intersections

Three intersections are currently designated as "High Capacity Intersections" on the County's General Plan: Watt Avenue & Folsom Boulevard, Watt Avenue & Kiefer Boulevard, and Watt Avenue & Jackson Road. At two intersections on Bradshaw Road where an LOS impact could not be mitigated by implementing the County's standard number of approach lanes, the County has proposed alternative mitigation measures by designating those two intersections as High Capacity Intersections: Bradshaw Road & Mayhew Road and Bradshaw Road & Jackson Road.

A high capacity intersection would utilize special treatments to increase the capacity of the intersection so as to reduce congestion and travel delay. Since each intersection could have unique travel movements, volumes and existing context sensitive conditions, the special treatments utilized at each high capacity intersection will be selected to meet the specific needs of each intersection. The range of special treatments is quite wide, ranging from the restriction of certain turning movements to various combinations that could include grade separating certain movements. While the field of traffic engineering is ever expending and evolving resulting in the use of new technologies and treatments, special treatments such as the following could be utilized at a high capacity intersection:

- Restricting turning movements
- Median U-turns
- Roundabouts
- Split intersections
- Quadrant roadway intersections
- Bowtie intersections
- Directional flyovers
- Center turn overpass
- Grade separated Roundabout
- Diverging diamond grade separation
- Compact diamond grade separation
- Single point urban grade separation
- Traditional urban grade separation

The County has conducted conceptual engineering to define potential improvements at the three study area intersections on Watt Avenue that are currently designated as "High Capacity Intersections" on the County's General Plan. These are:

- At the **Watt Avenue & Folsom Boulevard** intersection, the County proposes an ultimate configuration involving grade separation of the northbound and southbound through movements of Watt Avenue. Access to and from Folsom Boulevard would be accomplished via on and off-ramps from the left lanes of Watt Avenue to a single signalized intersection. A bus rapid transit (BRT) lane along Watt Avenue would also intersect Folsom Boulevard at the traffic signal. This design is consistent with the

recommendations of the South Watt Area Transportation Study (SWATS) dated November 1, 2002 and approved by the Board of Supervisors on November 26, 2002, and with the planning study for the *State Route 16 (Jackson Road) Corridor Study* (Fehr & Peers, 2012). It should be noted that the State Route 16 study has only had a staff-level review done by Caltrans, Sacramento County Department of Transportation, City of Rancho Cordova, and City of Sacramento. Other equivalent mitigation measures may be selected to the satisfaction of the Department of Transportation to mitigate the project's impact.

- At the **Watt Avenue & Kiefer Boulevard** intersection, the County proposes a tight diamond interchange as the ultimate improvement. The through movements (and BRT lane) on Watt Avenue would be grade separated from Kiefer Boulevard. Access to and from Kiefer Boulevard would be accomplished via on and off-ramps at two signalized intersections along Kiefer Boulevard. This design is proposed in the planning study prepared for *State Route 16 (Jackson Road) Corridor Study* (Fehr & Peers, 2012). It should be noted that the State Route 16 study has only had a staff-level review done by Caltrans, Sacramento County Department of Transportation, City of Rancho Cordova, and City of Sacramento. Other equivalent mitigation measures may be selected to the satisfaction of the Department of Transportation to mitigate the project's impact.

- At the **Watt Avenue & Jackson Road** intersection, the County proposes a standard six-by-six signalized intersection (two left-turn lanes, three through lanes, and one right-turn lane, on each approach) with three modifications. 1) The southbound left-turn movement would be grade separated; 2) The westbound right-turn movement would be grade separated; and 3) Three northbound left-turn lanes are proposed. This configuration represents an enhanced version of Alternative 6 in the planning study prepared for *State Route 16 (Jackson Road) Corridor Study* (Fehr and Peers, 2012). It should be noted that the State Route 16 study has only had a staff-level review done by Caltrans, Sacramento County Department of Transportation, City of Rancho Cordova, and City of Sacramento. Other equivalent mitigation measures may be selected to the satisfaction of the Department of Transportation to mitigate the project's impact.

At the new proposed "High Capacity Intersection" at Bradshaw Road and Jackson Road, the ultimate configuration has not been defined. A number of improvement options involving one or more of the special treatments identified above could be defined that would mitigate the LOS impact at this location.

Additionally, grade separated intersections are proposed along Grant Line Road, in order to meet the Connector JPA's level of service policy. These grade separations would be constructed at Prairie City Road (which is also a designated High Capacity Intersection), White Rock Road, Douglas Road, Kiefer Boulevard, Jackson Road, and Sunrise Boulevard.

Since each of these intersections have unique travel movements, volumes and existing context sensitive conditions (potential environmental issues, right-of-way, physical constraints, etc.), the special treatments utilized at each location will need to be studied to select the treatments that mitigate the LOS impact, while avoiding or minimizing other impacts.

10.5.3 CEQA Cumulative Plus FOUR PROJECTS U.S. 50 Freeway Mitigation

According to Caltrans' US-50 Transportation Concept Report (TCR) and Corridor System Management Plan (CSMP), all mainline freeway lanes of the 8-lane ultimate facility (4 lanes in each direction) have already been built, with the exception of the segment between Zinfandel Drive and Sunrise Boulevard (where 6 of the 8 ultimate lanes exist today). With the exception of this segment, capacity improvements to widen the freeway mainline are precluded by the ultimate configuration in the TCR/CSMP. The TCR/CSMP does conceptualize other projects that will benefit the US-50 corridor without adding additional mainline travel lanes. These improvements generally fall into one of three categories:

- Intelligent transportation systems (ITS) and integrated corridor management (ICM) projects. Some examples may include ramp metering and multimodal improvements.
- Improvements to parallel local facilities. Such projects are expected to reduce travel demand on US-50.
- Future HOV lanes and auxiliary lanes. These projects would extend, or bridge gaps in, the existing HOV and auxiliary lane network. Constructing these lanes is permissible even when further widening of the mainline is not allowable, and is consistent with the ultimate configuration in the TCR/CSMP.

The FOUR PROJECTS shall participate in one or more of these alternative improvements that could directly reduce the severity of the project's impact and/or provide operational benefits to the US-50 corridor in general.

10.5.3.1 US-50 Eastbound Alternative Improvements

To lessen the impact to the eastbound US-50 mainline between Stockton Boulevard and 59th Street, the project may pay a fair share toward the construction of:

- Ramp meter improvements (Caltrans ITS/OPS Project List)

10.5.3.2 US-50 Westbound Alternative Improvements

To lessen the impact to the westbound US-50 weave between Hazel Avenue and Rancho Cordova Parkway, the project may pay a fair share toward the construction of:

- Multi-modal corridor improvements and interchange improvements at Hazel Avenue (2035 SACOG MTP)
- Auxiliary lanes between Hazel Avenue and Rancho Cordova Parkway (2035 SACOG MTP)

Table 10.12
CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Roadway Segment Mitigations

ID	Roadway	Segment		CEQA Cumulative + FOUR PROJECTS					Mitigated CEQA Cumulative + FOUR PROJECTS						
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Volume / Capacity Ratio	Level of Service	LOS Impact with Mitigation?	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
2	Bradshaw Rd	US 50	Lincoln Village Dr	6	Arterial M	85,400	1.58	**F**	6	Arterial M	1.58	**F**	Yes		Maximum General Plan lanes
3	Bradshaw Rd	Lincoln Village Dr	Old Placerville Rd	6	Arterial M	77,570	1.44	**F**	6	Arterial M	1.44	**F**	Yes		Maximum General Plan lanes
4	Bradshaw Rd	Old Placerville Rd	Goethe Rd	6	Arterial M	74,760	1.38	**F**	6	Arterial M	1.38	**F**	Yes		Maximum General Plan lanes
5.1	Bradshaw Rd	Goethe Rd	Collector WJ-8	6	Arterial M	63,620	1.18	**F**	6	Arterial M	1.18	**F**	Yes		Maximum General Plan lanes
5.2	Bradshaw Rd	Collector WJ-8	Kiefer Blvd	6	Arterial M	59,990	1.11	**F**	6	Arterial M	1.11	**F**	Yes		Maximum General Plan lanes
6.2	Bradshaw Rd	Collector WJ-9	Mayhew Rd	6	Arterial M	55,140	1.02	**F**	6	Arterial M	1.02	**F**	Yes		Maximum General Plan lanes
6.3	Bradshaw Rd	Mayhew Rd	Jackson Rd	6	Arterial M	52,240	0.97	E	6	Arterial M	0.97	**E**	Yes		Maximum General Plan lanes
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd	6	Arterial M	50,410	0.93	**E**	6	Arterial M	0.93	**E**	Yes		Maximum General Plan lanes
23	Elder Creek Rd	Power Inn Rd	Florin-Perkins Rd	2	Arterial M	28,490	1.58	**F**	4	Arterial M	0.79	C	No		
25	Elder Creek Rd	South Watt Ave	Hedge Ave	4	Arterial M	48,190	1.34	**F**	6	Arterial M	0.89	**D**	No		
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd	4	Arterial M	40,630	1.13	**F**	6	Arterial M	0.75	C	No		
28.1	Elder Creek Rd	Bradshaw Rd	Vineyard Rd	3	Arterial M	33,740	1.87	**F**	4	Arterial M	0.94	E	No		
31.1	Excelsior Rd	Jackson Rd	Collector WJ-6	3	Arterial M	37,780	2.10	**F**	6	Arterial M	0.70	B	No		
31.2	Excelsior Rd	Collector WJ-6	Elder Creek Rd	3	Arterial M	37,130	2.06	**F**	6	Arterial M	0.69	B	No		
37	Florin Rd	Power Inn Rd	Florin-Perkins Rd	4	Arterial M	43,980	1.22	**F**	4	Arterial M	1.22	**F**	Yes		Maximum General Plan lanes

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Table 10.12
CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Roadway Segment Mitigations

ID	Roadway	Segment		CEQA Cumulative + FOUR PROJECTS					Mitigated CEQA Cumulative + FOUR PROJECTS						
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Volume / Capacity Ratio	Level of Service	LOS Impact with Mitigation?	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
41	Florin Rd	Mayhew Rd	Bradshaw Rd	4	Arterial M	23,450	0.65	B					No		
42.2	Florin Rd	Vineyard Rd	Excelsior Rd	3	Arterial M	19,620	1.09	**F**	4	Arterial M	0.55	A	No		
44	Folsom Blvd	Howe Ave	Jackson Rd	4	Arterial M	55,790	1.55	**F**	4	Arterial M	1.55	**F**	Yes		Maximum General Plan lanes
47	Fruitridge Rd	Florin Perkins Rd	South Watt Ave	2	Arterial M	26,960	1.50	**F**	4	Arterial M	0.75	C	No		
48	Fruitridge Rd	South Watt Ave	Hedge Ave	3	Arterial M	20,600	1.14	**F**	4	Arterial M	0.57	A	No		
51.2	Grant Line Rd	Chrysanthy Blvd	Kiefer Blvd	4	Arterial M	47,740	1.33	**F**	4	Expressway	0.88	B	No		
52.1	Grant Line Rd	Kiefer Blvd	Rancho Cordova Pkwy	4	Arterial M	37,000	1.03	**F**	4	Expressway	0.69	A	No		
56	Grant Line Rd	Sheldon Rd	Wilton Rd	4	Arterial M	45,270	1.26	**F**	4	Expressway	0.84	B	No		
57	Grant Line Rd	Wilton Rd	Bond Rd	4	Arterial M	40,140	1.12	**F**	4	Expressway	0.74	A	No		
58.2	Happy Ln	Routier Ext	Kiefer Blvd	2	Arterial M	20,770	1.15	**F**	4	Arterial M	0.58	A	No		
62	Howe Ave	US 50	Folsom Blvd	6	Arterial M	71,330	1.32	**F**	6	Arterial M	1.32	**F**	Yes		Maximum General Plan lanes
66.1	Jackson Rd	Florin Perkins Rd	14th Ave	4	Arterial M	43,840	1.22	**F**	4	Arterial M	1.22	**F**	Yes		Maximum General Plan lanes
66.2	Jackson Rd	14th Ave	Rock Creek Pkwy	4	Arterial M	61,500	1.71	**F**	4	Arterial M	1.71	**F**	Yes		Maximum General Plan lanes
66.3	Jackson Rd	Rock Creek Pkwy	Aspen 1 Dwy	4	Arterial M	57,370	1.59	**F**	4	Arterial M	1.59	**F**	Yes		Maximum General Plan lanes
66.4	Jackson Rd	Aspen 1 Dwy	South Watt Ave	4	Arterial M	55,060	1.53	**F**	4	Arterial M	1.53	**F**	Yes		Maximum General Plan lanes
67	Jackson Rd	South Watt Ave	Hedge Ave	4	Arterial M	67,850	1.88	**F**	6	Arterial M	1.26	**F**	Yes		Maximum General Plan lanes
68.1	Jackson Rd	Hedge Ave	Collector WJ-3	4	Arterial M	60,230	1.67	**F**	6	Arterial M	1.12	**F**	Yes		Maximum General Plan lanes

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Table 10.12
CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Roadway Segment Mitigations

ID	Roadway	Segment		CEQA Cumulative + FOUR PROJECTS					Mitigated CEQA Cumulative + FOUR PROJECTS						
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Volume / Capacity Ratio	Level of Service	LOS Impact with Mitigation?	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
68.2	Jackson Rd	Collector WJ-3	Mayhew Rd	4	Arterial M	60,910	1.69	**F**	6	Arterial M	1.13	**F**	Yes		Maximum General Plan lanes
69	Jackson Rd	Mayhew Rd	Bradshaw Rd	6	Arterial M	59,440	1.10	**F**	6	Arterial M	1.10	**F**	Yes		Maximum General Plan lanes
70.1	Jackson Rd	Bradshaw Rd	Collector WJ-4	6	Arterial M	59,220	1.10	**F**	6	Arterial M	1.10	**F**	Yes		Maximum General Plan lanes
70.2	Jackson Rd	Collector WJ-4	Happy Ln	6	Arterial M	59,210	1.10	**F**	6	Arterial M	1.10	**F**	Yes		Maximum General Plan lanes
71.1	Jackson Rd	Excelsior Rd	Collector JT-3	4	Arterial M	62,440	1.73	**F**	6	Arterial M	1.16	**F**	Yes		Maximum General Plan lanes
71.2	Jackson Rd	Collector JT-3	Tree View Ln	4	Arterial M	46,480	1.29	**F**	6	Arterial M	0.86	D	No		
71.3	Jackson Rd	Tree View Ln	Collector JT-4	4	Arterial M	40,520	1.13	**F**	6	Arterial M	0.75	C	No		
72.1	Jackson Rd	Eagles Nest Rd	Rockbridge Dr	4	Arterial M	37,200	1.03	**F**	6	Arterial M	0.69	B	No		
72.2	Jackson Rd	Rockbridge Dr	Sunrise Blvd	4	Arterial M	38,040	1.06	**F**	6	Arterial M	0.70	C	No		
73	Jackson Rd	Sunrise Blvd	Grant Line Rd	4	Arterial M	45,430	1.26	**F**	6	Arterial M	0.84	D	No		
76	Kiefer Blvd	Mayhew Rd	Bradshaw Rd	4	Arterial M	42,880	1.19	**F**	4	Arterial M	1.19	**F**	Yes		Maximum General Plan lanes
78.4	Kiefer Blvd	E Collector MS-1	Sunrise Blvd	3	Arterial M	39,640	2.20	**F**	4	Arterial M	1.10	**F**	Yes		Maximum General Plan lanes
79	Kiefer Blvd	Sunrise Blvd	Rancho Cordova Pkwy	4	Arterial M	33,480	0.93	**E**	4	Arterial M	0.93	**E**	Yes		Maximum General Plan lanes
89.1	Mayhew Rd	Jackson Rd	Rock Creek Pkwy	4	Arterial M	53,200	1.48	**F**	6	Arterial M	0.99	E	No		
89.2	Mayhew Rd	Rock Creek Pkwy	Fruitridge Rd	4	Arterial M	52,650	1.46	**F**	6	Arterial M	0.98	E	No		

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Table 10.12
CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Roadway Segment Mitigations

ID	Roadway	Segment		CEQA Cumulative + FOUR PROJECTS					Mitigated CEQA Cumulative + FOUR PROJECTS						
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Volume / Capacity Ratio	Level of Service	LOS Impact with Mitigation?	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
93	Old Placerville Rd	Routier Rd	Rockingham Dr	4	Arterial M	36,370	1.01	**F**	4	Arterial M	1.01	**F**	Yes		Maximum General Plan lanes
95	Rockingham Dr	Old Placerville Rd	Mather Field Rd	4	Arterial M	40,120	1.11	**F**	4	Arterial M	1.11	**F**	Yes		Maximum General Plan lanes
96	South Watt Ave	Folsom Blvd	Kiefer Blvd	6	Arterial M	81,710	1.51	**F**	6	Arterial M	1.51	**F**	Yes		Maximum General Plan lanes
97	South Watt Ave	Kiefer Blvd	Jackson Rd	6	Arterial M	70,440	1.30	**F**	6	Arterial M	1.30	**F**	Yes		Maximum General Plan lanes
100	South Watt Ave	Elder Creek Rd	Florin Rd	6	Arterial M	61,020	1.13	**F**	6	Arterial M	1.13	**F**	Yes		Maximum General Plan lanes
104.3	Sunrise Blvd	Rio Del Oro Pkwy	Douglas Rd	6	Arterial M	64,030	1.19	**F**	6	Arterial M	1.19	**F**	Yes		Maximum General Plan lanes
105	Sunrise Blvd	Douglas Rd	Kiefer Blvd	5	Arterial M	43,840	1.22	**F**	6	Arterial M	0.81	D	No		
106	Sunrise Blvd	Kiefer Blvd	Jackson Rd	4	Arterial M	34,190	0.95	**E**	6	Arterial M	0.63	B	No		
110	Watt Ave	US 50	Folsom Blvd	6	Arterial H	106,270	1.77	**F**	6	Arterial H	1.77	**F**	Yes		Maximum General Plan lanes
117	White Rock Rd	Grant Line Rd	Prairie City Rd	4	Arterial M	55,950	1.55	**F**	4	Expressway	1.04	C	No		
132	Kiefer Blvd	Americanos Blvd	Grant Line Rd	2	Arterial M	19,150	1.06	**F**	4	Arterial M	0.53	A	No		
135	Rancho Cordova Pkwy	White Rock Rd	International Dr	6	Arterial M	49,910	0.92	**E**	6	Arterial M	0.92	**E**	Yes		Maximum General Plan lanes
136	Rancho Cordova Pkwy	International Dr	Rio Del Oro Pkwy	6	Arterial M	59,780	1.11	**F**	6	Arterial M	1.11	**F**	Yes		Maximum General Plan lanes

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Table 10.12
CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Roadway Segment Mitigations

ID	Roadway	Segment		CEQA Cumulative + FOUR PROJECTS					Mitigated CEQA Cumulative + FOUR PROJECTS						
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Volume / Capacity Ratio	Level of Service	LOS Impact with Mitigation?	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
200	Kiefer Blvd	Tree View Ln	Eagles Nest Rd	4	Arterial M	37,540	1.04	**F**	4	Arterial M	1.04	**F**	Yes		Maximum General Plan lanes
301	Douglas Rd	Rock Creek Pkwy	Kiefer Blvd	4	Arterial M	37,470	1.04	**F**	4	Arterial M	1.04	**F**	Yes		Maximum General Plan lanes
302	Kiefer Blvd	Happy Ln	Douglas Rd	6	Arterial M	62,910	1.17	**F**	6	Arterial M	1.17	**F**	Yes		Maximum General Plan lanes
304	Mayhew Rd	Routier Ext	Bradshaw Rd	4	Arterial M	39,790	1.11	**F**	6	Arterial M	0.74	C	No		
305	Mayhew Rd	Bradshaw Rd	Jackson Rd	4	Arterial M	47,420	1.32	**F**	6	Arterial M	0.88	D	No		
307	Mayhew Rd	Collector WJ-13	Elder Creek Rd	3	Arterial M	42,630	2.37	**F**	4	Arterial M	1.18	F	No		
312	Rock Creek Pkwy East	Collector WJ-16	Jackson Road	2	Arterial M	19,410	1.08	**F**	4	Arterial M	0.54	A	No		
317	Routier Ext	Old Placerville Road	Happy Lane	4	Arterial H	41,580	1.04	**F**							Maximum General Plan lanes
405	Collector JT-3	Collector JT-5	Jackson Rd	2	Arterial M	20,320	1.13	**F**	4	Arterial M	0.56	A	No		

Note: Gray shading represents changes in travel lanes or facility type that the project is responsible to provide.

[1] The following classifications are used to determine daily roadway capacity:
Arterial L - Arterial, Low Access Control
Arterial M - Arterial, Moderate Access Control
Arterial H - Arterial, High Access Control
Rural Hwy - Rural 2-lane Highway
Rural S - Rural 2-lane Road, 24'-36' of pavement, Paved Shoulders
Rural NS - Rural 2-lane Road, 24'-36' of pavement, No Shoulders
Res Collector F - Residential Collector with Frontage
Res Collector NF - Residential Collector with No Frontage

[2] Alternative mitigations represent proposed mitigations beyond the General Plan, as proposed by the County of Sacramento.

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Table 10.13a

CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Impacted Intersections and County Standard Mitigations

	Intersection	AM Peak Hour												
		CEQA Cumulative Plus All			County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS			Alternative Mitigation Needed	CEQA Cumulative Plus All			County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS			Alternative Mitigation Needed
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
3	Power Inn Road/Howe Avenue & Folsom Blvd	Signal	**F**	**91.7**	Signal	**-**	**-**	Yes	Signal	**F**	**84.6**	Signal	**-**	**-**	Yes
4	Power Inn Road & 14th Avenue	Signal	**F**	**157.9**	Signal	**F**	**116.0**	Yes	Signal	**F**	**116.5**	Signal	**F**	**104.9**	Yes
12	Watt Avenue & Folsom Blvd.	Signal	**F**	**180.3**	Signal	**-**	**-**	Yes	Signal	**F**	**203.6**	Signal	**-**	**-**	Yes
14	S. Watt Avenue & Kiefer Blvd.	Signal	**F**	**101.5**	Signal	**F**	**91.0**	Yes	Signal	E	75.9	Signal	E	68.1	No
16	S. Watt Avenue & Jackson Road	Signal	**F**	**234.0**	Signal	**F**	**147.2**	Yes	Signal	**F**	**191.8**	Signal	**F**	**125.7**	Yes
17	S. Watt Avenue & Fruitridge Road	Signal	**E**	**71.5**	Signal	D	39.2	No	Signal	**F**	**102.4**	Signal	D	54.0	No
20	Elk Grove Florin Road/S. Watt Ave. & Florin Road	Signal	**F**	**277.4**	Signal	**F**	**146.0**	No	Signal	**F**	**204.3**	Signal	**F**	**122.6**	No
23	Hedge Avenue & Jackson Road	Signal	**F**	**128.3**	Signal	D	48.1	No	Signal	D	40.4	Signal	B	19.8	No
25	Hedge Avenue & Elder Creek Road	Signal	**F**	**109.3**	Signal	**-**	**-**	Yes	Signal	**F**	**122.4**	Signal	**-**	**-**	Yes
28	Mayhew Road & Kiefer Boulevard	Signal	**F**	**97.5**	Signal	E	73.5	No	Signal	E	72.8	Signal	E	60.6	No
29	Mayhew Road & Jackson Road	Signal	**F**	**160.2**	Signal	E	69.7	No	Signal	**F**	**129.9**	Signal	E	77.9	No
31	Mayhew Road & Elder Creek Road	Signal	**F**	**>300**	Signal	E	79.8	No	Signal	**F**	**>300**	Signal	D	41.4	No
32	Woodring Drive & Zinfandel Drive	Two-way stop			Round	A	8.8	No	Two-way stop			Round	B	10.5	No
	Eastbound		***F***	***85.7***						***F***	***247.0***				
	Northbound Left Turn		*B*	*10.6*						*B*	*12.4*				
35	Bradshaw Road & US 50 EB Ramps	Signal	**E**	**56.8**	Signal	**-**	**-**	Yes	Signal	D	39.7	Signal	-	-	No
36	Bradshaw Road & Old Placerville Road	Signal	**F**	**103.0**	Signal	**F**	**101.3**	Yes	Signal	**F**	**84.8**	Signal	**E**	**77.2**	Yes
37	Bradshaw Road & Kiefer Boulevard	Signal	**F**	**146.6**	Signal	**F**	**119.8**	Yes	Signal	**F**	**140.2**	Signal	**F**	**116.4**	Yes

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Table 10.13a

CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Impacted Intersections and County Standard Mitigations

	Intersection	AM Peak Hour													
		CEQA Cumulative Plus All			County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS			Alternative Mitigation Needed	CEQA Cumulative Plus All			County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS			Alternative Mitigation Needed
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
38	Bradshaw Road & Jackson Road	Signal	**F**	**161.3**	Signal	**-**	**-**	No	Signal	**F**	**161.2**	Signal	**-**	**-**	Yes
39	Bradshaw Road & Elder Creek Road	Signal	**F**	**210.1**	Signal	**F**	**96.6**	No	Signal	**F**	**226.7**	Signal	D	67.9	No
42	Happy Lane & Old Placerville Road	Two-way stop			Modify access control to allow only right-in and right-out on Happy Lane. Median will allow Westbound left-turns to Happy Lane. Construct 4-lane Routier extension.			No	Two-way stop			Modify access control to allow only right-in and right-out on Happy Lane. Median will allow Westbound left-turns to Happy Lane. Construct 4-lane Routier extension.			No
	Northbound Left Turn		***F***	***>300***						***F***	***>300***				
	Northbound Right Turn		***F***	***243.1***						***F***	***61.9***				
	Westbound Left Turn		*C*	*22.5*						***E***	***42.4***				
43	Happy Lane & Kiefer Boulevard	Signal	**F**	**140.2**	Signal	**-**	**-**	Yes	Signal	E	70.8	Signal	**-**	**-**	No
45	Excelsior Road & Jackson Road	Signal	**F**	**>300**	Signal	**F**	**118.6**	Yes	Signal	**F**	**280.2**	Signal	**F**	**150.7**	Yes
46	Excelsior Road & Elder Creek Road	Signal	**F**	**88.7**	Signal	B	14.6	No	Signal	E	60.6		B	17.3	No
47	Excelsior Road & Florin Road	Signal	**F**	**109.4**	Signal	D	47.2	No	Signal	E	68.0	Signal	E	67.3	No
51	Mather Field Road & Rockingham Drive	Signal	**F**	**>300**	Signal	**-**	**-**	Yes	Signal	**F**	**169.0**	Signal	**-**	**-**	Yes
58	Zinfandel Drive & Douglas Road	Signal	**F**	**219.8**	Signal	E	61.9	No	Signal	**F**	**218.2**	Signal	E	68.4	No
61	Eagles Nest Road & Florin Road	Two-way stop			Signal	**F**	**142.4**	Yes	Two-way stop			Signal	**F**	**137.7**	Yes
	Northbound		***F***	***>300***						***F***	***>300***				
	Southbound		***F***	***>300***						***F***	***>300***				
	Eastbound Left Turn		*B*	*11*						*A*	*9.4*				
	Westbound Left Turn		*A*	*8*						*A*	*8.7*				
67	Sunrise Boulevard & Douglas Road	Signal	**F**	**192.2**	Signal	**-**	**-**	Yes	Signal	**F**	**107.9**	Signal	**-**	**-**	Yes
69	Sunrise Boulevard & Kiefer Boulevard	Signal	**F**	**>300**	Signal	**F**	**118.3**	No	Signal	**F**	**259.2**	Signal	**E**	**71.1**	No
70	Sunrise Boulevard & Jackson Road	Signal	**F**	**90.3**	Signal	D	54.4	No	Signal	**E**	**78.3**	Signal	D	52.8	No
72	Sheldon Lake Drive/Sunrise Boulevard & Grant Line Road	Signal	**F**	**127.9**	Signal	**-**	**-**	Yes	Signal	**E**	**71.0**	Signal	**-**	**-**	Yes

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 10.13a

CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Impacted Intersections and County Standard Mitigations

	Intersection	AM Peak Hour													
		CEQA Cumulative Plus All			County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS			Alternative Mitigation Needed	CEQA Cumulative Plus All			County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS			Alternative Mitigation Needed
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
80	Grant Line Road & Jackson Road	Signal	F	117.3	Signal	E	76.3	No	Signal	F	106.5	Signal	C	34.0	No
86	Power Inn Road & Florin Rd	Signal	F	116.1	Signal	E	60.5	No	Signal	E	72.5	Signal	D	46.2	No
87	Florin Perkins Road & Florin Rd	Signal	E	59.3	Signal	E	58.8	No	Signal	F	113.8	Signal	F	100.0	No
91	Grant Line Rd & Eagles Nest Rd/Sloughhouse Rd	Signal	D	43.2	Signal	D	39.2	No	Signal	D	52.0	Signal	D	36.8	No
92	Grant Line Rd & Calvine Rd	Signal	D	36.5	Signal	B	11.3	No	Signal	C	27.4	Signal	A	9.3	No
93	Grant Line Rd & Dwy/Wilton Rd	Signal	F	83.4	Signal	E	59.7	No	Signal	F	97.4	Signal	F	82.2	Yes
95	Florin Perkins Road & 14th Avenue	Signal	E	65.6	Signal	-	-	Yes	Signal	D	45.3	Signal	-	-	No
96	Jackson Road & 14th Avenue	Signal	F	119.8	Signal	-	-	Yes	Signal	D	54.7	Signal	-	-	Yes
103	Rancho Cordova Pkwy & Douglas Road	Signal	E	57.9	Signal	-	-	No	Signal	E	77.2	Signal	-	-	Yes
303	Rock Creek Pkwy & Jackson Road	Signal	F	128.3	Signal	E	77.4	No	Signal	F	96.4	Signal	D	54.7	No
308	Hedge Avenue & Rock Creek Pkwy WB	Round	E	49.0	Round	B	13.8	No	Round	A	9.9	Round	B	13.4	No
310	Mayhew Road & Rock Creek Pkwy WB	Round	F	297.2	Round	-	-	Yes	Round	F	210.1	Round	-	-	Yes
311	Mayhew Road & Rock Creek Pkwy EB	Round	F	191.0	Round	-	-	Yes	Round	F	>300	Round	-	-	Yes
318	Bradshaw Road & Mayhew Road	Signal	F	163.9	Signal	F	120.2	Yes	Signal	F	128.4	Signal	F	103.6	Yes
319	Bradshaw Road & Collector WJ-10	Signal	F	190.9	Signal	D	44.6	No	Signal	C	28.5	Signal	C	20.5	No
325	Douglas Road & Kiefer Boulevard	Signal	F	162.1	Signal	F	125.9	Yes	Signal	F	103.1	Signal	F	95.7	Yes
329	Routier Ext & Kiefer Boulevard	Signal	F	88.4	Signal	-	-	Yes	Signal	E	71.4	Signal	-	-	Yes

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 10.13a

CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Impacted Intersections and County Standard Mitigations

	Intersection	AM Peak Hour													
		CEQA Cumulative Plus All			County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS			Alternative Mitigation Needed	CEQA Cumulative Plus All			County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS			Alternative Mitigation Needed
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
331	Routier Ext/Routier Rd & Old Placerville Road	Signal	**F**	**168.4**	Signal	**F**	**130.5**	Yes	Signal	**F**	**118.4**	Signal	**F**	**110.8**	Yes
400	Collector JT-3 & Jackson Road	Signal	**F**	**83.6**	Signal	D	47.3	No	Signal	D	48.2	Signal	C	20.7	No

Note: Gray shading represents changes in traffic control that the project is responsible to provide.

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 10.13b

CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) County Standard and Ultimate Mitigations

	Intersection	AM Peak Hour											
		County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS			Ultimate Mitigated CEQA Cumulative Plus FOUR PROJECTS			County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS			Ultimate Mitigated CEQA Cumulative Plus FOUR PROJECTS		
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)
3	Power Inn Road/Howe Avenue & Folsom Blvd	Signal	**F**	**91.7**	-	-	-	Signal	**F**	**84.6**	-	-	-
4	Power Inn Road & 14th Avenue	Signal	**F**	**116.0**	-	-	-	Signal	**F**	**104.9**	-	-	-
12	Watt Avenue & Folsom Blvd.	Signal	**F**	**180.3**	Signal	D	40.6	Signal	**F**	**203.6**	Signal	D	41.7
14	S. Watt Avenue & Kiefer Blvd.	Signal	**F**	**91.0**	Signal	SB Ramps A NB Ramps A	SB Ramps 6.5 NB Ramps 4.8	Signal	E	68.1	Signal	SB Ramps B NB Ramps A	SB Ramps 13.9 NB Ramps 5.1
16	S. Watt Avenue & Jackson Road	Signal	**F**	**147.2**	-	-	-	Signal	**F**	**125.7**	-	-	-
25	Hedge Avenue & Elder Creek Road	Signal	**F**	**109.3**	Signal	E	61.0	Signal	**F**	**122.4**	Signal	E	74.3
35	Bradshaw Road & US 50 EB Ramps	Signal	**E**	**56.8**	-	-	-	Signal	D	39.7	-	-	-
36	Bradshaw Road & Old Placerville Road	Signal	**F**	**101.3**	-	-	-	Signal	E	77.2	-	-	-
37	Bradshaw Road & Kiefer Boulevard	Signal	**F**	**119.8**	-	-	-	Signal	**F**	**116.4**	-	-	-
38	Bradshaw Road & Jackson Road	Signal	**F**	**161.3**	Grade Separate			Signal	**F**	**161.2**	Grade Separate		
42	Happy Lane & Old Placerville Road	Modify access control to allow only right-in and right-out on Happy Lane. Median will allow Westbound left-turns to Happy Lane. Alternative mitigation is to construct the 4-lane Routier extension from Old Placerville Rd to Kiefer Blvd..											
43	Happy Lane & Kiefer Boulevard	Signal	**F**	**140.2**	Signal	C	26.5	Signal	E	70.8	Signal	B	19.7
45	Excelsior Road & Jackson Road	Signal	**F**	**118.6**	-	-	-	Signal	**F**	**150.7**	-	-	-

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 10.13b

CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) County Standard and Ultimate Mitigations

	Intersection	AM Peak Hour											
		County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS			Ultimate Mitigated CEQA Cumulative Plus FOUR PROJECTS			County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS			Ultimate Mitigated CEQA Cumulative Plus FOUR PROJECTS		
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)
51	Mather Field Road & Rockingham Drive	Signal	F	>300	-	-	-	Signal	F	169.0	-	-	-
61	Eagles Nest Road & Florin Road	Signal	F	142.4	Signal	D	50.4	Signal	F	137.7	Signal	D	45.5
67	Sunrise Boulevard & Douglas Road	Signal	F	192.2	-	-	-	Signal	F	107.9	-	-	-
72	Sheldon Lake Drive/Sunrise Boulevard & Grant Line Road	Signal	F	127.9	Signal	**E**	**68.0**	Signal	E	71.0	Signal	C	27.3
93	Grant Line Rd & Dwy/Wilton Rd	Signal	E	59.7	Signal	C	22.0	Signal	F	82.2	Signal	C	28.6
95	Florin Perkins Road & 14th Avenue	Signal	E	65.6	-	-	-	Signal	**D**	**45.3**	-	-	-
96	Jackson Road & 14th Avenue	Signal	F	119.8	-	-	-	Signal	D	54.7	-	-	-
103	Rancho Cordova Pkwy & Douglas Road	Signal	E	57.9	Signal	D	39.0	Signal	E	77.2	Signal	**E**	**62.7**
310	Mayhew Road & Rock Creek Pkwy WB	Round	F	297.2	Signal	E	78.6	Round	F	210.1	Signal	D	40.5
311	Mayhew Road & Rock Creek Pkwy EB	Round	F	191.0				Round	F	>300			
318	Bradshaw Road & Mayhew Road	Signal	F	120.2	Signal	E	78.3	Signal	F	103.6	Signal	E	68.6
325	Douglas Road & Kiefer Boulevard	Signal	F	125.9	-	-	-	Signal	F	95.7	-	-	-
329	Routier Ext & Kiefer Boulevard	Signal	F	88.4	Signal	D	48.6	Signal	E	71.4	Signal	E	59.4
331	Routier Ext/Routier Rd & Old Placerville Road	Signal	F	130.5	Signal	D	53.6	Signal	F	110.8	Signal	D	35.0

Note: Gray shading represents changes in traffic control that the project is responsible to provide.

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 10.14a

Super Cumulative Plus FOUR PROJECTS (Proposed Project) Intersection Impacts and Mitigations

	Intersection	Traffic Control		Super Cumulative Plus FOUR PROJECTS Lane Geometrics				County Standard Mitigated Super Cumulative Plus FOUR PROJECTS Lane Geometrics				LOS Impact with Mitgation?
		Super Cumulative Plus FOUR PROJECTS	Mitigated Super Cumulative Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
3	Power Inn Road/Howe Avenue & Folsom Blvd.	Signal	Signal	2nd, 3T, R	2nd, 3T, 2L	2nd, T, 2R	2nd, 3T, 2R	2nd, 3T, R	2nd, 3T, 2L	2nd, T, 2R	2nd, 3T, 2R	Yes
4	Power Inn Road & 14th Avenue	Signal	Signal	2nd, 2T	2nd, 3T, L	2nd, T	2nd, T, R	2nd, 2T	2nd, 3T, L	2nd, T	2nd, T, 2R	Yes
12	S. Watt Ave./Watt Avenue & Folsom Blvd.	Signal	Signal	2nd, 3T, R	2nd, 3T, 2L	2nd, 3T, R	2nd, 3T, R	2nd, 3T, R	2nd, 3T, 2L	2nd, 3T, R	2nd, 3T, R	Yes
14	S. Watt Avenue & Kiefer Blvd.	Signal	Signal	2nd, 2T, R	4th, 3T, 2L	2nd, 3T, R	2nd, 3T, R	2nd, 3T, R	2nd, 3T, 2L	2nd, 3T, R	2nd, 3T, R	Yes
16	S. Watt Avenue & Jackson Road	Signal	Signal	2nd, 4T, R	2nd, 3T, 2L	2nd, 3T, R	2nd, 3T, R	2nd, 4T, R	2nd, 3T, 2L	2nd, 4T, R	2nd, 4T, R	Yes
17	S. Watt Avenue & Fruitridge Road	Signal	Signal	2nd, 3T, R	2nd, 3T, L	2nd, T, R	2nd, 3T, R	2nd, 4T, R	2nd, 3T, 2L	2nd, 3T, R	2nd, 3T, R	No
20	Elk Grove Florin Road/S. Watt Ave. & Florin Road	Signal	Signal	2nd, 4T, R	2nd, 3T, 2L	2nd, 3T, R	2nd, 3T, R	2nd, 4T, R	2nd, 3T, 2L	2nd, 4T, R	2nd, 4T, R	No
23	Hedge Avenue & Jackson Road	Signal	Signal	2nd, T, R	4th, 2L	2nd, 3T, R	2nd, 3T, R	2nd, T, R	2nd, L	2nd, 3T, 2R	2nd, 3T, 2R	No
25	Hedge Avenue & Elder Creek Road	Signal	Signal	2nd, T, R	2nd, L	2nd, T, 2R	2nd, T, 2R	2nd, T, R	2nd, L	2nd, T, 2R	2nd, T, 2R	Yes
28	Mayhew Road & Kiefer Boulevard	Signal	Signal	2nd, T, R	2nd, L	2nd, T, 2R	2nd, T, 2R	2nd, T, R	2nd, L	2nd, T, 2R	2nd, 3T, R	No
29	Mayhew Road & Jackson Road	Signal	Signal	2nd, 3T, R	2nd, 3T, 2L	2nd, 4T, R	2nd, 4T, R	2nd, 4T, R	2nd, 3T, 2L	2nd, 4T, R	2nd, 4T, R	No
31	Waterman Road/Mayhew Road & Elder Creek Road	Signal	Signal	2nd, 3T, R	2nd, 2L	2nd, T, 2R	2nd, T, 2R	2nd, 3T, R	2nd, 3T, 2L	2nd, 4T, R	2nd, 4T, R	No
32	Woodring Drive & Zinfandel Drive	Two-way stop	Roundabout	2nd, T, R	4th, 2L	1st		1st, T	4th, 2L	1st		No
35	Bradshaw Road & US 50 Eastbound Ramps	Signal	Signal	T, 3T, R	2nd, 3T, L	2nd, 2R		T, 3T, R	2nd, 3T, L	2nd, 2R		Yes
36	Bradshaw Road & Old Placerville Road	Signal	Signal	2nd, T, 3T, R	4th, 3T, 2L	2nd, 2T	2nd, T, R	2nd, T, 3T, R	4th, 3T, 2L	2nd, T, R	2nd, 2T, R	Yes
37	Bradshaw Road & Kiefer Boulevard	Signal	Signal	2nd, 3T, 2T, R	2nd, 3T, 2L	2nd, 3T, R	2nd, 3T, R	2nd, 3T, 2T, R	2nd, 3T, 2L	2nd, 3T, 2T, R	2nd, 3T, 2T, R	Yes
38	Jackson Road & Bradshaw Road	Signal	Signal	2nd, 3T, 2T, R	2nd, 3T, 2L	2nd, 3T, 2T, R	2nd, 3T, 2T, R	2nd, 3T, 2T, R	2nd, 3T, 2L	2nd, 3T, 2T, R	2nd, 3T, 2T, R	Yes
39	Bradshaw Road & Elder Creek Road	Signal	Signal	2nd, T, 2R	2nd, 3T, 2L	2nd, 2T, R	2nd, T, 2R	2nd, 3T, 2T, R	2nd, 3T, 2L	2nd, 3T, 2T, R	2nd, 3T, 2T, R	No
42	Happy Lane & Old Placerville Road	Two-way stop	Access Control	2nd, R		1st, 2R	2nd, T, T	Happy Lane to become right-in and right-out only. Median will allow westbound left turns.				No

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 10.14a

Super Cumulative Plus FOUR PROJECTS (Proposed Project) Intersection Impacts and Mitigations

	Intersection	Traffic Control		Super Cumulative Plus FOUR PROJECTS Lane Geometrics				County Standard Mitigated Super Cumulative Plus FOUR PROJECTS Lane Geometrics				LOS Impact with Mitgation?
		Super Cumulative Plus FOUR PROJECTS	Mitigated Super Cumulative Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
43	Kiefer Boulevard & Happy Ln	Signal	Signal									No
45	Excelsior Road & Jackson Road	Signal	Signal									Yes
46	Excelsior Road & Elder Creek Road	Signal	Signal									No
47	Excelsior Road & Florin Road	Signal	Signal									No
51	Mather Field Road & Rockingham Drive	Signal	Signal									Yes
58	Zinfandel Drive & Douglas Road	Signal	Signal									No
61	Eagles Nest Rd/Eagles Nest Road & Florin Road	Two-way stop	Signal									Yes
67	Sunrise Boulevard & Douglas Road	Signal	Signal									Yes
69	Sunrise Boulevard & Kiefer Boulevard	Signal	Signal									No
70	Jackson Road & Sunrise Boulevard	Signal	Signal									No
72	Sheldon Lake Drive/Sunrise Boulevard & Grant Line Rd/Grant	Signal	Signal									Yes
80	Grant Line Road & Jackson Road	Signal	Signal									No
86	Power Inn Road & Florin Rd	Signal	Signal									No
87	Florin Perkins Road & Florin Rd	Signal	Signal									
91	Grant Line Rd & Eagles Nest Rd/Sloughhouse Rd	Signal	Signal									No
92	Grant Line Rd & Calvine Rd	Signal	Signal									No
93	Grant Line Rd & Driveway/Wilton Rd	Signal	Signal									Yes
95	Florin Perkins Road & 14th Avenue	Signal	Signal									Yes
96	14th Avenue & Jackson Road	Signal	Signal									Yes

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 10.14a

Super Cumulative Plus FOUR PROJECTS (Proposed Project) Intersection Impacts and Mitigations

Intersection		Traffic Control		Super Cumulative Plus FOUR PROJECTS Lane Geometrics				County Standard Mitigated Super Cumulative Plus FOUR PROJECTS Lane Geometrics				LOS Impact with Mitgation?
		Super Cumulative Plus FOUR PROJECTS	Mitigated Super Cumulative Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
103	Rancho Cordova Pkwy & Douglas Road	Signal	Signal	↰↰↑↑↱	↲↓↓↳↳	↰↰↑↑↑↱	↰↰↑↑↑↱	↰↰↑↑↱	↲↓↓↳↳	↰↰↑↑↑↱	↰↰↑↑↑↱	Yes
303	Vineyard Road & Jackson Road	Signal	Signal	↰↰↑↱	↲↓↳	↰↰↑↑↑↱	↰↰↑↑↑↱	↰↰↑↑↱	↲↓↓↳↳	↰↰↑↑↑↱	↰↰↑↑↑↱	No
308	Hedge Avenue & Rock Creek Pkwy Westbound	Roundabout	Roundabout	↰	↱		↱	↰	↱		↱↱	No
310	Mayhew Road & Rock Creek Pkwy Westbound	Roundabout	Signal	↰↑	↱↓		↱	↰↑↑↱	↱↓↓↳	↰↑↱	↰↑↱	Yes
311	Mayhew Road & Rock Creek Pkwy Eastbound	Roundabout		↑↱	↓↱	↱						Yes
318	Bradshaw Road & Mayhew Road	Signal	Signal	↰↰↑↑↑↱	↲↓↓↓↳↳	↰↰↑↑↱	↰↰↑↑↱	↰↰↑↑↑↱	↲↲↓↓↓↳↳	↰↰↑↑↑↱	↰↰↑↑↑↱	Yes
319	Bradshaw Road & Collector WJ-10	Signal	Signal	↑↑↱	↓↓↓↳		↰↱	↑↑↑↱	↓↓↓↳↳		↰↰↱	No
325	Douglas Road Extension & Kiefer Boulevard	Signal	Signal	↰↰↑↑↱	↲↓↓↳↳	↰↰↑↑↑↱	↰↰↑↑↱	↰↰↑↑↱	↲↓↓↳↳	↰↰↑↑↑↱	↰↰↑↑↑↱	Yes
329	Routier Ext & Kiefer Boulevard	Signal	Signal	↰↰↑↑↱	↲↓↓↳↳	↰↰↑↑↑↱	↰↰↑↑↑↱	↰↰↑↑↱	↲↓↓↳↳	↰↰↑↑↑↱	↰↰↑↑↑↱	Yes
331	Routier Ext/Routier Rd & Old Placerville Road	Signal	Signal	↰↑↑↱	↲↓↓↳↳	↰↑↑↱	↰↰↑↱	↰↰↑↑↱	↲↓↓↳↳	↰↰↑↑↑↱	↰↰↑↑↑↱	Yes
400	Collector JT-3 & Jackson Road	Signal	Signal		↲↳	↰↰↑↑	↑↑↱		↲↲↳	↰↰↑↑↑	↑↑↱	No

[1] High capacity intersections are defined in the Sacramento County General Plan and may include grade separations, additional turn lanes, and/or other features as deemed appropriate by the County.

[2] Alternative mitigations represent proposed mitigations beyond the General Plan or standard intersection geometry, excluding high capacity intersections, as proposed by the County of Sacramento.

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 10.14b

Super Cumulative Plus FOUR PROJECTS (Proposed Project) Intersection Impacts and Mitigations

	Intersection	Traffic Control		County Standard Mitigated Super Cumulative Plus FOUR PROJECTS Lane Geometrics				Ultimate Mitigated Super Cumulative Plus FOUR PROJECTS Lane Geometrics				LOS Impact with Mitgation?	High Capacity Intersection?[1]	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
		Super Cumulative Plus FOUR PROJECTS	Mitigated Super Cumulative Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach				
3	Power Inn Road/Howe Avenue & Folsom Blvd.	Signal	Signal									Yes	No		Existing development
4	Power Inn Road & 14th Avenue	Signal	Signal									Yes	No		Existing development
12	S. Watt Ave./Watt Avenue & Folsom Blvd.	Signal	Signal									No	Yes	Grade separated NBT and SBT	
14	S. Watt Avenue & Kiefer Blvd.	Signal	Signal									No	Yes	Tight Diamond Interchange (SB Watt Ramps/Kiefer intersection shown)	
			Signal											Tight Diamond Interchange (NB Watt Ramps/Kiefer intersection shown)	
16	S. Watt Avenue & Jackson Road	Signal	Signal									Yes	Yes	Triple NBL, Free WBR and SBL via tunnel	Maximum General Plan Lanes
25	Hedge Avenue & Elder Creek Road	Signal	Signal									No	No	Dual NBL, Dual SBL	
35	Bradshaw Road & US 50 Eastbound Ramps	Signal	Signal									Yes	No		Maximum General Plan Lanes
36	Bradshaw Road & Old Placerville Road	Signal	Signal									Yes	No		Existing development
37	Bradshaw Road & Kiefer Boulevard	Signal	Signal									Yes	No	Carry 3 EBT and 3 WBT lanes through intersection	Maximum General Plan Lanes
38	Jackson Road & Bradshaw Road	Signal	Signal					Grade Separate				No	No		
42	Happy Lane & Old Placerville Road	Access Control	Access Control	Happy Lane to become right-in and right-out only. Median will allow westbound left turns.								Yes	No	Construct 4-lane Route extension from Old Placerville Rd to Kiefer Blvd	Maximum General Plan Lanes
43	Kiefer Boulevard & Happy Ln	Signal	Signal									No	No		Maximum lanes
45	Excelsior Road & Jackson Road	Signal	Signal									Yes	No	NBR overlap	Maximum General Plan Lanes
51	Mather Field Road & Rockingham Drive	Signal	Signal									Yes	No		Existing development
61	Eagles Nest Rd/Eagles Nest Road & Florin Road	Signal	Signal									No	No		
67	Sunrise Boulevard & Douglas Road	Signal	Signal									Yes	No		Maximum General Plan Lanes
72	Sheldon Lake Drive/Sunrise Boulevard & Grant Line Rd/Grant	Signal	Signal									No	No		
93	Grant Line Rd & Driveway/Wilton Rd	Signal	Signal									No	No	Dual SBL, Dual WBL, Dual WBR	

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 10.14b

Super Cumulative Plus FOUR PROJECTS (Proposed Project) Intersection Impacts and Mitigations

	Intersection	Traffic Control		County Standard Mitigated Super Cumulative Plus FOUR PROJECTS Lane Geometrics				Ultimate Mitigated Super Cumulative Plus FOUR PROJECTS Lane Geometrics				LOS Impact with Mitgation?	High Capacity Intersection?[1]	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
		Super Cumulative Plus FOUR PROJECTS	Mitigated Super Cumulative Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach				
95	Florin Perkins Road & 14th Avenue	Signal	Signal									Yes	No		Maximum lanes
96	14th Avenue & Jackson Road	Signal	Signal									Yes	No		Maximum lanes
103	Rancho Cordova Pkwy & Douglas Road	Signal	Signal									No	No	WBR Overlap	Maximum General Plan lanes
310	Mayhew Road & Rock Creek Pkwy Westbound	Roundabout	Signal									No	No		
311	Mayhew Road & Rock Creek Pkwy Eastbound	Roundabout										No	No		
318	Bradshaw Road & Mayhew Road	Signal	Signal									No	No	HCI, Triple EBL and dual SBR	Maximum General Plan lanes
325	Douglas Road Extension & Kiefer Boulevard	Signal	Signal									Yes	No		Maximum lanes
329	Routier Ext & Kiefer Boulevard	Signal	Signal									No	No		
331	Routier Ext/Routier Rd & Old Placerville Road	Signal	Signal									No	No	NBR overlap	

[1] High capacity intersections are defined in the Sacramento County General Plan and may include grade separations, additional turn lanes, and/or other features as deemed appropriate by the County.

[2] Alternative mitigations represent proposed mitigations beyond the General Plan or standard intersection geometry, excluding high capacity intersections, as proposed by the County of Sacramento.

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

10.5.4 CEQA Cumulative Plus FOUR PROJECTS Pedestrian and Bicycle Facility Mitigation

The FOUR PROJECTS applicants shall coordinate with Sacramento County to identify the necessary on- and off-site pedestrian and bicycle facilities to serve the proposed development. These facilities shall be incorporated into the FOUR PROJECTS and could include sidewalks, stop signs, standard pedestrian and school crossing warning signs, lane striping to provide a bicycle lane, bicycle parking, signs to identify pedestrian and bicycle paths, raised crosswalks, pedestrian signal heads, and all appropriate traffic calming measures as defined in the County's Neighborhood Traffic Management Program (NTMP). Sidewalks would be required as part of the frontage improvements along all new roadway construction in the FOUR PROJECTS vicinity in conformance with County design standards. Circulation and access to all proposed public spaces shall include sidewalks that meet Americans with Disabilities Act standards.

10.5.5 CEQA Cumulative Plus FOUR PROJECTS Transit System Mitigation

The applicants of the FOUR PROJECTS shall coordinate with Regional Transit (or other transit operators) to provide the additional transit facilities and services assumed in transportation analysis (see Section 8.1.2.3), or a cost-effective equivalent level of transit facilities and services.

The assumed transit routes and service frequency would be required at full development of the FOUR PROJECTS. The full level of transit service would not achieve adequate transit ridership during the early stages of development. Thus the ultimate transit service, like the roadway system serving the FOUR PROJECTS, must be phased with development of the FOUR PROJECTS.

10.5.6 CEQA Cumulative Plus FOUR PROJECTS Functionality Mitigation

Table 10.15 summarizes the results of the functionality analysis for the study area rural roadway segments with mitigation.

10.5.7 CEQA Cumulative Plus FOUR PROJECTS Mitigation Summary

Tables 10.16 through 10.21 summarize the roadway segments, intersections, and freeway facilities that would exhibit significant LOS impacts, along with the mitigation success for these impacts.

Table 10.15
CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Functionality Mitigations

ID	Roadway	Segment		CEQA Cumulative + FOUR PROJECTS				Mitigation	Impact after Mitigation?
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Functionality Impact? [2]		
15	Douglas Rd	Mather Blvd	Zinfandel Dr	4	Arterial M	34,000	Yes[3]	Widen to County standards [5]	No
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd	6	Arterial M	50,410	Yes[3]	Widen to County standards [5]	No
19	Eagles Nest Rd	Kiefer Blvd	Jackson Rd	4	Arterial M	13,170	Yes[3]	Widen to County standards [5]	No
20	Eagles Nest Rd	Jackson Rd	Florin Rd	2	Arterial M	9,180	Yes	Widen to County standards [5]	No
25	Elder Creek Rd	South Watt Ave	Hedge Ave	4	Arterial M	48,190	Yes[3]	Widen to County standards [5]	No
26	Elder Creek Rd	Hedge Ave	Mayhew Rd	4	Arterial M	33,950	Yes[3]	Widen to County standards [5]	No
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd	4	Arterial M	40,630	Yes[3]	Widen to County standards [5]	No
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd	3	Arterial M	33,740	Yes[3]	Widen to County standards [5]	No
30	Excelsior Rd	Kiefer Blvd	Jackson Rd	2	Arterial M	27,590	Yes	Widen to County standards [5]	No
31	Excelsior Rd	Jackson Rd	Elder Creek Rd	3	Arterial M	37,130	Yes[3]	Widen to County standards [5]	No
32	Excelsior Rd	Elder Creek Rd	Florin Rd	3	Arterial M	12,510	Yes[3]	Widen to County standards [5]	No
33	Excelsior Rd	Florin Rd	Gerber Rd	2	Arterial M	12,810	Yes	Widen to County standards [5]	No
34	Excelsior Rd	Gerber Rd	Calvine Rd	2	Arterial M	8,160	Yes	Widen to County standards [5]	No
39	Florin Rd	South Watt Ave	Hedge Ave	4	Arterial M	14,880	Yes[3]	Widen to County standards [5]	No
40	Florin Rd	Hedge Ave	Mayhew Rd	4	Arterial M	17,360	Yes[3]	Widen to County standards [5]	No
41	Florin Rd	Mayhew Rd	Bradshaw Rd	4	Arterial M	23,450	Yes[3]	Widen to County standards [5]	No
42	Florin Rd	Bradshaw Rd	Excelsior Rd	4	Arterial M	25,600	Yes[3]	Widen to County standards [5]	No
43	Florin Rd	Excelsior Rd	Sunrise Blvd	2	Arterial M	17,620	Yes	Widen to County standards [5]	No
48	Fruitridge Rd	Fruitridge Rd	Hedge Ave	3	Arterial M	20,600	Yes[3]	Widen to County standards [5]	No
49	Fruitridge Rd	Hedge Ave	Mayhew Rd	4	Arterial M	17,810	Yes[3]	Widen to County standards [5]	No
50	Grant Line Rd	White Rock Rd	Douglas Rd	4	Arterial M	41,060	Yes[3]	Widen to County standards [5]	No
58	Happy Ln	Old Placerville Rd	Kiefer Blvd	4	Arterial M	13,720	Yes[3]	Widen to County standards [5]	No
59	Hedge Ave	Jackson Rd	Fruitridge Rd	2	Arterial M	9,920	Yes	Widen to County standards [5]	No
60	Hedge Ave	Fruitridge Rd	Elder Creek Rd	2	Arterial M	6,870	Yes	Widen to County standards [5]	No
61	Hedge Ave	Elder Creek Rd	Florin Rd	2	Arterial M	21,920	Yes	Widen to County standards [5]	No
70	Jackson Rd	Bradshaw Rd	Excelsior Rd	6	Arterial M	59,220	Yes[3]	Widen to County standards [5]	No
71	Jackson Rd	Excelsior Rd	Eagles Nest Rd	4	Arterial M	62,440	Yes[3]	Widen to County standards [5]	No

Red text with light gray shading indicate project impacts.

Table 10.15
CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Functionality Mitigations

ID	Roadway	Segment		CEQA Cumulative + FOUR PROJECTS				Mitigation	Impact after Mitigation?
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Functionality Impact? [2]		
77	Kiefer Blvd	Bradshaw Rd	Happy Ln	6	Arterial M	51,510	Yes[3]	Widen to County standards [5]	No
78	Kiefer Blvd	Zinfandel Dr	Sunrise Blvd	3	Arterial M	39,640	Yes[3]	Widen to County standards [5]	No
89	Mayhew Rd	Jackson Rd	Fruitridge Rd	4	Arterial M	53,200	Yes[3]	Widen to County standards [5]	No
116	White Rock Rd	Fitzgerald Rd	Grant Line Rd	4	Arterial M	55,990	Yes[3]	Widen to County standards [5]	No
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd	4	Arterial M	22,240	Yes[3]	Widen to County standards [5]	No

Note: Gray shading indicates changes in travel lanes or facility type that the project is responsible to provide. For all roadway segments to be widened, the project is responsible to build the entire roadway to County standards.

[1] Substandard rural roads are defined as rural, 2-lane roadway segments with travel lanes narrower than 12 feet and/or roadside shoulders narrower than 6 feet.

[2] Functionality impacts are triggered when a substandard rural road increases over a threshold of 6,000 ADT, or for a roadway already above 6,000 ADT, increases by more than 600 ADT.

[3] The potential for an impact exists should the project generate traffic volumes on the roadway exceeding 6,000 ADT, or increasing more than 600 ADT on a roadway already above 6,000 ADT, prior to the construction of roadway improvements.

[4] Excluding the roadway segment that is within the developed community of Independence at Mather.

[5] The functionality impact is mitigated by improving the roadway to County standards, including widening travel lanes to 12 feet and/or widening or providing paved shoulders to 6 feet.

Red text with light gray shading indicate project impacts.

Table 10.16
CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Summary of Impacted Roadway Segr

ID	Roadway	Segment	
		From	To
Level of Service Impact Fully Mitigated by General Plan Lanes			
23	Elder Creek Rd	Power Inn Rd	Florin-Perkins Rd
25	Elder Creek Rd	South Watt Ave	Hedge Ave
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd
28.1	Elder Creek Rd	Bradshaw Rd	Vineyard Rd
31.1	Excelsior Rd	Jackson Rd	Collector WJ-6
31.2	Excelsior Rd	Collector WJ-6	Elder Creek Rd
41	Florin Rd	Mayhew Rd	Bradshaw Rd
42.2	Florin Rd	Vineyard Rd	Excelsior Rd
47	Fruitridge Rd	Florin Perkins Rd	South Watt Ave
48	Fruitridge Rd	South Watt Ave	Hedge Ave
51.1	Grant Line Rd	Douglas Rd	Chrysanthy Blvd
51.2	Grant Line Rd	Chrysanthy Blvd	Kiefer Blvd
55.2	Grant Line Rd	Elk Grove City Limit	Sheldon Rd
56	Grant Line Rd	Sheldon Rd	Wilton Rd
57	Grant Line Rd	Wilton Rd	Bond Rd
58.2	Happy Lane	Routier Ext	Kiefer Boulevard
71.2	Jackson Rd	Collector JT-3	Tree View Ln
71.3	Jackson Rd	Tree View Ln	Collector JT-4
72.1	Jackson Rd	Eagles Nest Rd	Rockbridge Dr
72.2	Jackson Rd	Rockbridge Dr	Sunrise Blvd
73	Jackson Rd	Sunrise Blvd	Grant Line Rd
89.1	Mayhew Rd	Jackson Rd	Rock Creek Pkwy
89.2	Mayhew Rd	Rock Creek Pkwy	Fruitridge Rd
105	Sunrise Blvd	Douglas Rd	Kiefer Blvd
106	Sunrise Blvd	Kiefer Blvd	Jackson Rd
117	White Rock Rd	Grant Line Rd	Prairie City Rd
132	Kiefer Blvd	Americanos Blvd	Grant Line Rd
304	Mayhew Rd	Routier Ext	Bradshaw Rd
307	Mayhew Rd	Collector WJ-13	Elder Creek Rd
312	Rock Creek Pkwy East	Collector WJ-16	Jackson Road
405	Collector JT-3	Collector JT-5	Jackson Rd
Level of Service Impact Not Fully Mitigated by General Plan Lanes			
2	Bradshaw Rd	US 50	Lincoln Village Dr
3	Bradshaw Rd	Lincoln Village Dr	Old Placerville Rd
4	Bradshaw Rd	Old Placerville Rd	Goethe Rd
5.1	Bradshaw Rd	Goethe Rd	Collector WJ-8

Note: Refer to Table 6.12 for detailed description of impacts and mitigations.

Table 10.16
CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Summary of Impacted Roadway Segr

ID	Roadway	Segment	
		From	To
5.2	Bradshaw Rd	Collector WJ-8	Kiefer Blvd
6.2	Bradshaw Rd	Collector WJ-9	Mayhew Rd
6.3	Bradshaw Rd	Mayhew Rd	Jackson Rd
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd
37	Florin Rd	Power Inn Rd	Florin-Perkins Rd
44	Folsom Blvd	Howe Ave	Jackson Rd
62	Howe Ave	US 50	Folsom Blvd
66.1	Jackson Rd	Florin Perkins Rd	14th Ave
66.2	Jackson Rd	14th Ave	Rock Creek Pkwy
66.3	Jackson Rd	Rock Creek Pkwy	Aspen 1 Dwy
66.4	Jackson Rd	Aspen 1 Dwy	South Watt Ave
67	Jackson Rd	South Watt Ave	Hedge Ave
68.1	Jackson Rd	Hedge Ave	Collector WJ-3
68.2	Jackson Rd	Collector WJ-3	Mayhew Rd
69	Jackson Rd	Mayhew Rd	Bradshaw Rd
70.1	Jackson Rd	Bradshaw Rd	Collector WJ-4
70.2	Jackson Rd	Collector WJ-4	Happy Ln
71.1	Jackson Rd	Excelsior Rd	Collector JT-3
76	Kiefer Blvd	Mayhew Rd	Bradshaw Rd
78.4	Kiefer Blvd	E Collector MS-1	Sunrise Blvd
93	Old Placerville Rd	Routier Rd	Rockingham Dr
95	Rockingham Dr	Old Placerville Rd	Mather Field Rd
96	South Watt Ave	Folsom Blvd	Kiefer Blvd
97	South Watt Ave	Kiefer Blvd	Jackson Rd
100	South Watt Ave	Elder Creek Rd	Florin Rd
104.3	Sunrise Blvd	Rio Del Oro Pkwy	Douglas Rd
110	Watt Ave	US 50	Folsom Blvd
135	Rancho Cordova Pkwy	White Rock Rd	International Dr
136	Rancho Cordova Pkwy	International Dr	Rio Del Oro Pkwy
200	Kiefer Blvd	Tree View Ln	Eagles Nest Rd
301	Douglas Rd	Rock Creek Pkwy	Kiefer Blvd
302	Kiefer Blvd	Happy Ln	Douglas Rd
305	Mayhew Rd	Bradshaw Rd	Jackson Rd
317	Routier Ext	Old Placerville Road	Happy Lane

Note: Refer to Table 6.12 for detailed description of impacts and mitigations.

Table 10.17

CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Summary of Impacted Intersections

	Intersection	Alternative Mitigation
Level of Service Impact Fully Mitigated by General Plan Lanes		
17	S. Watt Avenue & Fruitridge Road	
20	Elk Grove Florin Road/S. Watt Ave. & Florin Road	
23	Hedge Avenue & Jackson Road	
28	Mayhew Road & Kiefer Boulevard	
29	Mayhew Road & Jackson Road	
31	Mayhew Road & Elder Creek Road	
32	Woodring Drive & Zinfandel Drive	
39	Bradshaw Road & Elder Creek Road	
46	Excelsior Road & Elder Creek Road	
47	Excelsior Road & Florin Road	
58	Zinfandel Drive & Douglas Road	
69	Sunrise Boulevard & Kiefer Boulevard	
70	Sunrise Boulevard & Jackson Road	
80	Grant Line Road & Jackson Road	
86	Power Inn Road & Florin Rd	
87	Florin Perkins Road & Florin Rd	
91	Grant Line Rd & Eagles Nest Rd/Sloughhouse Rd	
92	Grant Line Rd & Calvine Rd	
303	Happy Lane & Jackson Road	

Table 10.17

CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Summary of Impacted Intersections

	Intersection	Alternative Mitigation
308	Hedge Avenue & Rock Creek Pkwy WB	
319	Bradshaw Road & Collector WJ-10	
400	Collector JT-3 & Jackson Road	
	Level of Service Impact Not Fully Mitigated by General Plan Lanes But Designated High Capacity Intersection	
12	Watt Avenue & Folsom Blvd.	**
14	S. Watt Avenue & Kiefer Blvd.	**
16	S. Watt Avenue & Jackson Road	
	Level of Service Impact Not Fully Mitigated by General Plan Lanes	
3	Power Inn Road/Howe Avenue & Folsom Blvd	
4	Power Inn Road & 14th Avenue	
25	Hedge Avenue & Elder Creek Road	**
35	Bradshaw Road & US 50 EB Ramps	
36	Bradshaw Road & Old Placerville Road	
37	Bradshaw Road & Kiefer Boulevard	
38	Bradshaw Road & Jackson Road	**
42	Happy Lane & Old Placerville Road	**
43	Happy Lane & Kiefer Boulevard	**
45	Excelsior Road & Jackson Road	
51	Mather Field Road & Rockingham Drive	

Table 10.17

CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Summary of Impacted Intersections

	Intersection	Alternative Mitigation
61	Eagles Nest Road & Florin Road	**
67	Sunrise Boulevard & Douglas Road	
72	Sheldon Lake Drive/Sunrise Boulevard & Grant Line Road	**
93	Grant Line Rd & Dwy/Wilton Rd	**
95	Florin Perkins Road & 14th Avenue	
96	Jackson Road & 14th Avenue	
103	Rancho Cordova Pkwy & Douglas Road	**
310	Douglas Road & Rock Creek Pkwy	**
311	Bradshaw Road & Collector WJ-8	**
318	Bradshaw Road & Mayhew Road	**
325	Douglas Road & Kiefer Boulevard	
329	Routier Ext & Kiefer Boulevard	**
331	Routier Ext/Routier Rd & Old Placerville Road	**

[1] Alternative mitigations represent proposed mitigations beyond the General Plan, excluding designated high capacity intersections, as proposed by the County of Sacramento.

* denotes alternative mitigations that improve operations but do not fully mitigate the impact.
** denotes alternative mitigations that fully mitigate the impact.

Table 10.18

CEQA Cumulative Plus FOUR PROJECTS (Proposed Project)
Summary of Impacted Freeway Basic Segments

Direction	Location
Level of Service Impact Not Mitigated	
Eastbound US-50	Stockton Boulevard to 59th Street

Source: *DKS Associates, 2018.*

Table 10.19

CEQA Cumulative Plus FOUR PROJECTS (Proposed Project)
Summary of Impacted Freeway Merge/Diverge/Weave Segments

Direction	Location	Junction Type
Level of Service Impact Not Mitigated		
Westbound US-50	Southbound Hazel Avenue Slip Entrance	Weave
	Rancho Cordova Parkway Exit	

Source: *DKS Associates, 2018.*

Table 10.20

CEQA Cumulative Plus FOUR PROJECTS (Proposed Project)
Summary of Impacted Freeway Ramp Termini

Direction	US 50 Exit Ramp
Queuing Impact Not Mitigated	
Eastbound US-50	Howe Avenue
	Zinfandel Drive
Westbound US-50	Rancho Cordova Parkway

Source: *DKS Associates, 2018.*

Table 10.21
CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Functionality Impact Summary

ID	Roadway	Segment	
		From	To
Functionality Impact Fully Mitigated			
15	Douglas Rd	Mather Blvd	Zinfandel Dr
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd
19	Eagles Nest Rd	Kiefer Blvd	Jackson Rd
20	Eagles Nest Rd	Jackson Rd	Florin Rd
25	Elder Creek Rd	South Watt Ave	Hedge Ave
26	Elder Creek Rd	Hedge Ave	Mayhew Rd
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd
30	Excelsior Rd	Kiefer Blvd	Jackson Rd
31	Excelsior Rd	Jackson Rd	Elder Creek Rd
32	Excelsior Rd	Elder Creek Rd	Florin Rd
33	Excelsior Rd	Florin Rd	Gerber Rd
34	Excelsior Rd	Gerber Rd	Calvine Rd
39	Florin Rd	South Watt Ave	Hedge Ave
40	Florin Rd	Hedge Ave	Mayhew Rd
41	Florin Rd	Mayhew Rd	Bradshaw Rd
42	Florin Rd	Bradshaw Rd	Excelsior Rd
43	Florin Rd	Excelsior Rd	Sunrise Blvd
48	Fruitridge Rd	Fruitridge Rd	Hedge Ave
49	Fruitridge Rd	Hedge Ave	Mayhew Rd
50	Grant Line Rd	White Rock Rd	Douglas Rd
58	Happy Ln	Old Placerville Rd	Kiefer Blvd
59	Hedge Ave	Jackson Rd	Fruitridge Rd
60	Hedge Ave	Fruitridge Rd	Elder Creek Rd
61	Hedge Ave	Elder Creek Rd	Florin Rd
70	Jackson Rd	Bradshaw Rd	Excelsior Rd

Table 10.21
CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Functionality Impact Summary

ID	Roadway	Segment	
		From	To
71	Jackson Rd	Excelsior Rd	Eagles Nest Rd
77	Kiefer Blvd	Bradshaw Rd	Happy Ln
78	Kiefer Blvd	Zinfandel Dr	Sunrise Blvd
89	Mayhew Rd	Jackson Rd	Fruitridge Rd
116	White Rock Rd	Fitzgerald Rd	Grant Line Rd
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd

11. CEQA CUMULATIVE PLUS JACKSON TOWNSHIP (PROPOSED PROJECT) SCENARIO

11.1 JACKSON TOWNSHIP PROJECT DESCRIPTION AND METHODOLOGY

11.1.1 Project Description

As illustrated previously in Figure 1.1, the Jackson Township project is located in unincorporated Sacramento County, generally east of the City of Sacramento and south of the City of Rancho Cordova and Mather Airport. It is bounded on the south by Jackson Road (SR 16) and on the west by Excelsior Road. The north boundary is near the future Kiefer Boulevard, while the east boundary is west of Eagles Nest Road.

11.1.2 Methodology

The analysis of the CEQA Cumulative Plus Jackson Township Project scenario is based upon the analysis of the CEQA Cumulative Plus FOUR PROJECTS scenario discussed in Section 6. The travel model was utilized to estimate the portion of the FOUR PROJECTS traffic that is associated with the Jackson Township project. With this information, it was possible to identify whether the Jackson Township project, on its own, would trigger significant impacts. It should be noted that, even at locations where the Jackson Township project on its own would not trigger a significant impact, the Jackson Township project contributes to the cumulative impacts associated with the CEQA Cumulative Plus FOUR PROJECTS scenario.

11.1.1 CEQA Cumulative Land Use

Section 10.1.1 discusses land use associated with CEQA Cumulative conditions.

11.1.2 Transportation Network

Section 10.1.2 discusses the transportation network associated with the CEQA Cumulative conditions, including the transportation network improvements associated with the FOUR PROJECTS.

11.1.3 Jackson Township Project Trip Generation

The trip generation of the Jackson Township project was estimated by the SACSIM model, which has been utilized to prepare transportation forecasts for this analysis. **Table 11.1** summarizes the person trip generation. The Jackson Township project would generate over 24,000 daily work person trip ends, and over 192,000 daily person trip ends for all trip purposes.

The total trip generation of the Jackson Township project is somewhat higher under the CEQA Cumulative scenario than with existing conditions. The SACSIM model will vary the trips generated by retail and service uses depending on the amount of development that is near those uses. This result is expected as commercial development with much housing and/or employment

nearby will be more successful (and generate more trips) than the same commercial development located in an area with less nearby population.

Table 11.1: Estimated Daily Person Trip Generation (CEQA Cumulative Plus FOUR PROJECTS Proposed Project Scenario)

Jackson Township Specific Plan

Project	Trip Purpose	Daily Person Trip Ends
Jackson Township	Work Trips	24,001
	Non-Work Trips	168,919
	All Trip Purposes	192,920

Source: *DKS Associates, 2018.*

Table 11.2 summarizes the estimated mode choice for the Jackson Township Project. Over 84 percent of all person trips are expected to be accommodated by automobile. Transit will serve about 2.4 percent of all trips, while walk and bike modes will accommodate about 12.9 percent of all trips.

Table 11.3 summarizes the vehicular (auto) trip generation of the Jackson Township project. The Jackson Township project is estimated to generate over 118,000 daily vehicle trip ends. About 24,400 of the daily vehicle trip ends will be associated with trips with both an origin and destination within the Jackson Township project, about 20 percent of the trip ends. Those internal trip ends represent about 12,200 daily vehicle trips (one-half the number of internal trip ends). The Jackson Township project will generate about 94,000 external vehicle trips that have an origin or destination inside the Jackson Township project but the other end of the trip is outside the Jackson Township project. Table 11.3 also shows the vehicle trips generated during the a.m. and p.m. peak hours.

11.1.4 Jackson Township Project Trip Distribution

The distribution of trips associated with development on the Jackson Township project site was derived utilizing SACSIM, incorporating the proposed land use and access locations associated with the Jackson Township project site. Trip distribution varies by land use and time period. **Figure 11.1** illustrates the overall trip distribution of daily Jackson Township project trips with the CEQA Cumulative scenario.

11.2 OPERATIONS ANALYSIS AND IMPACTS

11.2.1 CEQA Cumulative Plus Jackson Township Project Roadway Segment Impacts

Table 11.4 summarizes the results of the operations analysis for the study area roadway segments. Only those segments where an impact would be triggered by the Jackson Township project are shown. The table includes the number of lanes assumed with the implementation of

the FOUR PROJECTS. The shaded table cells under the "Travel Lanes" and "Facility Type" headings illustrate new roadways or widened roadways. The last column of the table shows the project(s) responsible for the increase in the number of roadway lanes. The shaded table cells under the "Level of Service" heading indicate those locations with an LOS impact.

11.2.2 CEQA Cumulative Plus Jackson Township Project Intersection Impacts

Table 11.5 and 11.6 summarize the results of the operations analysis for the study area intersections. Only those intersections where an impact would be triggered by the Jackson Township project are shown. The tables include the implementation of intersection changes associated with the FOUR PROJECTS. Table 11.6 illustrates the type of traffic control and number of lanes by type on each study area intersection approach. Shaded table cells indicate those locations where changes in traffic control and / or number of approach lanes by type would be fully funded by the project(s) shown in the last column. Shaded table cells in Table 11.5 illustrate those locations with an LOS impact. Detailed analysis information is included in the technical appendix.

Signal warrant analysis was conducted for all unsignalized intersections along Jackson Road, and other unsignalized intersections in close proximity to the project. The project is considered to have a significant impact at an unsignalized location if both the impact criteria in Table 1.6 are met, and one or more of the signal warrants specified in the California Manual on Uniform Traffic Control Devices (CAMUTCD) are met. The following unsignalized intersections exhibit significant impacts and meet one or more traffic signal warrants:

- Eagles Nest Road and Florin Road

Table 11.2: Mode Split (CEQA Cumulative Plus FOUR PROJECTS Prop. Proj. Scenario)

Jackson Township Specific Plan

Project	Mode	Percentage of Person Trips by Trip Purpose		
		Work Trips	Non-Work Trips	All Trip Purposes
Jackson Township	Auto - SOV	81.0%	40.1%	45.2%
	Auto - HOV	9.4%	43.8%	39.5%
	Transit	5.8%	1.9%	2.4%
	Walk	2.6%	12.9%	11.7%
	Bike	1.1%	1.3%	1.2%

Source: *DKS Associates, 2018.*

Table 11.3: Estimated Daily Vehicle Trip Generation (CEQA CUMULATIVE Plus FOUR PROJECTS Prop. Proj. Scenario)

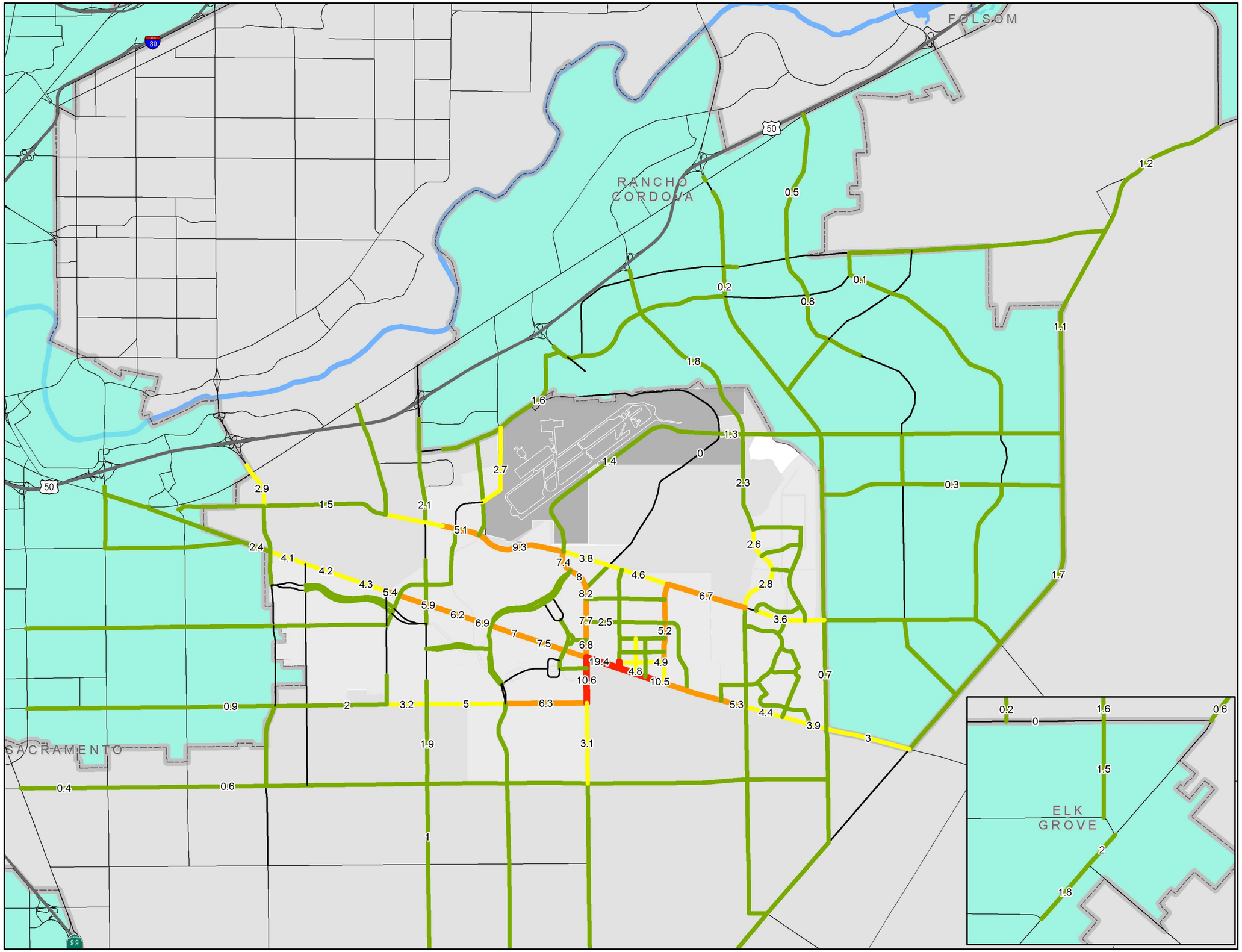
Jackson Township Specific Plan

Trip Type		AM Peak Hour	PM Peak Hour	Daily
Total Vehicle Trip Ends		10,419	10,878	118,567
Percent Internal Trip Ends[1]		19.4%	21.4%	20.6%
Vehicle trips	Internal to Project	1,012	1,163	12,229
	External to Project	8,395	8,553	94,111
	Total	9,407	9,716	106,340

[1.] Both trip ends within the project.

Source: *DKS Associates, 2018.*

FIGURE 11.1
CEQA CUM PLUS FOUR PROJECTS
JT TRIP DISTRIBUTION
(PROPOSED PROJECT)



Legend

- 0.0%
- 0.1% to 2.5%
- 2.6% to 5.0%
- 5.1% to 10.0%
- 10.0% and up
- Freeways
- Other Major Roadways
- Cities
- Mather Airport

DKS

Table 11.4
CEQA Cumulative Roadway Segment Levels of Service - Impacts Triggered by Jackson Township Project

ID	Roadway	Segment		CEQA Cumulative No Project					CEQA Cumulative + FOUR PROJECTS					Project(s) Responsible for Change in Lanes
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	
31.1	Excelsior Rd	Jackson Rd	Collector WJ-6	2	Arterial M	11,960	0.66	B	3	Arterial M	37,780	2.10	**F**	West Jackson
31.2	Excelsior Rd	Collector WJ-6	Elder Creek Rd	2	Arterial M	11,960	0.66	B	3	Arterial M	37,130	2.06	**F**	West Jackson
66.2	Jackson Rd	14th Ave	Rock Creek Pkwy	4	Arterial M	40,320	1.12	**F**	4	Arterial M	61,500	1.71	**F**	
66.3	Jackson Rd	Rock Creek Pkwy	Aspen 1 Dwy	4	Arterial M	34,630	0.96	E	4	Arterial M	57,370	1.59	**F**	
67	Jackson Rd	South Watt Ave	Hedge Ave	4	Arterial M	38,240	1.06	**F**	4	Arterial M	67,850	1.88	**F**	
70.1	Jackson Rd	Bradshaw Rd	Collector WJ-4	2	Rural Hwy	23,120	1.01	**F**	6	Arterial M	59,220	1.10	**F**	West Jackson
70.2	Jackson Rd	Collector WJ-4	Happy Ln	2	Rural Hwy	23,190	1.01	**F**	6	Arterial M	59,210	1.10	**F**	West Jackson
71.1	Jackson Rd	Excelsior Rd	Collector JT-3	2	Rural Hwy	23,020	1.01	**F**	4	Arterial M	62,440	1.73	**F**	Jackson Township
71.2	Jackson Rd	Collector JT-3	Tree View Ln	2	Rural Hwy	23,020	1.01	**F**	4	Arterial M	46,480	1.29	**F**	Jackson Township
71.3	Jackson Rd	Tree View Ln	Collector JT-4	2	Rural Hwy	22,990	1.00	**F**	4	Arterial M	40,520	1.13	**F**	Jackson Township
71.4	Jackson Rd	Collector JT-4	Eagles Nest Rd	2	Rural Hwy	23,020	1.01	**F**	4	Arterial M	37,510	1.04	**F**	Jackson Township
73	Jackson Rd	Sunrise Blvd	Grant Line Rd	4	Arterial M	31,730	0.88	D	4	Arterial M	45,430	1.26	**F**	
79	Kiefer Blvd	Sunrise Blvd	Rancho Cordova Pkwy	4	Arterial M	20,760	0.58	A	4	Arterial M	33,480	0.93	**E**	
405	Collector JT-3	Collector JT-5	Jackson Rd						2	Arterial M	20,320	1.13	**F**	Jackson Township

Note: Gray shading indicates changes in travel lanes or facility type that the project is responsible to provide.

[1] The following classifications are used to determine daily roadway capacity:
Arterial L - Arterial, Low Access Control
Arterial M - Arterial, Moderate Access Control
Arterial H - Arterial, High Access Control
Rural Hwy - Rural 2-lane Highway
Rural S - Rural 2-lane Road, 24'-36' of pavement, Paved Shoulders
Rural NS - Rural 2-lane Road, 24'-36' of pavement, No Shoulders
Res Collector F - Residential Collector with Frontage
Res Collector NF - Residential Collector with No Frontage

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 11.5

CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Intersection Levels of Service - Impacts Triggered by Jackson Township Project

	Intersection	AM Peak Hour							PM Peak Hour						
		CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS			LOS Impact	CEQA Cumulative No Project			CEQA Cumulative Plus FOUR PROJECTS			LOS Impact
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
45	Excelsior Road & Jackson Road	Signal	E	59.9	Signal	F	>300	Yes	Signal	D	39.0	Signal	F	269.1	Yes
47	Excelsior Road & Florin Road	All-way stop	**F**	**62.4**	Signal	F	111.2	Yes	All-way stop	**F**	**67.3**	Signal	E	74.2	No
51	Mather Field Road & Rockingham Drive	Signal	**F**	**156.5**	Signal	F	>300	Yes	Signal	**F**	**119.4**	Signal	F	170.3	Yes
58	Zinfandel Drive & Douglas Road	Signal	**F**	**156.8**	Signal	F	216.8	Yes	Signal	E	73.1	Signal	F	220.1	Yes
61	Eagles Nest Road & Florin Road	Two-way stop			Two-way stop			Yes	Two-way stop			Two-way stop			Yes
	Northbound		***F***	***>300***		***F***	***>300***			***F***	***>300***		***F***	***>300***	
	Southbound		***F***	***>300***		***F***	***>300***			***F***	***>300***		***F***	***>300***	
	Eastbound Left Turn		*B*	*10.2*		*B*	*11.3*			*A*	*8.5*		*A*	*9.3*	
	Westbound Left Turn		*A*	*0.0*		*A*	*0.0*			*A*	*9.4*		*A*	*8.7*	
69	Sunrise Boulevard & Kiefer Boulevard	Signal	**F**	**151.0**	Signal	F	>300	Yes	Signal	**F**	**138.0**	Signal	F	261.4	Yes

Note: Gray shading represents changes in traffic control that the project is responsible to provide.

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 11.6

CEQA Cumulative (Proposed Project) Intersection Geometrics - Impacts Triggered by Jackson Township

	Intersection	Traffic Control		Super Cumulative No Project Lane Geometrics				Super Cumulative Plus FOUR PROJECTS Lane Geometrics				Project(s) Responsible for Change
		Existing	Existing Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
45	Excelsior Road & Jackson Road	Signal	Signal									West Jackson; Jackson Township
47	Excelsior Road & Florin Road	All-way stop	Signal									West Jackson
51	Mather Field Road & Rockingham Drive	Signal	Signal									
58	Zinfandel Drive & Douglas Road	Signal	Signal									
61	Eagles Nest Rd/Eagles Nest Road & Florin Road	Two-way stop	Signal									
69	Sunrise Boulevard & Kiefer Boulevard	Signal	Signal									NewBridge; Mather South

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

11.2.3 CEQA Cumulative Plus Jackson Township Project U.S. 50 Freeway Impacts

Based upon the Caltrans' thresholds of significance, any volume contribution to a significant impact of the CEQA Cumulative Plus FOUR PROJECTS scenario is considered significant. Therefore, the impacts of the CEQA Cumulative Plus Jackson Township Project scenario are identical to those of the CEQA Cumulative Plus FOUR PROJECTS scenario.

11.2.3.1 Freeway Basic Segments

Table 10.7 summarizes a.m. and p.m. peak hour US 50 freeway mainline operations. Details of the analysis are included in the technical appendix. None of the impacts would be triggered by the Jackson Township project alone.

11.2.3.2 Freeway Merge/Diverge/Weave Segments

Table 10.8 summarizes a.m. and p.m. peak hour freeway operations at ramp junctions and weaving areas. Details of the analysis are included in the technical appendix. None of the impacts would be triggered by the Jackson Township project alone.

11.2.3.3 Freeway Ramp Intersection Queuing

Tables 10.9 and 10.10 summarizes a.m. and p.m. peak hour freeway ramp intersection queuing. None of the impacts would be triggered by the Jackson Township project alone.

11.2.4 CEQA Cumulative Plus Jackson Township Project Pedestrian and Bicycle Facility Impacts

The Jackson Township project would not remove any existing or planned pedestrian facility. The Jackson Township project would not remove any existing bicycle facility, but would modify facilities that are planned in the Bikeway Master Plan. The Jackson Township project would add pedestrian and bicycle demands within the Jackson Township project site and to and from nearby land uses. As illustrated in Figure 3.2, the Jackson Township project has proposed changes to the Bikeway Master Plan. Because the Jackson Township project would add demand for pedestrian and bicycle facilities that may not be available in the site vicinity, the impact of the Jackson Township project on pedestrian and bicycle circulation is potentially significant.

11.2.5 CEQA Cumulative Plus Jackson Township Project Transit System Impacts

Public transit would not be provided to the site of the Jackson Township project under CEQA Cumulative scenario without development of the Jackson Township project. In the preparation of this analysis, a transit system to serve the FOUR PROJECTS was developed (see Section 8.1.2.3).

However, the timing and implementation of the transit system are uncertain at this time. The Jackson Township project would increase demands for public transit facilities. Therefore, the impact of the Jackson Township project on the transit system is potentially significant.

11.2.6 CEQA Cumulative Plus Jackson Township Project Functionality Impacts

Table 11.7 summarizes the results of the functionality analysis. Only those segments where an impact would be triggered by the Jackson Township project are shown. The table includes the number of lanes assumed with the implementation of the FOUR PROJECTS, which in many cases is greater than the number of lanes in the existing condition. The shaded table cells under the "Travel Lanes" heading illustrates new roadways and widened roadways that are assumed part of the FOUR PROJECTS. The "Substandard?" heading indicates whether or not a roadway meets the County standards of 12-foot lanes and 6-foot shoulders. If the FOUR PROJECTS make improvements to a roadway segment such as widening, they would be required to reconstruct the entire substandard roadway segment to County standards. The shaded table cells under the "Functionality Impact?" heading indicate those locations with a functionality impact.

As stated above, the traffic analysis assumed that the FOUR PROJECTS would construct a number of travel lanes on roadway segments that are internal to or on the boundary of the FOUR PROJECTS, and the entire roadway segment would be reconstructed to County standards at that time. The timing of implementation of such additional traffic lanes on these internal or boundary roadway segments will affect whether or not impacts would exist at some time prior to full build out of the FOUR PROJECTS.

Table 11.7
CEQA Cumulative Plus FOUR PROJECTS Functionality Impacts Triggered by Jackson Township Project

ID	Roadway	Segment		Jurisdiction	Existing Substandard Roadways				CEQA Cumulative + FOUR PROJECTS			
		From	To		Travel Lanes	Pavement (ft)	Substandard? [1]	Existing Volume	Travel Lanes	Facility Type[1]	Forecasted Volume	Functionality Impact? [2]
15	Douglas Rd	Mather Blvd	Zinfandel Dr	County	2	23	Yes	6,635	4	Arterial M	34,000	Yes[3]
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd	Rancho Cordova/County	2	23	Yes	8,369	6	Arterial M	50,410	Yes[3]
25	Elder Creek Rd	South Watt Ave	Hedge Ave	County	2	23	Yes	5,576	4	Arterial M	48,190	Yes[3]
26	Elder Creek Rd	Hedge Ave	Mayhew Rd	County	2	23	Yes	5,797	4	Arterial M	33,950	Yes[3]
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd	County	2	23	Yes	5,355	4	Arterial M	40,630	Yes[3]
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd	County	2	23	Yes	2,158	3	Arterial M	33,740	Yes[3]
30	Excelsior Rd	Kiefer Blvd	Jackson Rd	County	2	22	Yes	3,716	2	Arterial M	27,590	Yes
31	Excelsior Rd	Jackson Rd	Elder Creek Rd	County	2	<21	Yes	5,075	3	Arterial M	37,130	Yes[3]
32	Excelsior Rd	Elder Creek Rd	Florin Rd	County	2	<21	Yes	4,203	3	Arterial M	12,510	Yes[3]
33	Excelsior Rd	Florin Rd	Gerber Rd	County	2	<21	Yes	5,423	2	Arterial M	12,810	Yes
41	Florin Rd	Mayhew Rd	Bradshaw Rd	County	2	22	Yes	6,317	4	Arterial M	23,450	Yes[3]
42	Florin Rd	Bradshaw Rd	Excelsior Rd	County	2	22	Yes	3,478	4	Arterial M	25,600	Yes[3]
48	Fruitridge Rd	Fruitridge Rd	Hedge Ave	City of Sacramento/ County	2	22	Yes	2,890	3	Arterial M	20,600	Yes[3]
50	Grant Line Rd	White Rock Rd	Douglas Rd	Rancho Cordova/County	2	22	Yes	7,189	4	Arterial M	41,060	Yes[3]
70	Jackson Rd	Bradshaw Rd	Excelsior Rd	County	2	26	Yes	13,030	6	Arterial M	59,220	Yes[3]
71	Jackson Rd	Excelsior Rd	Eagles Nest Rd	County	2	26	Yes	10,478	4	Arterial M	62,440	Yes[3]
77	Kiefer Blvd	Bradshaw Rd	Happy Ln	County	2	22	Yes	4,618	6	Arterial M	51,510	Yes[3]
78	Kiefer Blvd	Zinfandel Dr	Sunrise Blvd	County	2	22	Yes	656	3	Arterial M	39,640	Yes[3]
116	White Rock Rd	Fitzgerald Rd	Grant Line Rd	Rancho Cordova/County	2	20	Yes	2,490	4	Arterial M	55,990	Yes[3]
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd	County	2	<21	Yes	2,848	4	Arterial M	22,240	Yes[3]

Red text with light gray shading indicate project impacts.

Table 11.7
CEQA Cumulative Plus FOUR PROJECTS Functionality Impacts Triggered by Jackson Township Project

ID	Roadway	Segment		Jurisdiction	Existing Substandard Roadways				CEQA Cumulative + FOUR PROJECTS			
		From	To		Travel Lanes	Pavement (ft)	Substandard? [1]	Existing Volume	Travel Lanes	Facility Type[1]	Forecasted Volume	Functionality Impact? [2]

Note: Gray shading indicates changes in travel lanes or facility type that the project is responsible to provide. For all roadway segments to be widened, the project is responsible to build the entire roadway to County standards.

[1] Substandard rural roads are defined as rural, 2-lane roadway segments with travel lanes narrower than 12 feet and/or roadside shoulders narrower than 6 feet.

[2] Functionality impacts are triggered when a substandard rural road increases over a threshold of 6,000 ADT, or for a roadway already above 6,000 ADT, increases by more than 600 ADT.

[3] The potential for an impact exists should the project generate traffic volumes on the roadway exceeding 6,000 ADT, or increasing more than 600 ADT on a roadway already above 6,000 ADT, prior to the construction of roadway improvements.

[4] Excluding the roadway segment that is within the developed community of Independence at Mather.

[5] The functionality impact is mitigated by improving the roadway to County standards, including widening travel lanes to 12 feet and/or widening or providing paved shoulders to 6 feet.

Red text with light gray shading indicate project impacts.

11.3 MITIGATION

11.3.1 CEQA Cumulative Plus Jackson Township Project Roadway Segment Mitigation

Table 11.8 summarizes the results of the operations analysis for the study area roadway segments with mitigation. Where feasible, the number of roadway lanes was increased to mitigate the impact. However, the increased number of lanes could not exceed the maximum General Plan designations of the appropriate jurisdictions. The shaded table cells under the "Travel Lanes" and "Facility Type" headings illustrate widened roadways for mitigation purposes, which would be the responsibility of the FOUR PROJECTS to fund. The Jackson Township project would contribute a fair share. The shaded table cells under the "Level of Service" heading indicate those locations that would continue to have LOS impacts after mitigation. The table also includes the constraint that precluded full mitigation of the LOS impact.

The "LOS Impact with Mitigation?" column shows whether there is still an LOS impact after the mitigation measure is applied. In other words, this column shows whether a mitigation measure successfully mitigates the impact or not. In several locations where the improvements allowed under the General Plan would not mitigate an LOS impact, the County has proposed alternative mitigation measures, which are shown in the "Alternative Mitigation" column. These alternative mitigation measures will either fully mitigate the impact or substantially reduce the level of impact.

Table 11.8
CEQA Cumulative Plus FOUR PROJECTS Roadway Segment Mitigations - Impacts Triggered by Jackson Township Project

ID	Roadway	Segment		CEQA Cumulative + FOUR PROJECTS					Mitigated CEQA Cumulative + FOUR PROJECTS						
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Volume / Capacity Ratio	Level of Service	LOS Impact with Mitigation?	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
31.1	Excelsior Rd	Jackson Rd	Collector WJ-6	3	Arterial M	37,780	2.10	**F**	6	Arterial M	0.70	B	No		
31.2	Excelsior Rd	Collector WJ-6	Elder Creek Rd	3	Arterial M	37,130	2.06	**F**	6	Arterial M	0.69	B	No		
66.2	Jackson Rd	14th Ave	Rock Creek Pkwy	4	Arterial M	61,500	1.71	**F**	4	Arterial M	1.71	**F**	Yes		Maximum General Plan lanes
66.3	Jackson Rd	Rock Creek Pkwy	Aspen 1 Dwy	4	Arterial M	57,370	1.59	**F**	4	Arterial M	1.59	**F**	Yes		Maximum General Plan lanes
67	Jackson Rd	South Watt Ave	Hedge Ave	4	Arterial M	67,850	1.88	**F**	6	Arterial M	1.26	**F**	Yes		Maximum General Plan lanes
70.1	Jackson Rd	Bradshaw Rd	Collector WJ-4	6	Arterial M	59,220	1.10	**F**	6	Arterial M	1.10	**F**	Yes		Maximum General Plan lanes
70.2	Jackson Rd	Collector WJ-4	Happy Ln	6	Arterial M	59,210	1.10	**F**	6	Arterial M	1.10	**F**	Yes		Maximum General Plan lanes
71.1	Jackson Rd	Excelsior Rd	Collector JT-3	4	Arterial M	62,440	1.73	**F**	6	Arterial M	1.16	**F**	Yes		Maximum General Plan lanes
71.2	Jackson Rd	Collector JT-3	Tree View Ln	4	Arterial M	46,480	1.29	**F**	6	Arterial M	0.86	D	No		
71.3	Jackson Rd	Tree View Ln	Collector JT-4	4	Arterial M	40,520	1.13	**F**	6	Arterial M	0.75	C	No		
71.4	Jackson Rd	Collector JT-4	Eagles Nest Rd	4	Arterial M	37,510	1.04	**F**					No		
73	Jackson Rd	Sunrise Blvd	Grant Line Rd	4	Arterial M	45,430	1.26	**F**	6	Arterial M	0.84	D	No		
79	Kiefer Blvd	Sunrise Blvd	Rancho Cordova Pkwy	4	Arterial M	33,480	0.93	**E**	4	Arterial M	0.93	**E**	Yes		Maximum General Plan lanes
405	Collector JT-3	Collector JT-5	Jackson Rd	2	Arterial M	20,320	1.13	**F**	4	Arterial M	0.56	A	No		

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 11.8
CEQA Cumulative Plus FOUR PROJECTS Roadway Segment Mitigations - Impacts Triggered by Jackson Township Project

ID	Roadway	Segment		CEQA Cumulative + FOUR PROJECTS					Mitigated CEQA Cumulative + FOUR PROJECTS						
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Volume/ Capacity Ratio	Level of Service	Travel Lanes	Facility Type[1]	Volume / Capacity Ratio	Level of Service	LOS Impact with Mitigation?	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible

Note: Gray shading represents changes in travel lanes or facility type that the project is responsible to provide.

[1] The following classifications are used to determine daily roadway capacity:
Arterial L - Arterial, Low Access Control
Arterial M - Arterial, Moderate Access Control
Arterial H - Arterial, High Access Control
Rural Hwy - Rural 2-lane Highway
Rural S - Rural 2-lane Road, 24'-36' of pavement, Paved Shoulders
Rural NS - Rural 2-lane Road, 24'-36' of pavement, No Shoulders
Res Collector F - Residential Collector with Frontage
Res Collector NF - Residential Collector with No Frontage

[2] Alternative mitigations represent proposed mitigations beyond the General Plan, as proposed by the County of Sacramento.

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

11.3.2 CEQA Cumulative Plus Jackson Township Project Intersection Mitigation

Tables 11.9a and 11.10a summarize the results of the operations analysis for the study area intersections with mitigation. However, the increased number of lanes on each approach does not exceed the County's standard number of approach lanes. **Tables 11.9b and 11.10b** summarize the results of the operations analysis for the study area intersections with the ultimate mitigation, which may exceed the County's standard number of approach lanes. Shaded table cells indicate those locations where changes in traffic control and / or number of approach lanes by type have been made to mitigate impacts, which would be the responsibility of the FOUR PROJECTS to fund. The Jackson Township project would contribute a fair share. The shaded table cells under the "Level of Service" heading indicate those locations with an LOS impact after mitigation. Table 11.10a and Table 11.10b also identifies those intersections that would continue to have LOS impacts after mitigation, along with the constraint that precluded full mitigation. Detailed analysis information is included in the technical appendix.

The "LOS Impact with Mitigation?" column shows whether there is still an LOS impact after the mitigation measure is applied. In other words, this column shows whether a mitigation measure successfully mitigates the impact or not. In several locations where the LOS impact could not be mitigated by implementing the County's standard number of approach lanes, the County has proposed alternative mitigation measures, which are shown in the "Alternative Mitigation" column. These generally include providing additional turn lanes, carrying an additional through lane past the intersection, or designating the intersection as a High Capacity Intersection. These alternative mitigation measures will either fully mitigate the impact or substantially reduce the level of impact.

High Capacity Intersections

Grade separated intersections are proposed along Grant Line Road, in order to meet the Connector JPA's level of service policy. These grade separations would be constructed at Prairie City Road (which is also a designated High Capacity Intersection) and Sunrise Boulevard. Since each of these intersections have unique travel movements, volumes and existing context sensitive conditions (potential environmental issues, right-of-way, physical constraints, etc.), the special treatments utilized at each location will need to be studied to select the treatments that mitigate the LOS impact, while avoiding or minimizing other impacts.

11.3.3 CEQA Cumulative Plus Jackson Township Project Pedestrian and Bicycle Facility Mitigation

The Jackson Township project applicant shall coordinate with Sacramento County to identify the necessary on- and off-site pedestrian and bicycle facilities to serve the proposed development. These facilities shall be incorporated into the Jackson Township project and could include sidewalks, stop signs, standard pedestrian and school crossing warning signs, lane striping to provide a bicycle lane, bicycle parking, signs to identify pedestrian and bicycle paths, raised crosswalks, pedestrian signal heads, and all appropriate traffic calming measures as defined in the County's Neighborhood Traffic Management Program (NTMP). Sidewalks would be required as part of the frontage improvements along all new roadway construction in the Jackson

Township project vicinity in conformance with County design standards. Circulation and access to all proposed public spaces shall include sidewalks that meet Americans with Disabilities Act standards.

11.3.4 CEQA Cumulative Plus Jackson Township Project Transit System Mitigation

The applicant of the Jackson Township project shall coordinate with Regional Transit (or other transit operators) to provide the additional transit facilities and services assumed in transportation analysis (see Section 8.1.2.3), or a cost-effective equivalent level of transit facilities and services.

The assumed transit routes and service frequency would be required at full development of the Jackson Township project. The full level of transit service would not achieve adequate transit ridership during the early stages of development. Thus the ultimate transit service, like the roadway system serving the Jackson Township project, must be phased with development of the Jackson Township project.

11.3.5 CEQA Cumulative Plus Jackson Township Project Functionality Mitigation

Table 11.11 summarizes the results of the functionality analysis for the rural roadway segments with mitigation.

Table 11.9a

CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Impacted Intersections and County Standard Mitigations - Impacts Triggered by Jackson Township Project

	Intersection	AM Peak Hour													
		CEQA Cumulative Plus All			County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS			Alternative Mitigation Needed	CEQA Cumulative Plus All			County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS			Alternative Mitigation Needed
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	
45	Excelsior Road & Jackson Road	Signal	**F**	**>300**	Signal	**F**	**118.6**	Yes	Signal	**F**	**269.1**	Signal	**F**	**150.7**	Yes
47	Excelsior Road & Florin Road	Signal	**F**	**111.2**	Signal	D	47.2	No	Signal	E	74.2	Signal	E	67.3	No
51	Mather Field Road & Rockingham Drive	Signal	**F**	**>300**	Signal	**-**	**-**	Yes	Signal	**F**	**170.3**	Signal	**-**	**-**	Yes
58	Zinfandel Drive & Douglas Road	Signal	**F**	**216.8**	Signal	E	61.9	No	Signal	**F**	**220.1**	Signal	E	68.4	No
61	Eagles Nest Road & Florin Road	Two-way stop			Signal	**F**	**142.4**	Yes	Two-way stop			Signal	**F**	**137.7**	Yes
	Northbound		***F***	***>300***						***F***	***>300***				
	Southbound		***F***	***>300***						***F***	***>300***				
	Eastbound Left Turn		*B*	*11*						*A*	*9.3*				
	Westbound Left Turn		*A*	*0*						*A*	*8.7*				
69	Sunrise Boulevard & Kiefer Boulevard	Signal	**F**	**>300**	Signal	**F**	**118.3**	No	Signal	**F**	**261.4**	Signal	**E**	**71.1**	No

Note: Gray shading represents changes in traffic control that the project is responsible to provide.

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 11.9b

CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) County Standard and Ultimate Mitigations - Impacts Triggered by Jackson Township Project

	Intersection	AM Peak Hour											
		County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS			Ultimate Mitigated CEQA Cumulative Plus FOUR PROJECTS			County Standard Mitigated CEQA Cumulative Plus FOUR PROJECTS			Ultimate Mitigated CEQA Cumulative Plus FOUR PROJECTS		
		Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)	Control	Int LOS	Delay (sec)
45	Excelsior Road & Jackson Road	Signal	**F**	**118.6**	Signal	-	-	Signal	**F**	**150.7**	Signal	-	-
51	Mather Field Road & Rockingham Drive	Signal	**F**	**>300**	Signal	-	-	Signal	**F**	**>300**	Signal	-	-
61	Eagles Nest Road & Florin Road	Signal	**F**	**142.4**	Signal	D	50.4	Signal	**F**	**137.7**	Signal	D	45.5

Note: Gray shading represents changes in traffic control that the project is responsible to provide.

Bold values do not meet LOS policy. **Red** values with light gray shading indicate project impacts.

Table 11.10a

CEQA Cumulative Plus FOUR PROJECTS (Prop. Proj.) Intersection Impacts and Mitigations - Impacts Triggered by Jackson Township

		Traffic Control		Super Cumulative Plus FOUR PROJECTS Lane Geometrics				County Standard Mitigated Super Cumulative Plus FOUR PROJECTS Lane Geometrics				LOS Impact with Mitgation?
		Super Cumulative Plus FOUR PROJECTS	Mitigated Super Cumulative Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach	
45	Excelsior Road & Jackson Road	Signal	Signal									Yes
47	Excelsior Road & Florin Road	Signal	Signal									No
51	Mather Field Road & Rockingham Drive	Signal	Signal									Yes
58	Zinfandel Drive & Douglas Road	Signal	Signal									No
61	Eagles Nest Rd/Eagles Nest Road & Florin Road	Two-way stop	Signal									Yes
69	Sunrise Boulevard & Kiefer Boulevard	Signal	Signal									No

[1] High capacity intersections are defined in the Sacramento County General Plan and may include grade separations, additional turn lanes, and/or other features as deemed appropriate by the County.

[2] Alternative mitigations represent proposed mitigations beyond the General Plan or standard intersection geometry, excluding high capacity intersections, as proposed by the County of Sacramento.

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 11.10b

CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) Intersection Impacts and Mitigations - Impacts Triggered by Jackson Township

	Intersection	Traffic Control		County Standard Mitigated Super Cumulative Plus FOUR PROJECTS Lane Geometrics				Ultimate Mitigated Super Cumulative Plus FOUR PROJECTS Lane Geometrics				LOS Impact with Mitgation?	High Capacity Intersection?[1]	Alternative Mitigation[2]	Constraint if Full Mitigation Not Possible
		Super Cumulative Plus FOUR PROJECTS	Mitigated Super Cumulative Plus FOUR PROJECTS	NB Approach	SB Approach	EB Approach	WB Approach	NB Approach	SB Approach	EB Approach	WB Approach				
45	Excelsior Road & Jackson Road	Signal	Signal									Yes	No	NBR overlap	Maximum General Plan Lanes
51	Mather Field Road & Rockingham Drive	Signal	Signal									Yes	No		Existing development
61	Eagles Nest Rd/Eagles Nest Road & Florin Road	Signal	Signal									No	No		

[1] High capacity intersections are defined in the Sacramento County General Plan and may include grade separations, additional turn lanes, and/or other features as deemed appropriate by the County.

[2] Alternative mitigations represent proposed mitigations beyond the General Plan or standard intersection geometry, excluding high capacity intersections, as proposed by the County of Sacramento.

Note: Gray shading represents changes in traffic control or approach lanes for which the project is responsible to pay a fair share.

Table 11.11
CEQA Cumulative Plus FOUR PROJECTS Functionality Mitigations - Impacts Triggered by Jackson Township Project

ID	Roadway	Segment		CEQA Cumulative + FOUR PROJECTS				Mitigation	Impact after Mitigation?
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Functionality Impact? [2]		
15	Douglas Rd	Mather Blvd	Zinfandel Dr	4	Arterial M	34,000	Yes[3]	Widen to County standards [5]	No
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd	6	Arterial M	50,410	Yes[3]	Widen to County standards [5]	No
25	Elder Creek Rd	South Watt Ave	Hedge Ave	4	Arterial M	48,190	Yes[3]	Widen to County standards [5]	No
26	Elder Creek Rd	Hedge Ave	Mayhew Rd	4	Arterial M	33,950	Yes[3]	Widen to County standards [5]	No
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd	4	Arterial M	40,630	Yes[3]	Widen to County standards [5]	No
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd	3	Arterial M	33,740	Yes[3]	Widen to County standards [5]	No
30	Excelsior Rd	Kiefer Blvd	Jackson Rd	2	Arterial M	27,590	Yes	Widen to County standards [5]	No
31	Excelsior Rd	Jackson Rd	Elder Creek Rd	3	Arterial M	37,130	Yes[3]	Widen to County standards [5]	No
32	Excelsior Rd	Elder Creek Rd	Florin Rd	3	Arterial M	12,510	Yes[3]	Widen to County standards [5]	No
33	Excelsior Rd	Florin Rd	Gerber Rd	2	Arterial M	12,810	Yes	Widen to County standards [5]	No
41	Florin Rd	Mayhew Rd	Bradshaw Rd	4	Arterial M	23,450	Yes[3]	Widen to County standards [5]	No
42	Florin Rd	Bradshaw Rd	Excelsior Rd	4	Arterial M	25,600	Yes[3]	Widen to County standards [5]	No
48	Fruitridge Rd	Fruitridge Rd	Hedge Ave	3	Arterial M	20,600	Yes[3]	Widen to County standards [5]	No
50	Grant Line Rd	White Rock Rd	Douglas Rd	4	Arterial M	41,060	Yes[3]	Widen to County standards [5]	No
70	Jackson Rd	Bradshaw Rd	Excelsior Rd	6	Arterial M	59,220	Yes[3]	Widen to County standards [5]	No
71	Jackson Rd	Excelsior Rd	Eagles Nest Rd	4	Arterial M	62,440	Yes[3]	Widen to County standards [5]	No
77	Kiefer Blvd	Bradshaw Rd	Happy Ln	6	Arterial M	51,510	Yes[3]	Widen to County standards [5]	No
78	Kiefer Blvd	Zinfandel Dr	Sunrise Blvd	3	Arterial M	39,640	Yes[3]	Widen to County standards [5]	No
116	White Rock Rd	Fitzgerald Rd	Grant Line Rd	4	Arterial M	55,990	Yes[3]	Widen to County standards [5]	No
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd	4	Arterial M	22,240	Yes[3]	Widen to County standards [5]	No

Red text with light gray shading indicate project impacts.

Table 11.11
CEQA Cumulative Plus FOUR PROJECTS Functionality Mitigations - Impacts Triggered by Jackson Township Project

ID	Roadway	Segment		CEQA Cumulative + FOUR PROJECTS				Mitigation	Impact after Mitigation?
		From	To	Travel Lanes	Facility Type[1]	Forecasted Volume	Functionality Impact? [2]		

Note: Gray shading indicates changes in travel lanes or facility type that the project is responsible to provide. For all roadway segments to be widened, the project is responsible to build the entire roadway to County standards.

[1] Substandard rural roads are defined as rural, 2-lane roadway segments with travel lanes narrower than 12 feet and/or roadside shoulders narrower than 6 feet.

[2] Functionality impacts are triggered when a substandard rural road increases over a threshold of 6,000 ADT, or for a roadway already above 6,000 ADT, increases by more than 600 ADT.

[3] The potential for an impact exists should the project generate traffic volumes on the roadway exceeding 6,000 ADT, or increasing more than 600 ADT on a roadway already above 6,000 ADT, prior to the construction of roadway improvements.

[4] Excluding the roadway segment that is within the developed community of Independence at Mather.

[5] The functionality impact is mitigated by improving the roadway to County standards, including widening travel lanes to 12 feet and/or widening or providing paved shoulders to 6 feet.

Red text with light gray shading indicate project impacts.

11.3.6 CEQA Cumulative Plus Jackson Township Project Mitigation Summary

Tables 11.12 and 11.13 summarize the mitigation success for the roadway segments and intersections that exhibit significant LOS impacts. **Table 11.14** summarizes the mitigation success for the rural roadway segments that exhibit functionality impacts. Tables 11.13 through 11.15 summarize the mitigation success for the freeway system facilities that exhibit significant impacts.

Table 11.12
CEQA Cumulative Plus FOUR PROJECTS
Summary of Impacted Roadway Segments Triggered by Jackson Township Project

ID	Roadway	Segment	
		From	To
Level of Service Impact Fully Mitigated by General Plan Lanes			
31.1	Excelsior Rd	Jackson Rd	Collector WJ-6
31.2	Excelsior Rd	Collector WJ-6	Elder Creek Rd
71.2	Jackson Rd	Collector JT-3	Tree View Ln
71.3	Jackson Rd	Tree View Ln	Collector JT-4
71.4	Jackson Rd	Collector JT-4	Eagles Nest Rd
73	Jackson Rd	Sunrise Blvd	Grant Line Rd
405	Collector JT-3	Collector JT-5	Jackson Rd
Level of Service Impact Not Fully Mitigated by General Plan Lanes			
66.2	Jackson Rd	14th Ave	Rock Creek Pkwy
66.3	Jackson Rd	Rock Creek Pkwy	Aspen 1 Dwy
67	Jackson Rd	South Watt Ave	Hedge Ave
70.1	Jackson Rd	Bradshaw Rd	Collector WJ-4
70.2	Jackson Rd	Collector WJ-4	Happy Ln
71.1	Jackson Rd	Excelsior Rd	Collector JT-3

Note: Refer to Table 7.8 for detailed description of impacts and mitigations.

Table 11.13

CEQA Cumulative Plus FOUR PROJECTS (Proposed Project) -
Summary of Intersection Impacts Triggered by Jackson Township

	Intersection	Alternative Mitigation
Level of Service Impact Fully Mitigated by General Plan Lanes		
47	Excelsior Road & Florin Road	
58	Zinfandel Drive & Douglas Road	
61	Eagles Nest Road & Florin Road	**
69	Sunrise Boulevard & Kiefer Boulevard	
Level of Service Impact Not Fully Mitigated by General Plan Lanes		
45	Excelsior Road & Jackson Road	
51	Mather Field Road & Rockingham Drive	

[1] Alternative mitigations represent proposed mitigations beyond the General Plan, excluding designated high capacity intersections, as proposed by the County of Sacramento.

* denotes alternative mitigations that improve operations but do not fully mitigate the impact.
** denotes alternative mitigations that fully mitigate the impact.

Table 11.14
CEQA Cumulative Plus FOUR PROJECTS
Summary of Functionality Impacts Triggered by Jackson Township Project

ID	Roadway	Segment	
		From	To
Functionality Impact Fully Mitigated			
15	Douglas Rd	Mather Blvd	Zinfandel Dr
16	Douglas Rd	Zinfandel Dr	Sunrise Blvd
25	Elder Creek Rd	South Watt Ave	Hedge Ave
26	Elder Creek Rd	Hedge Ave	Mayhew Rd
27	Elder Creek Rd	Mayhew Rd	Bradshaw Rd
28	Elder Creek Rd	Bradshaw Rd	Excelsior Rd
30	Excelsior Rd	Kiefer Blvd	Jackson Rd
31	Excelsior Rd	Jackson Rd	Elder Creek Rd
32	Excelsior Rd	Elder Creek Rd	Florin Rd
33	Excelsior Rd	Florin Rd	Gerber Rd
41	Florin Rd	Mayhew Rd	Bradshaw Rd
42	Florin Rd	Bradshaw Rd	Excelsior Rd
48	Fruitridge Rd	Fruitridge Rd	Hedge Ave
50	Grant Line Rd	White Rock Rd	Douglas Rd
70	Jackson Rd	Bradshaw Rd	Excelsior Rd
71	Jackson Rd	Excelsior Rd	Eagles Nest Rd
77	Kiefer Blvd	Bradshaw Rd	Happy Ln
78	Kiefer Blvd	Zinfandel Dr	Sunrise Blvd
116	White Rock Rd	Fitzgerald Rd	Grant Line Rd
123	Zinfandel Dr	Douglas Rd	Kiefer Blvd

12. VEHICLE MILES TRAVELED PER CAPITA

12.1 VMT DESCRIPTION

For CEQA purposes, California Senate Bill 743 (SB 743) dictates a change in the evaluation of transportation impacts, primarily shifting from level of service (LOS) to vehicle miles traveled (VMT). The VMT metric combines mode choice and trip length into a single parameter that is generally proportional to greenhouse gas (GHG) effects. The CEQA changes proposed under SB 743, however, are currently voluntary and will not become mandatory until at least January 1, 2020. This section discusses VMT analysis that was prepared for the proposed projects under Existing Plus Project and MTP Cumulative Plus Four Projects conditions.

12.2 METHODOLOGY

The analysis presented in this section was prepared using a methodology generally consistent with the methodology adopted by SACOG to determine regional thresholds and VMT Per Capita regionally. Because SACOG's adopted model (SacSIM) is a "tour-based" Activity Based Model (ABM) it is possible to trace every daily trip undertaken by each member of each household, whether or not each trip originates or terminates at the person's home or somewhere else. Therefore, it is also possible to trace the total distance traveled by each person during the day and the mode used for each trip. This allows SACOG (and this analysis) to calculate detailed VMT per capita for all trips undertaken by residents of the region or a particular study or project area. This VMT, combined with VMT of trips for non-residential uses within the study or project area, results in overall VMT (and VMT per capita) generated by the study or project area.

12.3 EXISTING PLUS PROJECT

Table 12.1 shows the estimated VMT per capita under Existing Plus Jackson Township conditions. Over 14,500 people are anticipated to generate over 297,500 vehicle miles traveled per day. That equates to an average 20.4 vehicle miles traveled per capita per day, higher than the predicted 18.6 VMT per capita average in the total region.

12.3 MTP PLUS ALL PROJECTS

Table 12.1 also depicts the estimated VMT per capita in the Jackson Corridor under MTP Cumulative Plus Four Projects condition. Each of the four projects are anticipated to have a higher VMT per capita than the remainder of the region. In total, the population in the region (3,139,601) is predicted to generate 54,154,989 daily vehicle miles; translating to 17.3 vehicle miles traveled per capita per day.

Table 12.1
Estimated VMT per Capita Jackson Corridor Joint TIS

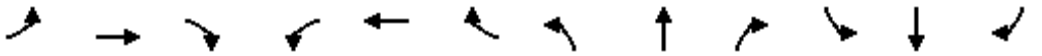
Scenario	Population	VMT	VMT/Capita
Existing plus Jackson Township			
Jackson Township	14,597	297,769	20.4
Remainder of Regional	2,214,577	Varies	18.5
Total Region	Varies	Varies	18.6
MTP Plus All Projects			
Jackson Township	14,597	264,306	18.1
Mather South	8,703	159,094	18.3
New Bridge	9,183	187,527	20.4
West Jackson	35,561	674,632	19.0
Remainder of Regional	3,071,557	52,869,430	17.2
Total Region	3,139,601	54,154,989	17.3

Appendix A

Existing Synchro Reports

Existing No Project

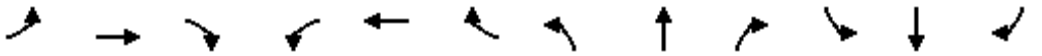
AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	662	0	969	0	0	0	0	1392	552	0	1131	343
Future Volume (vph)	662	0	969	0	0	0	0	1392	552	0	1131	343
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	4.0		4.0	4.0
Lane Util. Factor	0.97		0.88					0.91	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3367		2733					4988	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3367		2733					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	662	0	969	0	0	0	0	1392	552	0	1131	343
RTOR Reduction (vph)	0	0	26	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	662	0	943	0	0	0	0	1392	552	0	1131	343
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	61.0		61.0					51.0	120.0		51.0	120.0
Effective Green, g (s)	61.0		61.0					51.0	120.0		51.0	120.0
Actuated g/C Ratio	0.51		0.51					0.42	1.00		0.42	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Lane Grp Cap (vph)	1711		1389					2119	1553		2119	1553
v/s Ratio Prot								c0.28			0.23	
v/s Ratio Perm	0.20		c0.35						0.36			0.22
v/c Ratio	0.39		0.68					0.66	0.36		0.53	0.22
Uniform Delay, d1	18.1		22.2					27.5	0.0		25.7	0.0
Progression Factor	1.00		1.00					0.68	1.00		0.69	1.00
Incremental Delay, d2	0.7		2.7					1.2	0.5		0.8	0.3
Delay (s)	18.7		24.8					20.0	0.5		18.4	0.3
Level of Service	B		C					B	A		B	A
Approach Delay (s)		22.4			0.0			14.4			14.2	
Approach LOS		C			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		

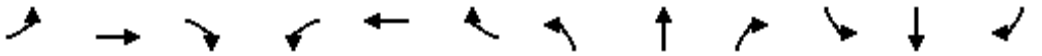
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	133	250	71	238	743	706	292	1103	178	665	1409	132
Future Volume (vph)	133	250	71	238	743	706	292	1103	178	665	1409	132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		0.97	0.95	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	3356		3367	3471	2733	3367	4988	1553	3367	4988	1553
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	3356		3367	3471	2733	3367	4988	1553	3367	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	133	250	71	238	743	706	292	1103	178	665	1409	132
RTOR Reduction (vph)	0	21	0	0	0	518	0	0	101	0	0	74
Lane Group Flow (vph)	133	300	0	238	743	188	292	1103	77	665	1409	58
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	7.0	25.0		14.0	32.0	32.0	16.0	35.0	35.0	30.0	49.0	49.0
Effective Green, g (s)	7.0	25.0		14.0	32.0	32.0	16.0	35.0	35.0	30.0	49.0	49.0
Actuated g/C Ratio	0.06	0.21		0.12	0.27	0.27	0.13	0.29	0.29	0.25	0.41	0.41
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	196	699		392	925	728	448	1454	452	841	2036	634
v/s Ratio Prot	c0.04	0.09		0.07	c0.21		0.09	c0.22		c0.20	0.28	
v/s Ratio Perm						0.07			0.05			0.04
v/c Ratio	0.68	0.43		0.61	0.80	0.26	0.65	0.76	0.17	0.79	0.69	0.09
Uniform Delay, d1	55.4	41.3		50.4	41.1	34.7	49.4	38.7	31.7	42.1	29.3	21.8
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.65	0.61	0.42	1.12	1.16	1.60
Incremental Delay, d2	17.3	1.9		6.8	7.3	0.9	5.9	3.1	0.7	6.3	1.6	0.2
Delay (s)	72.7	43.2		57.2	48.4	35.5	38.0	26.7	13.9	53.2	35.7	35.2
Level of Service	E	D		E	D	D	D	C	B	D	D	D
Approach Delay (s)		51.9			44.3			27.3			41.0	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	39.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	77.9%	ICU Level of Service	D
Analysis Period (min)	15		

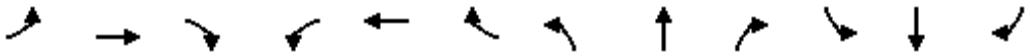
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	138	357	376	5	1001	27	351	12	2	20	13	225
Future Volume (vph)	138	357	376	5	1001	27	351	12	2	20	13	225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.97	1.00
Satd. Flow (prot)	1736	3471	1553	1736	3471	1553	1618	1627	1524		1790	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.97	1.00
Satd. Flow (perm)	1736	3471	1553	1736	3471	1553	1618	1627	1524		1790	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	138	357	376	5	1001	27	351	12	2	20	13	225
RTOR Reduction (vph)	0	0	147	0	0	19	0	0	2	0	0	170
Lane Group Flow (vph)	138	357	229	5	1001	8	183	180	0	0	33	55
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4	2	3	8		2	2		6	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	11.0	39.0	64.0	4.0	32.0	32.0	25.0	25.0	25.0		16.0	16.0
Effective Green, g (s)	11.0	39.0	64.0	4.0	32.0	32.0	25.0	25.0	25.0		16.0	16.0
Actuated g/C Ratio	0.10	0.37	0.61	0.04	0.30	0.30	0.24	0.24	0.24		0.15	0.15
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Lane Grp Cap (vph)	181	1289	946	66	1057	473	385	387	362		272	238
v/s Ratio Prot	c0.08	0.10	0.06	0.00	c0.29		c0.11	0.11			0.02	
v/s Ratio Perm			0.09			0.01			0.00			c0.03
v/c Ratio	0.76	0.28	0.24	0.08	0.95	0.02	0.48	0.47	0.00		0.12	0.23
Uniform Delay, d1	45.7	23.1	9.4	48.7	35.7	25.5	34.4	34.3	30.5		38.4	39.1
Progression Factor	1.00	1.00	1.00	1.20	0.84	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	25.7	0.5	0.6	1.8	15.3	0.1	4.2	4.0	0.0		0.9	2.2
Delay (s)	71.5	23.7	10.0	60.3	45.4	25.6	38.5	38.3	30.5		39.3	41.3
Level of Service	E	C	A	E	D	C	D	D	C		D	D
Approach Delay (s)		25.3			44.9			38.3			41.1	
Approach LOS		C			D			D			D	

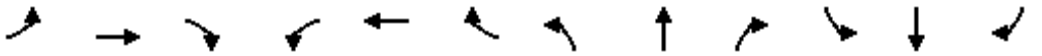
Intersection Summary			
HCM 2000 Control Delay	36.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	62.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	214	97	183	471	56	592	57	275	87	114	34
Future Volume (vph)	26	214	97	183	471	56	592	57	275	87	114	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		0.95	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85		0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00		0.98	
Satd. Flow (prot)	1752	3505	1568	1752	3449		1665	1683	1568		3366	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00		0.98	
Satd. Flow (perm)	1752	3505	1568	1752	3449		1665	1683	1568		3366	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	26	214	97	183	471	56	592	57	275	87	114	34
RTOR Reduction (vph)	0	0	82	0	9	0	0	0	186	0	13	0
Lane Group Flow (vph)	26	214	15	183	518	0	326	323	89	0	222	0
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4						2			
Actuated Green, G (s)	5.0	16.0	16.0	18.0	29.0		34.0	34.0	34.0		16.0	
Effective Green, g (s)	5.0	16.0	16.0	18.0	29.0		34.0	34.0	34.0		16.0	
Actuated g/C Ratio	0.05	0.15	0.15	0.17	0.28		0.32	0.32	0.32		0.15	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Lane Grp Cap (vph)	83	534	238	300	952		539	544	507		512	
v/s Ratio Prot	0.01	0.06		c0.10	c0.15		c0.20	0.19			c0.07	
v/s Ratio Perm			0.01						0.06			
v/c Ratio	0.31	0.40	0.06	0.61	0.54		0.60	0.59	0.18		0.43	
Uniform Delay, d1	48.3	40.2	38.1	40.3	32.4		29.9	29.7	25.5		40.4	
Progression Factor	0.91	1.55	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	9.4	2.2	0.5	8.9	2.2		5.0	4.7	0.8		2.7	
Delay (s)	53.3	64.5	38.6	49.2	34.6		34.8	34.4	26.2		43.1	
Level of Service	D	E	D	D	C		C	C	C		D	
Approach Delay (s)		56.2			38.4			32.1			43.1	
Approach LOS		E			D			C			D	

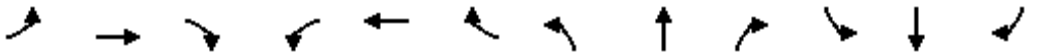
Intersection Summary			
HCM 2000 Control Delay	39.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	277	262	250	691	19	462	48	135	28	144	39
Future Volume (vph)	21	277	262	250	691	19	462	48	135	28	144	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	3.9	3.9	5.5	4.0	4.0	4.3	4.3		5.1	5.1	5.1
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.89		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1568	3400	3505	1568	3367	3087		1752	3505	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	3505	1568	3400	3505	1568	3367	3087		1752	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	21	277	262	250	691	19	462	48	135	28	144	39
RTOR Reduction (vph)	0	0	166	0	0	12	0	108	0	0	0	31
Lane Group Flow (vph)	21	277	96	250	691	7	462	75	0	28	144	8
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	3%	3%	3%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		8	8		4	4	
Permitted Phases			6			2						4
Actuated Green, G (s)	19.5	66.1	66.1	19.5	66.0	66.0	35.7	35.7		34.9	34.9	34.9
Effective Green, g (s)	19.5	66.1	66.1	19.5	66.0	66.0	35.7	35.7		34.9	34.9	34.9
Actuated g/C Ratio	0.11	0.37	0.37	0.11	0.37	0.37	0.20	0.20		0.19	0.19	0.19
Clearance Time (s)	5.5	3.9	3.9	5.5	4.0	4.0	4.3	4.3		5.1	5.1	5.1
Lane Grp Cap (vph)	189	1287	575	368	1285	574	667	612		339	679	304
v/s Ratio Prot	0.01	0.08		c0.07	c0.20		c0.14	0.02		0.02	c0.04	
v/s Ratio Perm			0.06			0.00						0.00
v/c Ratio	0.11	0.22	0.17	0.68	0.54	0.01	0.69	0.12		0.08	0.21	0.02
Uniform Delay, d1	72.4	39.1	38.4	77.2	45.0	36.3	67.1	59.3		59.4	61.0	58.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.2	0.4	0.6	9.7	1.6	0.0	5.8	0.4		0.5	0.7	0.2
Delay (s)	73.6	39.5	39.0	87.0	46.6	36.3	72.9	59.7		59.9	61.7	58.9
Level of Service	E	D	D	F	D	D	E	E		E	E	E
Approach Delay (s)		40.6			56.9			69.1			61.0	
Approach LOS		D			E			E			E	

Intersection Summary			
HCM 2000 Control Delay	56.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	22.9
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		

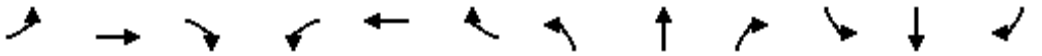
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	794	0	480	0	881	850	0	374	338
Future Volume (vph)	0	0	0	794	0	480	0	881	850	0	374	338
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.6		4.6		3.5	4.0		5.1	5.1
Lane Util. Factor				0.97		0.88		0.91	1.00		0.91	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3367		2733		4988	1553		4988	1553
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3367		2733		4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	794	0	480	0	881	850	0	374	338
RTOR Reduction (vph)	0	0	0	0	0	192	0	0	0	0	0	139
Lane Group Flow (vph)	0	0	0	794	0	288	0	881	850	0	374	199
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type				Prot		Perm		NA	Free		NA	Perm
Protected Phases				4				6			2	
Permitted Phases						4			Free			2
Actuated Green, G (s)				35.4		35.4		66.5	110.0		64.9	64.9
Effective Green, g (s)				35.4		35.4		66.5	110.0		64.9	64.9
Actuated g/C Ratio				0.32		0.32		0.60	1.00		0.59	0.59
Clearance Time (s)				4.6		4.6		3.5			5.1	5.1
Lane Grp Cap (vph)				1083		879		3015	1553		2942	916
v/s Ratio Prot				c0.24				0.18			0.07	
v/s Ratio Perm						0.11			c0.55			0.13
v/c Ratio				0.73		0.33		0.29	0.55		0.13	0.22
Uniform Delay, d1				33.1		28.3		10.4	0.0		10.0	10.6
Progression Factor				1.00		1.00		0.70	1.00		1.00	1.00
Incremental Delay, d2				4.4		1.0		0.2	1.3		0.1	0.5
Delay (s)				37.5		29.3		7.6	1.3		10.1	11.2
Level of Service				D		C		A	A		B	B
Approach Delay (s)		0.0			34.4			4.5			10.6	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.7
Intersection Capacity Utilization	46.3%	ICU Level of Service	A
Analysis Period (min)	15		

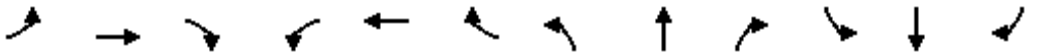
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	499	0	1021	0	0	0	0	1232	807	0	944	220
Future Volume (vph)	499	0	1021	0	0	0	0	1232	807	0	944	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4		6.4					5.1	4.0		4.6	4.0
Lane Util. Factor	0.97		0.88					0.91	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3367		2733					4988	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3367		2733					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	499	0	1021	0	0	0	0	1232	807	0	944	220
RTOR Reduction (vph)	0	0	165	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	499	0	856	0	0	0	0	1232	807	0	944	220
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	33.6		33.6					64.9	110.0		65.4	110.0
Effective Green, g (s)	33.6		33.6					64.9	110.0		65.4	110.0
Actuated g/C Ratio	0.31		0.31					0.59	1.00		0.59	1.00
Clearance Time (s)	6.4		6.4					5.1			4.6	
Lane Grp Cap (vph)	1028		834					2942	1553		2965	1553
v/s Ratio Prot								0.25			0.19	
v/s Ratio Perm	0.15		c0.31						c0.52			0.14
v/c Ratio	0.49		1.03					0.42	0.52		0.32	0.14
Uniform Delay, d1	31.2		38.2					12.3	0.0		11.2	0.0
Progression Factor	1.00		1.00					1.00	1.00		0.39	1.00
Incremental Delay, d2	1.6		38.2					0.4	1.2		0.2	0.2
Delay (s)	32.8		76.4					12.7	1.2		4.5	0.2
Level of Service	C		E					B	A		A	A
Approach Delay (s)		62.1			0.0			8.2			3.7	
Approach LOS		E			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	24.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		

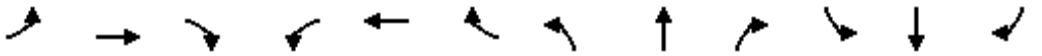
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	792	0	198	0	624	473	0	691	345
Future Volume (vph)	0	0	0	792	0	198	0	624	473	0	691	345
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.9	4.9			4.8	4.0		4.8	4.0
Lane Util. Factor				0.95	0.95			0.95	1.00		0.95	1.00
Frt				1.00	0.94			1.00	0.85		1.00	0.85
Flt Protected				0.95	0.97			1.00	1.00		1.00	1.00
Satd. Flow (prot)				1649	1582			3471	1553		3471	1553
Flt Permitted				0.95	0.97			1.00	1.00		1.00	1.00
Satd. Flow (perm)				1649	1582			3471	1553		3471	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	792	0	198	0	624	473	0	691	345
RTOR Reduction (vph)	0	0	0	0	22	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	507	461	0	0	624	473	0	691	345
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type				Perm	NA			NA	Free		NA	Free
Protected Phases					8			2			6	
Permitted Phases				8					Free			Free
Actuated Green, G (s)				35.1	35.1			65.2	110.0		65.2	110.0
Effective Green, g (s)				35.1	35.1			65.2	110.0		65.2	110.0
Actuated g/C Ratio				0.32	0.32			0.59	1.00		0.59	1.00
Clearance Time (s)				4.9	4.9			4.8			4.8	
Lane Grp Cap (vph)				526	504			2057	1553		2057	1553
v/s Ratio Prot								0.18			c0.20	
v/s Ratio Perm				c0.31	0.29				0.30			0.22
v/c Ratio				0.96	0.91			0.30	0.30		0.34	0.22
Uniform Delay, d1				36.8	36.0			11.1	0.0		11.4	0.0
Progression Factor				1.00	1.00			0.75	1.00		1.00	1.00
Incremental Delay, d2				31.2	23.5			0.4	0.5		0.4	0.3
Delay (s)				68.1	59.5			8.7	0.5		11.8	0.3
Level of Service				E	E			A	A		B	A
Approach Delay (s)		0.0			63.9			5.2			8.0	
Approach LOS		A			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	24.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.7
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		

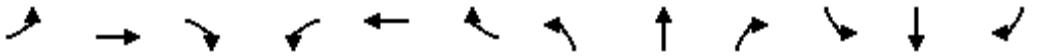
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	0	977	0	0	0	0	898	295	0	1234	201
Future Volume (vph)	250	0	977	0	0	0	0	898	295	0	1234	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	5.1					4.9	4.0		4.8	4.0
Lane Util. Factor	0.95	0.91	0.95					0.91	1.00		0.95	1.00
Frt	1.00	0.86	0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	1649	1422	1475					4988	1553		3471	1553
Flt Permitted	0.95	1.00	1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	1649	1422	1475					4988	1553		3471	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	250	0	977	0	0	0	0	898	295	0	1234	201
RTOR Reduction (vph)	0	46	46	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	225	458	452	0	0	0	0	898	295	0	1234	201
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA	Perm					NA	Free		NA	Free
Protected Phases		4						2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	34.9	34.9	34.9					65.1	110.0		65.2	110.0
Effective Green, g (s)	34.9	34.9	34.9					65.1	110.0		65.2	110.0
Actuated g/C Ratio	0.32	0.32	0.32					0.59	1.00		0.59	1.00
Clearance Time (s)	5.1	5.1	5.1					4.9			4.8	
Lane Grp Cap (vph)	523	451	467					2951	1553		2057	1553
v/s Ratio Prot								0.18			c0.36	
v/s Ratio Perm	0.14	0.32	0.31						0.19			0.13
v/c Ratio	0.43	1.01	0.97					0.30	0.19		0.60	0.13
Uniform Delay, d1	29.7	37.5	37.0					11.2	0.0		14.2	0.0
Progression Factor	1.00	1.00	1.00					1.00	1.00		0.60	1.00
Incremental Delay, d2	2.6	46.1	34.2					0.3	0.3		1.0	0.1
Delay (s)	32.3	83.6	71.2					11.4	0.3		9.5	0.1
Level of Service	C	F	E					B	A		A	A
Approach Delay (s)		69.2			0.0			8.7			8.1	
Approach LOS		E			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	27.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	82.7%	ICU Level of Service	E
Analysis Period (min)	15		

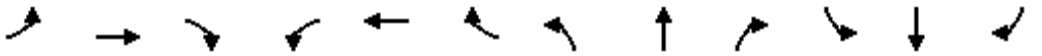
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	880	0	154	0	815	686	0	737	303
Future Volume (vph)	0	0	0	880	0	154	0	815	686	0	737	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.8		6.8		4.6	4.0		4.6	4.0
Lane Util. Factor				0.97		1.00		0.91	1.00		0.95	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3400		1568		5036	1568		3505	1568
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3400		1568		5036	1568		3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	880	0	154	0	815	686	0	737	303
RTOR Reduction (vph)	0	0	0	0	0	82	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	880	0	72	0	815	686	0	737	303
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				Perm		Perm		NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases				8		8			Free			Free
Actuated Green, G (s)				33.2		33.2		65.4	110.0		65.4	110.0
Effective Green, g (s)				33.2		33.2		65.4	110.0		65.4	110.0
Actuated g/C Ratio				0.30		0.30		0.59	1.00		0.59	1.00
Clearance Time (s)				6.8		6.8		4.6			4.6	
Lane Grp Cap (vph)				1026		473		2994	1568		2083	1568
v/s Ratio Prot								0.16			0.21	
v/s Ratio Perm				c0.26		0.05			c0.44			0.19
v/c Ratio				0.86		0.15		0.27	0.44		0.35	0.19
Uniform Delay, d1				36.2		28.1		10.8	0.0		11.5	0.0
Progression Factor				1.00		1.00		0.56	1.00		1.00	1.00
Incremental Delay, d2				9.2		0.7		0.2	0.7		0.5	0.3
Delay (s)				45.4		28.8		6.2	0.7		11.9	0.3
Level of Service				D		C		A	A		B	A
Approach Delay (s)		0.0			42.9			3.7			8.5	
Approach LOS		A			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	16.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	11.4
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		

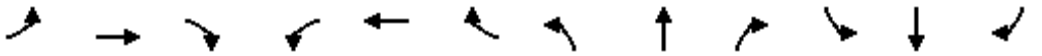
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	344	947	1227	0	0	202	0	1376	9	0	1439	178
Future Volume (vph)	344	947	1227	0	0	202	0	1376	9	0	1439	178
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0		4.0			4.0	4.0
Lane Util. Factor	0.91	0.86	0.91			0.88		0.86			0.95	1.00
Frt	1.00	0.95	0.85			0.85		1.00			1.00	0.85
Flt Protected	0.95	1.00	1.00			1.00		1.00			1.00	1.00
Satd. Flow (prot)	1595	3000	1427			2733		6339			3505	1568
Flt Permitted	0.95	1.00	1.00			1.00		1.00			1.00	1.00
Satd. Flow (perm)	1595	3000	1427			2733		6339			3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	344	947	1227	0	0	202	0	1376	9	0	1439	178
RTOR Reduction (vph)	0	6	25	0	0	191	0	1	0	0	0	61
Lane Group Flow (vph)	310	1516	662	0	0	11	0	1384	0	0	1439	117
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Turn Type	Split	NA	Perm			Prot		NA			NA	Perm
Protected Phases	4	4				1		2			6	
Permitted Phases			4									6
Actuated Green, G (s)	55.0	55.0	55.0			6.0		37.0			47.0	47.0
Effective Green, g (s)	55.0	55.0	55.0			6.0		37.0			47.0	47.0
Actuated g/C Ratio	0.50	0.50	0.50			0.05		0.34			0.43	0.43
Clearance Time (s)	4.0	4.0	4.0			4.0		4.0			4.0	4.0
Lane Grp Cap (vph)	797	1500	713			149		2132			1497	669
v/s Ratio Prot	0.19	c0.51				0.00		0.22			c0.41	
v/s Ratio Perm			0.46									0.07
v/c Ratio	0.39	1.01	0.93			0.07		0.65			0.96	0.17
Uniform Delay, d1	17.1	27.5	25.7			49.4		31.0			30.6	19.5
Progression Factor	1.00	1.00	1.00			1.00		1.00			0.78	0.62
Incremental Delay, d2	1.4	25.8	20.2			1.0		1.5			13.2	0.4
Delay (s)	18.5	53.3	45.8			50.3		32.5			36.9	12.5
Level of Service	B	D	D			D		C			D	B
Approach Delay (s)		47.0			50.3			32.5			34.2	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	40.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	97.1%	ICU Level of Service	F
Analysis Period (min)	15		

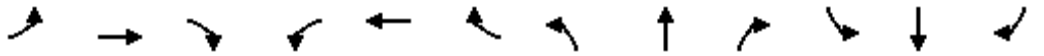
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	352	0	397	0	1893	295	0	1863	1771
Future Volume (vph)	0	0	0	352	0	397	0	1893	295	0	1863	1771
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.5		3.5		4.8	4.0		5.1	4.0
Lane Util. Factor				0.97		0.88		0.91	1.00		0.91	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3303		2682		4988	1553		4988	1553
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3303		2682		4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	352	0	397	0	1893	295	0	1863	1771
RTOR Reduction (vph)	0	0	0	0	0	16	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	352	0	381	0	1893	295	0	1863	1771
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	4%	4%	4%	4%	4%	4%
Turn Type				Perm		Perm		NA	Free		NA	Free
Protected Phases								6			2	
Permitted Phases				8		8			Free			Free
Actuated Green, G (s)				36.5		36.5		65.2	110.0		64.9	110.0
Effective Green, g (s)				36.5		36.5		65.2	110.0		64.9	110.0
Actuated g/C Ratio				0.33		0.33		0.59	1.00		0.59	1.00
Clearance Time (s)				3.5		3.5		4.8			5.1	
Lane Grp Cap (vph)				1095		889		2956	1553		2942	1553
v/s Ratio Prot								0.38			0.37	
v/s Ratio Perm				0.11		0.14			0.19			c1.14
v/c Ratio				0.32		0.43		0.64	0.19		0.63	1.14
Uniform Delay, d1				27.5		28.6		14.7	0.0		14.8	55.0
Progression Factor				1.00		1.00		0.60	1.00		1.00	1.00
Incremental Delay, d2				0.8		1.5		1.0	0.2		1.0	71.5
Delay (s)				28.3		30.1		9.7	0.2		15.8	126.5
Level of Service				C		C		A	A		B	F
Approach Delay (s)		0.0			29.3			8.4			69.7	
Approach LOS		A			C			A			E	

Intersection Summary			
HCM 2000 Control Delay	44.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.6
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		

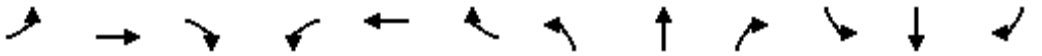
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1092	0	436	0	0	0	0	1103	449	0	1977	236
Future Volume (vph)	1092	0	436	0	0	0	0	1103	449	0	1977	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		3.5					4.8	4.0		5.1	4.0
Lane Util. Factor	0.94		0.88					0.86	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	4894		2733					6285	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	4894		2733					6285	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1092	0	436	0	0	0	0	1103	449	0	1977	236
RTOR Reduction (vph)	0	0	14	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	1092	0	422	0	0	0	0	1103	449	0	1977	236
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								6			2	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	36.5		36.5					65.2	110.0		64.9	110.0
Effective Green, g (s)	36.5		36.5					65.2	110.0		64.9	110.0
Actuated g/C Ratio	0.33		0.33					0.59	1.00		0.59	1.00
Clearance Time (s)	3.5		3.5					4.8			5.1	
Lane Grp Cap (vph)	1623		906					3725	1553		2942	1553
v/s Ratio Prot								0.18			c0.40	
v/s Ratio Perm	c0.22		0.15						0.29			0.15
v/c Ratio	0.67		0.47					0.30	0.29		0.67	0.15
Uniform Delay, d1	31.6		29.0					11.1	0.0		15.3	0.0
Progression Factor	1.00		1.00					1.00	1.00		0.80	1.00
Incremental Delay, d2	2.2		1.7					0.2	0.5		1.0	0.2
Delay (s)	33.9		30.8					11.3	0.5		13.3	0.2
Level of Service	C		C					B	A		B	A
Approach Delay (s)		33.0			0.0			8.1			11.9	
Approach LOS		C			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	16.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.6
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		

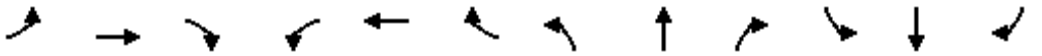
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	570	328	7	0	285	15	8	30	5	7	6	227
Future Volume (vph)	570	328	7	0	285	15	8	30	5	7	6	227
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.9	6.9		6.0			6.1			6.2	5.5
Lane Util. Factor	1.00	1.00	1.00		1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.85		0.99			0.98			1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00			0.99			0.97	1.00
Satd. Flow (prot)	1703	1792	1524		1796			1799			1779	1553
Flt Permitted	0.95	1.00	1.00		1.00			0.99			0.97	1.00
Satd. Flow (perm)	1703	1792	1524		1796			1799			1779	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	570	328	7	0	285	15	8	30	5	7	6	227
RTOR Reduction (vph)	0	0	2	0	1	0	0	3	0	0	0	125
Lane Group Flow (vph)	570	328	5	0	299	0	0	40	0	0	13	102
Heavy Vehicles (%)	6%	6%	6%	5%	5%	5%	3%	3%	3%	4%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	Over
Protected Phases	1	6		5	2		8	8		4	4	1
Permitted Phases			6									
Actuated Green, G (s)	80.5	120.8	120.8		44.2			9.5			22.0	80.5
Effective Green, g (s)	80.5	120.8	120.8		44.2			9.5			22.0	80.5
Actuated g/C Ratio	0.45	0.67	0.67		0.25			0.05			0.12	0.45
Clearance Time (s)	5.5	6.9	6.9		6.0			6.1			6.2	5.5
Lane Grp Cap (vph)	761	1202	1022		441			94			217	694
v/s Ratio Prot	c0.33	0.18			c0.17			c0.02			c0.01	0.07
v/s Ratio Perm			0.00									
v/c Ratio	0.75	0.27	0.00		0.68			0.43			0.06	0.15
Uniform Delay, d1	41.4	11.9	9.8		61.5			82.6			69.9	29.4
Progression Factor	1.00	1.00	1.00		1.00			1.00			1.00	1.00
Incremental Delay, d2	6.7	0.6	0.0		8.2			13.6			0.5	0.4
Delay (s)	48.0	12.5	9.8		69.6			96.2			70.4	29.9
Level of Service	D	B	A		E			F			E	C
Approach Delay (s)		34.8			69.6			96.2			32.1	
Approach LOS		C			E			F			C	

Intersection Summary			
HCM 2000 Control Delay	43.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	24.7
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		

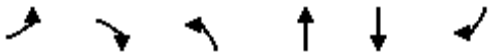
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	229	55	163	413	284	654	0	0	2885	161
Future Volume (vph)	0	0	229	55	163	413	284	654	0	0	2885	161
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.6		6.2	6.2	4.6	5.0			5.3	5.3
Lane Util. Factor			1.00		1.00	0.88	0.97	0.91			0.86	1.00
Frt			0.86		1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected			1.00		0.99	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)			1596		1770	2682	3303	4893			6166	1524
Flt Permitted			1.00		0.99	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)			1596		1770	2682	3303	4893			6166	1524
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	229	55	163	413	284	654	0	0	2885	161
RTOR Reduction (vph)	0	0	159	0	0	337	0	0	0	0	0	50
Lane Group Flow (vph)	0	0	70	0	218	76	284	654	0	0	2885	111
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type			Over	Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases			1	4	4		1	6			2	
Permitted Phases						4						2
Actuated Green, G (s)			20.0		24.8	24.8	20.0	99.0			74.1	74.1
Effective Green, g (s)			20.0		24.8	24.8	20.0	99.0			74.1	74.1
Actuated g/C Ratio			0.15		0.18	0.18	0.15	0.73			0.55	0.55
Clearance Time (s)			4.6		6.2	6.2	4.6	5.0			5.3	5.3
Lane Grp Cap (vph)			236		325	492	489	3588			3384	836
v/s Ratio Prot			0.04		c0.12		c0.09	0.13			c0.47	
v/s Ratio Perm						0.03						0.07
v/c Ratio			0.30		0.67	0.15	0.58	0.18			0.85	0.13
Uniform Delay, d1			51.2		51.3	46.3	53.6	5.5			25.8	14.8
Progression Factor			1.00		1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2			3.2		10.5	0.7	5.0	0.1			2.9	0.3
Delay (s)			54.4		61.8	47.0	58.6	5.7			28.8	15.1
Level of Service			D		E	D	E	A			C	B
Approach Delay (s)		54.4			52.1			21.7			28.0	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	135.0	Sum of lost time (s)	16.1
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		

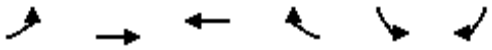
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	794	139	0	0	999	741
Future Volume (vph)	794	139	0	0	999	741
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5			4.7	4.0
Lane Util. Factor	0.97	0.91			0.95	1.00
Frt	1.00	0.85			1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00
Satd. Flow (prot)	3306	1386			3406	1524
Flt Permitted	0.95	1.00			1.00	1.00
Satd. Flow (perm)	3306	1386			3406	1524
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	794	139	0	0	999	741
RTOR Reduction (vph)	1	33	0	0	0	0
Lane Group Flow (vph)	807	92	0	0	999	741
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%
Turn Type	Prot	Perm			NA	Free
Protected Phases	4				2	
Permitted Phases		4				Free
Actuated Green, G (s)	66.5	66.5			65.3	140.0
Effective Green, g (s)	66.5	66.5			65.3	140.0
Actuated g/C Ratio	0.48	0.48			0.47	1.00
Clearance Time (s)	3.5	3.5			4.7	
Lane Grp Cap (vph)	1570	658			1588	1524
v/s Ratio Prot	c0.24				c0.29	
v/s Ratio Perm		0.07				0.49
v/c Ratio	0.51	0.14			0.63	0.49
Uniform Delay, d1	25.5	20.7			28.2	0.0
Progression Factor	1.00	1.00			1.00	1.00
Incremental Delay, d2	1.2	0.4			1.9	1.1
Delay (s)	26.7	21.1			30.1	1.1
Level of Service	C	C			C	A
Approach Delay (s)	26.0			0.0	17.8	
Approach LOS	C			A	B	

Intersection Summary			
HCM 2000 Control Delay	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		

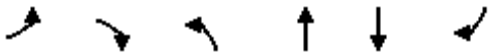
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	313	215	440	118	23	141
Future Volume (vph)	313	215	440	118	23	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1671	3343	3343	1495	1752	1568
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1671	3343	3343	1495	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	313	215	440	118	23	141
RTOR Reduction (vph)	0	0	0	87	0	103
Lane Group Flow (vph)	313	215	440	31	23	38
Heavy Vehicles (%)	8%	8%	8%	8%	3%	3%
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	16.0	36.0	16.0	16.0	16.0	16.0
Effective Green, g (s)	16.0	36.0	16.0	16.0	16.0	16.0
Actuated g/C Ratio	0.27	0.60	0.27	0.27	0.27	0.27
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	445	2005	891	398	467	418
v/s Ratio Prot	c0.19	0.06	c0.13		0.01	
v/s Ratio Perm				0.02		c0.02
v/c Ratio	0.70	0.11	0.49	0.08	0.05	0.09
Uniform Delay, d1	19.9	5.1	18.6	16.5	16.3	16.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	9.0	0.1	2.0	0.4	0.2	0.4
Delay (s)	28.8	5.2	20.5	16.9	16.5	17.0
Level of Service	C	A	C	B	B	B
Approach Delay (s)		19.2	19.8		16.9	
Approach LOS		B	B		B	

Intersection Summary			
HCM 2000 Control Delay	19.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	42.8%	ICU Level of Service	A
Analysis Period (min)	15		

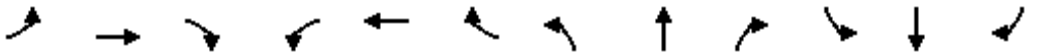
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	13	7	23	522	257	329
Future Volume (vph)	13	7	23	522	257	329
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3367	1553	1719	3438	3343	1495
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3367	1553	1719	3438	3343	1495
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	13	7	23	522	257	329
RTOR Reduction (vph)	0	6	0	0	0	211
Lane Group Flow (vph)	13	1	23	522	257	118
Heavy Vehicles (%)	4%	4%	5%	5%	8%	8%
Turn Type	Prot	Over	Prot	NA	NA	Over
Protected Phases	4	5	5	2	6	4
Permitted Phases						
Actuated Green, G (s)	18.0	4.0	4.0	24.0	16.0	18.0
Effective Green, g (s)	18.0	4.0	4.0	24.0	16.0	18.0
Actuated g/C Ratio	0.36	0.08	0.08	0.48	0.32	0.36
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	1212	124	137	1650	1069	538
v/s Ratio Prot	0.00	0.00	0.01	c0.15	0.08	c0.08
v/s Ratio Perm						
v/c Ratio	0.01	0.00	0.17	0.32	0.24	0.22
Uniform Delay, d1	10.3	21.2	21.4	8.0	12.5	11.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0	0.1	2.6	0.5	0.5	0.9
Delay (s)	10.3	21.2	24.1	8.5	13.1	12.1
Level of Service	B	C	C	A	B	B
Approach Delay (s)	14.1			9.1	12.5	
Approach LOS	B			A	B	

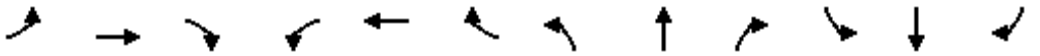
Intersection Summary			
HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	30.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	695	0	622	0	0	0	0	2255	550	0	1790	1584
Future Volume (vph)	695	0	622	0	0	0	0	2255	550	0	1790	1584
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	4.0		4.0	4.0
Lane Util. Factor	0.97		0.88					0.86	1.00		0.86	0.86
Frt	1.00		0.85					1.00	0.85		0.95	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3400		2760					6346	1568		4540	1348
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3400		2760					6346	1568		4540	1348
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	695	0	622	0	0	0	0	2255	550	0	1790	1584
RTOR Reduction (vph)	0	0	24	0	0	0	0	0	0	0	133	0
Lane Group Flow (vph)	695	0	598	0	0	0	0	2255	550	0	2449	792
Turn Type	Prot		Perm					NA	Free		NA	Free
Protected Phases	4							2			6	
Permitted Phases			4						Free			Free
Actuated Green, G (s)	16.0		16.0					36.0	60.0		36.0	60.0
Effective Green, g (s)	16.0		16.0					36.0	60.0		36.0	60.0
Actuated g/C Ratio	0.27		0.27					0.60	1.00		0.60	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Lane Grp Cap (vph)	906		736					3807	1568		2724	1348
v/s Ratio Prot	0.20							0.36			c0.54	
v/s Ratio Perm			c0.22						0.35			0.59
v/c Ratio	0.77		0.81					0.59	0.35		0.90	0.59
Uniform Delay, d1	20.3		20.6					7.4	0.0		10.4	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	6.2		9.5					0.7	0.6		5.3	1.9
Delay (s)	26.5		30.1					8.1	0.6		15.7	1.9
Level of Service	C		C					A	A		B	A
Approach Delay (s)		28.2			0.0			6.7			12.5	
Approach LOS		C			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



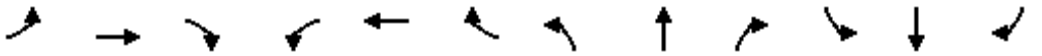
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	460	0	1232	0	2123	823	0	2914	1435
Future Volume (vph)	0	0	0	460	0	1232	0	2123	823	0	2914	1435
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0		4.0		4.0	4.0		4.0	4.0
Lane Util. Factor				0.97		0.76		0.86	0.86		0.81	0.81
Frt				1.00		0.85		0.99	0.85		0.97	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3400		3575		4708	1348		5814	1270
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3400		3575		4708	1348		5814	1270
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	460	0	1232	0	2123	823	0	2914	1435
RTOR Reduction (vph)	0	0	0	0	0	13	0	8	0	0	36	0
Lane Group Flow (vph)	0	0	0	460	0	1219	0	2280	658	0	3524	789
Turn Type				Prot		Perm		NA	Free		NA	Free
Protected Phases				8				2			6	
Permitted Phases						8			Free			Free
Actuated Green, G (s)				36.0		36.0		66.0	110.0		66.0	110.0
Effective Green, g (s)				36.0		36.0		66.0	110.0		66.0	110.0
Actuated g/C Ratio				0.33		0.33		0.60	1.00		0.60	1.00
Clearance Time (s)				4.0		4.0		4.0			4.0	
Lane Grp Cap (vph)				1112		1170		2824	1348		3488	1270
v/s Ratio Prot				0.14				0.48			c0.61	
v/s Ratio Perm						c0.34			0.49			0.62
v/c Ratio				0.41		1.04		0.81	0.49		1.01	0.62
Uniform Delay, d1				28.8		37.0		17.1	0.0		22.0	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				1.1		37.9		2.6	1.3		17.8	2.3
Delay (s)				29.9		74.9		19.7	1.3		39.8	2.3
Level of Service				C		E		B	A		D	A
Approach Delay (s)		0.0			62.7			15.6			33.0	
Approach LOS		A			E			B			C	

Intersection Summary			
HCM 2000 Control Delay	32.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	597	367	217	693	291	149
Future Volume (vph)	597	367	217	693	291	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3154	1411	1577	3154	3060	1411
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3154	1411	1577	3154	3060	1411
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	597	367	217	693	291	149
RTOR Reduction (vph)	0	271	0	0	0	112
Lane Group Flow (vph)	597	96	217	693	291	37
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	17.0	17.0	15.0	36.0	16.0	16.0
Effective Green, g (s)	17.0	17.0	15.0	36.0	16.0	16.0
Actuated g/C Ratio	0.26	0.26	0.23	0.55	0.25	0.25
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	824	369	363	1746	753	347
v/s Ratio Prot	c0.19		c0.14	0.22	c0.10	
v/s Ratio Perm		0.07				0.03
v/c Ratio	0.72	0.26	0.60	0.40	0.39	0.11
Uniform Delay, d1	21.9	19.0	22.3	8.3	20.4	19.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.5	1.7	7.1	0.7	1.5	0.6
Delay (s)	27.4	20.7	29.4	9.0	21.9	19.6
Level of Service	C	C	C	A	C	B
Approach Delay (s)	24.8			13.8	21.1	
Approach LOS	C			B	C	

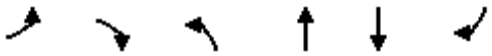
Intersection Summary			
HCM 2000 Control Delay	19.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	50.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	219	340	0	1	278	32	1	1	0	45	2	455
Future Volume (vph)	219	340	0	1	278	32	1	1	0	45	2	455
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00		0.95	0.95	1.00
Frt	1.00	1.00		1.00	0.98			1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98		0.95	0.96	1.00
Satd. Flow (prot)	1736	3471		1736	3417			1800		1665	1676	1568
Flt Permitted	0.95	1.00		0.95	1.00			0.98		0.95	0.96	1.00
Satd. Flow (perm)	1736	3471		1736	3417			1800		1665	1676	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	219	340	0	1	278	32	1	1	0	45	2	455
RTOR Reduction (vph)	0	0	0	0	12	0	0	0	0	0	0	358
Lane Group Flow (vph)	219	340	0	1	298	0	0	2	0	23	24	97
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases												6
Actuated Green, G (s)	11.0	23.0		4.0	16.0			16.0		16.0	16.0	16.0
Effective Green, g (s)	11.0	23.0		4.0	16.0			16.0		16.0	16.0	16.0
Actuated g/C Ratio	0.15	0.31		0.05	0.21			0.21		0.21	0.21	0.21
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	4.0
Lane Grp Cap (vph)	254	1064		92	728			384		355	357	334
v/s Ratio Prot	c0.13	0.10		0.00	c0.09			c0.00		0.01	0.01	
v/s Ratio Perm												c0.06
v/c Ratio	0.86	0.32		0.01	0.41			0.01		0.06	0.07	0.29
Uniform Delay, d1	31.3	20.0		33.6	25.4			23.2		23.5	23.5	24.7
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2	29.9	0.8		0.2	1.7			0.0		0.4	0.4	2.2
Delay (s)	61.2	20.8		33.8	27.1			23.3		23.9	23.9	26.9
Level of Service	E	C		C	C			C		C	C	C
Approach Delay (s)		36.6			27.2			23.3			26.6	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	30.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	50.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	277	27	21	784	654	103
Future Volume (vph)	277	27	21	784	654	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	0.98	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1743		1752	1845	1811	
Flt Permitted	0.96		0.95	1.00	1.00	
Satd. Flow (perm)	1743		1752	1845	1811	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	277	27	21	784	654	103
RTOR Reduction (vph)	6	0	0	0	10	0
Lane Group Flow (vph)	298	0	21	784	747	0
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	16.0		4.0	36.0	28.0	
Effective Green, g (s)	16.0		4.0	36.0	28.0	
Actuated g/C Ratio	0.27		0.07	0.60	0.47	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	464		116	1107	845	
v/s Ratio Prot	c0.17		0.01	c0.43	c0.41	
v/s Ratio Perm						
v/c Ratio	0.64		0.18	0.71	0.88	
Uniform Delay, d1	19.5		26.5	8.3	14.5	
Progression Factor	1.00		0.97	1.37	1.00	
Incremental Delay, d2	6.7		1.6	1.9	13.0	
Delay (s)	26.2		27.4	13.3	27.6	
Level of Service	C		C	B	C	
Approach Delay (s)	26.2			13.7	27.6	
Approach LOS	C			B	C	

Intersection Summary			
HCM 2000 Control Delay	21.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM 2010 Signalized Intersection Summary
1: Howe Avenue & College Town Drive/US 50 Westbound Ramps

03/07/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	0	223	458	534	539	0	1438	662	0	1266	311
Future Volume (veh/h)	58	0	223	458	534	539	0	1438	662	0	1266	311
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1827	1827	1827	0	1827	1827	0	1827	1827
Adj Flow Rate, veh/h	58	0	223	458	804	359	0	1438	0	0	1266	311
Adj No. of Lanes	0	1	2	2	2	1	0	3	1	0	4	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	0	4	4	0	4	4
Cap, veh/h	366	0	575	1189	1248	531	0	1746	544	0	2200	544
Arrive On Green	0.21	0.00	0.21	0.34	0.34	0.34	0.00	0.35	0.00	0.00	0.35	0.35
Sat Flow, veh/h	1757	0	2760	3480	3654	1553	0	5152	1553	0	6540	1553
Grp Volume(v), veh/h	58	0	223	458	804	359	0	1438	0	0	1266	311
Grp Sat Flow(s),veh/h/ln	1757	0	1380	1740	1827	1553	0	1663	1553	0	1571	1553
Q Serve(g_s), s	3.2	0.0	8.4	12.0	22.3	23.8	0.0	31.6	0.0	0.0	19.7	19.5
Cycle Q Clear(g_c), s	3.2	0.0	8.4	12.0	22.3	23.8	0.0	31.6	0.0	0.0	19.7	19.5
Prop In Lane	1.00		1.00	1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	366	0	575	1189	1248	531	0	1746	544	0	2200	544
V/C Ratio(X)	0.16	0.00	0.39	0.39	0.64	0.68	0.00	0.82	0.00	0.00	0.58	0.57
Avail Cap(c_a), veh/h	366	0	575	1189	1248	531	0	1746	544	0	2200	544
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	38.9	0.0	40.9	29.9	33.3	33.8	0.0	35.6	0.0	0.0	31.7	31.7
Incr Delay (d2), s/veh	0.9	0.0	2.0	0.9	2.6	6.8	0.0	4.6	0.0	0.0	1.1	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	3.3	5.9	11.7	11.2	0.0	15.3	0.0	0.0	8.7	9.0
LnGrp Delay(d),s/veh	39.8	0.0	42.9	30.9	35.9	40.6	0.0	40.2	0.0	0.0	32.8	36.0
LnGrp LOS	D		D	C	D	D		D			C	D
Approach Vol, veh/h		281			1621			1438			1577	
Approach Delay, s/veh		42.2			35.5			40.2			33.5	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		46.0		29.0		46.0		45.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		42.0		25.0		42.0		41.0
Max Q Clear Time (g_c+I1), s		33.6		10.4		21.7		25.8
Green Ext Time (p_c), s		4.0		0.2		5.5		2.1

Intersection Summary	
HCM 2010 Ctrl Delay	36.6
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	249	34	137	10	73	39	151	1419	19	20	846	219
Future Volume (veh/h)	249	34	137	10	73	39	151	1419	19	20	846	219
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1827	1900	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	273	0	137	10	73	39	151	1419	19	20	846	219
Adj No. of Lanes	2	0	1	0	1	0	2	3	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	4	4	4	4	4	4
Cap, veh/h	644	0	287	22	163	87	338	2367	32	101	1475	660
Arrive On Green	0.18	0.00	0.18	0.16	0.16	0.16	0.10	0.47	0.47	0.06	0.43	0.43
Sat Flow, veh/h	3514	0	1568	141	1031	551	3375	5072	68	1740	3471	1553
Grp Volume(v), veh/h	273	0	137	122	0	0	151	930	508	20	846	219
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1723	0	0	1688	1663	1815	1740	1736	1553
Q Serve(g_s), s	8.3	0.0	9.4	7.7	0.0	0.0	5.1	24.9	24.9	1.3	22.2	11.3
Cycle Q Clear(g_c), s	8.3	0.0	9.4	7.7	0.0	0.0	5.1	24.9	24.9	1.3	22.2	11.3
Prop In Lane	1.00		1.00	0.08		0.32	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	644	0	287	273	0	0	338	1552	847	101	1475	660
V/C Ratio(X)	0.42	0.00	0.48	0.45	0.00	0.00	0.45	0.60	0.60	0.20	0.57	0.33
Avail Cap(c_a), veh/h	644	0	287	273	0	0	338	1552	847	101	1475	660
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.4	0.0	43.8	45.7	0.0	0.0	50.9	23.7	23.7	53.8	26.2	23.1
Incr Delay (d2), s/veh	2.0	0.0	5.6	5.2	0.0	0.0	4.2	1.7	3.1	4.3	1.6	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	4.5	4.1	0.0	0.0	2.6	11.7	13.1	0.8	10.9	5.1
LnGrp Delay(d),s/veh	45.4	0.0	49.4	51.0	0.0	0.0	55.1	25.4	26.8	58.1	27.9	24.4
LnGrp LOS	D		D	D			E	C	C	E	C	C
Approach Vol, veh/h		410			122			1589			1085	
Approach Delay, s/veh		46.8			51.0			28.7			27.7	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.0	60.0		26.0	16.0	55.0		23.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	7.0	56.0		22.0	12.0	51.0		19.0
Max Q Clear Time (g_c+I1), s	3.3	26.9		11.4	7.1	24.2		9.7
Green Ext Time (p_c), s	0.8	1.9		0.4	0.1	1.4		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	31.5
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	239	380	41	90	270	187	70	1237	97	254	441	88
Future Volume (veh/h)	239	380	41	90	270	187	70	1237	97	254	441	88
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	239	380	41	90	270	187	70	1237	97	254	441	88
Adj No. of Lanes	1	2	0	1	2	1	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	273	710	76	195	623	279	188	1341	105	263	1504	673
Arrive On Green	0.16	0.22	0.22	0.11	0.18	0.18	0.06	0.41	0.41	0.08	0.43	0.43
Sat Flow, veh/h	1757	3194	343	1757	3505	1568	3375	3262	255	3375	3471	1553
Grp Volume(v), veh/h	239	207	214	90	270	187	70	657	677	254	441	88
Grp Sat Flow(s),veh/h/ln	1757	1752	1784	1757	1752	1568	1688	1736	1782	1688	1736	1553
Q Serve(g_s), s	12.0	9.4	9.5	4.3	6.2	10.0	1.8	32.3	32.5	6.8	7.4	3.1
Cycle Q Clear(g_c), s	12.0	9.4	9.5	4.3	6.2	10.0	1.8	32.3	32.5	6.8	7.4	3.1
Prop In Lane	1.00		0.19	1.00		1.00	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	273	389	396	195	623	279	188	714	733	263	1504	673
V/C Ratio(X)	0.87	0.53	0.54	0.46	0.43	0.67	0.37	0.92	0.92	0.97	0.29	0.13
Avail Cap(c_a), veh/h	273	389	396	195	623	279	188	714	733	263	1504	673
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.1	30.9	30.9	37.5	33.0	34.5	41.0	25.1	25.2	41.4	16.6	15.3
Incr Delay (d2), s/veh	30.0	5.1	5.2	7.6	2.2	12.2	5.6	19.1	19.2	47.8	0.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	5.1	5.3	2.5	3.2	5.3	1.0	19.1	19.7	4.9	3.7	1.4
LnGrp Delay(d),s/veh	67.1	36.0	36.1	45.1	35.2	46.7	46.6	44.2	44.3	89.2	17.0	15.7
LnGrp LOS	E	D	D	D	D	D	D	D	D	F	B	B
Approach Vol, veh/h		660			547			1404			783	
Approach Delay, s/veh		47.3			40.7			44.4			40.3	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	41.0	14.0	24.0	9.0	43.0	18.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	37.0	10.0	20.0	5.0	39.0	14.0	16.0
Max Q Clear Time (g_c+I1), s	8.8	34.5	6.3	11.5	3.8	9.4	14.0	12.0
Green Ext Time (p_c), s	0.0	1.0	0.0	0.8	0.0	2.2	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	43.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	116	303	197	283	206	114	616	102	16	409	5
Future Volume (veh/h)	11	116	303	197	283	206	114	616	102	16	409	5
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1900	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	11	116	303	197	283	206	114	616	102	16	409	5
Adj No. of Lanes	1	1	2	1	2	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	85	329	492	474	785	554	322	1382	618	98	946	12
Arrive On Green	0.05	0.18	0.18	0.28	0.41	0.41	0.18	0.39	0.39	0.06	0.27	0.27
Sat Flow, veh/h	1707	1792	2682	1707	1909	1349	1757	3505	1568	1757	3546	43
Grp Volume(v), veh/h	11	116	303	197	252	237	114	616	102	16	202	212
Grp Sat Flow(s),veh/h/ln	1707	1792	1341	1707	1703	1554	1757	1752	1568	1757	1752	1837
Q Serve(g_s), s	1.1	10.2	18.7	17.0	18.4	19.1	10.2	23.2	7.6	1.6	17.2	17.2
Cycle Q Clear(g_c), s	1.1	10.2	18.7	17.0	18.4	19.1	10.2	23.2	7.6	1.6	17.2	17.2
Prop In Lane	1.00		1.00	1.00		0.87	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	85	329	492	474	700	639	322	1382	618	98	467	490
V/C Ratio(X)	0.13	0.35	0.62	0.42	0.36	0.37	0.35	0.45	0.16	0.16	0.43	0.43
Avail Cap(c_a), veh/h	85	329	492	474	700	639	322	1382	618	98	467	490
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	81.8	64.2	67.7	53.1	36.6	36.8	64.2	40.0	35.3	81.0	54.7	54.7
Incr Delay (d2), s/veh	3.1	3.0	5.7	2.7	1.4	1.7	3.0	1.0	0.6	3.6	2.9	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	5.3	7.3	8.3	8.9	8.5	5.2	11.5	3.4	0.9	8.7	9.2
LnGrp Delay(d),s/veh	84.8	67.1	73.4	55.7	38.1	38.5	67.2	41.1	35.9	84.6	57.6	57.5
LnGrp LOS	F	E	E	E	D	D	E	D	D	F	E	E
Approach Vol, veh/h		430			686			832			430	
Approach Delay, s/veh		72.0			43.3			44.0			58.6	
Approach LOS		E			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	75.0	54.0	37.0	37.0	52.0	13.0	78.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	71.0	50.0	33.0	33.0	48.0	9.0	74.0
Max Q Clear Time (g_c+I1), s	3.6	25.2	19.0	20.7	12.2	19.2	3.1	21.1
Green Ext Time (p_c), s	0.0	1.3	0.2	0.9	0.1	1.3	0.0	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	51.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	225	115	115	275	102	166	760	117	44	384	104
Future Volume (veh/h)	84	225	115	115	275	102	166	760	117	44	384	104
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	84	225	115	115	275	102	166	760	117	44	384	104
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	146	935	418	146	672	244	205	1110	497	117	935	418
Arrive On Green	0.08	0.27	0.27	0.08	0.27	0.27	0.12	0.32	0.32	0.07	0.27	0.27
Sat Flow, veh/h	1757	3505	1568	1757	2522	914	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	84	225	115	115	189	188	166	760	117	44	384	104
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1683	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	2.8	3.0	3.5	3.9	5.3	5.5	5.5	11.4	3.3	1.4	5.4	3.1
Cycle Q Clear(g_c), s	2.8	3.0	3.5	3.9	5.3	5.5	5.5	11.4	3.3	1.4	5.4	3.1
Prop In Lane	1.00		1.00	1.00		0.54	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	146	935	418	146	467	449	205	1110	497	117	935	418
V/C Ratio(X)	0.57	0.24	0.28	0.79	0.40	0.42	0.81	0.68	0.24	0.38	0.41	0.25
Avail Cap(c_a), veh/h	146	935	418	146	467	449	205	1110	497	117	935	418
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	17.2	17.4	27.0	18.1	18.2	25.9	17.9	15.1	26.8	18.1	17.3
Incr Delay (d2), s/veh	15.3	0.6	1.6	33.4	2.6	2.9	28.2	3.4	1.1	9.0	1.3	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	1.5	1.7	3.2	2.9	2.9	4.3	6.0	1.6	1.0	2.8	1.5
LnGrp Delay(d),s/veh	41.8	17.8	19.0	60.4	20.7	21.0	54.0	21.3	16.3	35.8	19.5	18.7
LnGrp LOS	D	B	B	E	C	C	D	C	B	D	B	B
Approach Vol, veh/h		424			492			1043			532	
Approach Delay, s/veh		22.9			30.1			26.0			20.7	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	23.0	9.0	20.0	11.0	20.0	9.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	19.0	5.0	16.0	7.0	16.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	3.4	13.4	5.9	5.5	7.5	7.4	4.8	7.5
Green Ext Time (p_c), s	0.0	1.3	0.0	0.7	0.0	1.5	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	25.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	219	99	79	204	98	114	791	99	39	252	85
Future Volume (veh/h)	146	219	99	79	204	98	114	791	99	39	252	85
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	146	219	99	79	204	98	114	791	99	39	252	85
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	176	935	418	176	935	418	146	1051	470	117	993	444
Arrive On Green	0.10	0.27	0.27	0.10	0.27	0.27	0.08	0.30	0.30	0.07	0.28	0.28
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	146	219	99	79	204	98	114	791	99	39	252	85
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1568	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	4.9	2.9	3.0	2.5	2.7	2.9	3.8	12.2	2.8	1.3	3.3	2.5
Cycle Q Clear(g_c), s	4.9	2.9	3.0	2.5	2.7	2.9	3.8	12.2	2.8	1.3	3.3	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	176	935	418	176	935	418	146	1051	470	117	993	444
V/C Ratio(X)	0.83	0.23	0.24	0.45	0.22	0.23	0.78	0.75	0.21	0.33	0.25	0.19
Avail Cap(c_a), veh/h	176	935	418	176	935	418	146	1051	470	117	993	444
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	17.2	17.2	25.4	17.1	17.2	27.0	19.0	15.7	26.7	16.6	16.3
Incr Delay (d2), s/veh	34.6	0.6	1.3	8.1	0.5	1.3	32.6	5.0	1.0	7.5	0.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	1.5	1.4	1.6	1.4	1.4	3.2	6.5	1.3	0.9	1.7	1.2
LnGrp Delay(d),s/veh	61.1	17.8	18.6	33.6	17.7	18.5	59.5	24.0	16.7	34.2	17.2	17.2
LnGrp LOS	E	B	B	C	B	B	E	C	B	C	B	B
Approach Vol, veh/h		464			381			1004			376	
Approach Delay, s/veh		31.6			21.2			27.3			19.0	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	22.0	10.0	20.0	9.0	21.0	10.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	18.0	6.0	16.0	5.0	17.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	3.3	14.2	4.5	5.0	5.8	5.3	6.9	4.9
Green Ext Time (p_c), s	0.0	0.9	0.0	0.6	0.0	1.5	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	25.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	364	344	77	111	357	543	85	1898	204	616	1290	507
Future Volume (veh/h)	364	344	77	111	357	543	85	1898	204	616	1290	507
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	364	344	77	111	357	543	85	1898	204	616	1290	507
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	366	946	423	206	781	630	172	1852	577	604	2489	775
Arrive On Green	0.11	0.27	0.27	0.06	0.22	0.22	0.05	0.37	0.37	0.18	0.50	0.50
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	364	344	77	111	357	543	85	1898	204	616	1290	507
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	18.2	13.5	6.4	5.4	15.0	38.0	4.2	63.3	16.2	30.5	29.8	41.4
Cycle Q Clear(g_c), s	18.2	13.5	6.4	5.4	15.0	38.0	4.2	63.3	16.2	30.5	29.8	41.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	366	946	423	206	781	630	172	1852	577	604	2489	775
V/C Ratio(X)	1.00	0.36	0.18	0.54	0.46	0.86	0.49	1.03	0.35	1.02	0.52	0.65
Avail Cap(c_a), veh/h	366	946	423	206	781	630	172	1852	577	604	2489	775
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	76.1	50.4	47.8	77.8	57.3	46.7	78.8	53.6	38.8	70.0	28.8	31.8
Incr Delay (d2), s/veh	45.8	1.1	0.9	9.8	1.9	14.5	9.8	27.5	1.7	41.8	0.8	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.9	6.7	2.9	2.8	7.5	25.9	2.2	33.7	7.3	17.7	13.8	18.6
LnGrp Delay(d),s/veh	121.9	51.5	48.7	87.6	59.2	61.1	88.5	81.1	40.5	111.8	29.6	36.0
LnGrp LOS	F	D	D	F	E	E	F	F	D	F	C	D
Approach Vol, veh/h		785			1011			2187			2413	
Approach Delay, s/veh		83.9			63.4			77.6			52.0	
Approach LOS		F			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.2	89.9	23.8	42.6	36.0	68.1	15.8	50.6
Change Period (Y+Rc), s	5.5	4.8	5.5	* 4.6	5.5	* 4.8	5.5	4.6
Max Green Setting (Gmax), s	8.7	84.9	18.3	* 38	30.5	* 63	10.3	45.7
Max Q Clear Time (g_c+I1), s	6.2	43.4	20.2	40.0	32.5	65.3	7.4	15.5
Green Ext Time (p_c), s	0.0	8.8	0.0	0.0	0.0	0.0	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	66.5
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	2	32	0	232	0	1858	47	70	1335	6
Future Volume (veh/h)	10	0	2	32	0	232	0	1858	47	70	1335	6
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	10	0	2	32	0	232	0	1858	47	70	1335	6
Adj No. of Lanes	0	1	0	1	0	2	1	3	1	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	60	0	12	292	0	521	2	2141	667	123	2924	13
Arrive On Green	0.04	0.00	0.04	0.17	0.00	0.17	0.00	0.43	0.43	0.07	0.57	0.57
Sat Flow, veh/h	1435	0	287	1757	0	3136	1740	4988	1553	1740	5125	23
Grp Volume(v), veh/h	12	0	0	32	0	232	0	1858	47	70	866	475
Grp Sat Flow(s),veh/h/ln	1722	0	0	1757	0	1568	1740	1663	1553	1740	1663	1823
Q Serve(g_s), s	0.5	0.0	0.0	1.1	0.0	4.8	0.0	24.5	1.3	2.8	10.9	10.9
Cycle Q Clear(g_c), s	0.5	0.0	0.0	1.1	0.0	4.8	0.0	24.5	1.3	2.8	10.9	10.9
Prop In Lane	0.83		0.17	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	72	0	0	292	0	521	2	2141	667	123	1897	1040
V/C Ratio(X)	0.17	0.00	0.00	0.11	0.00	0.45	0.00	0.87	0.07	0.57	0.46	0.46
Avail Cap(c_a), veh/h	72	0	0	292	0	521	72	2141	667	123	1897	1040
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.4	0.0	0.0	25.6	0.0	27.1	0.0	18.7	12.1	32.5	9.0	9.0
Incr Delay (d2), s/veh	5.0	0.0	0.0	0.8	0.0	2.7	0.0	5.1	0.2	17.8	0.8	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.6	0.0	2.3	0.0	12.2	0.6	1.9	5.1	5.8
LnGrp Delay(d),s/veh	38.4	0.0	0.0	26.3	0.0	29.8	0.0	23.8	12.3	50.2	9.8	10.4
LnGrp LOS	D			C		C		C	B	D	A	B
Approach Vol, veh/h		12			264			1905			1411	
Approach Delay, s/veh		38.4			29.4			23.5			12.0	
Approach LOS		D			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	46.2		8.5	10.2	36.0		17.5
Change Period (Y+Rc), s	* 4.6	5.0		5.5	* 5.1	* 5		5.5
Max Green Setting (Gmax), s	* 3	33.4		3.0	* 5.1	* 31		12.0
Max Q Clear Time (g_c+I1), s	0.0	12.9		2.5	4.8	26.5		6.8
Green Ext Time (p_c), s	0.0	6.2		0.0	0.0	2.9		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	19.5
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	100	23	195	172	529	34	1438	162	263	946	104
Future Volume (veh/h)	48	100	23	195	172	529	34	1438	162	263	946	104
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1845	1845	1845	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	48	100	23	195	172	529	34	1438	162	263	946	104
Adj No. of Lanes	2	2	1	2	2	1	2	3	0	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	97	959	429	326	1203	538	105	1775	200	367	2134	234
Arrive On Green	0.03	0.28	0.28	0.10	0.34	0.34	0.03	0.39	0.39	0.11	0.47	0.47
Sat Flow, veh/h	3375	3471	1553	3408	3505	1568	3375	4549	512	3375	4563	500
Grp Volume(v), veh/h	48	100	23	195	172	529	34	1051	549	263	689	361
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1704	1752	1568	1688	1663	1737	1688	1663	1739
Q Serve(g_s), s	2.4	3.7	1.9	9.3	5.8	56.9	1.7	48.0	48.0	12.8	23.7	23.8
Cycle Q Clear(g_c), s	2.4	3.7	1.9	9.3	5.8	56.9	1.7	48.0	48.0	12.8	23.7	23.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.30	1.00		0.29
Lane Grp Cap(c), veh/h	97	959	429	326	1203	538	105	1297	677	367	1555	813
V/C Ratio(X)	0.49	0.10	0.05	0.60	0.14	0.98	0.32	0.81	0.81	0.72	0.44	0.44
Avail Cap(c_a), veh/h	97	959	429	326	1203	538	105	1297	677	367	1555	813
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	81.4	45.9	45.3	73.8	38.6	55.4	80.7	46.3	46.3	73.3	30.4	30.4
Incr Delay (d2), s/veh	16.8	0.2	0.2	7.8	0.2	34.9	8.0	5.6	10.2	11.4	0.9	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.8	0.8	4.8	2.8	29.9	0.9	23.0	24.9	6.6	11.1	11.8
LnGrp Delay(d),s/veh	98.3	46.1	45.5	81.6	38.9	90.3	88.7	51.8	56.4	84.7	31.3	32.2
LnGrp LOS	F	D	D	F	D	F	F	D	E	F	C	C
Approach Vol, veh/h		171			896			1634			1313	
Approach Delay, s/veh		60.7			78.5			54.2			42.3	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	84.9	10.4	64.1	24.0	71.7	21.8	52.7
Change Period (Y+Rc), s	5.5	5.3	5.5	* 5.7	5.5	* 5.3	5.5	* 5.7
Max Green Setting (Gmax), s	5.3	79.5	4.9	* 58	18.5	* 66	16.3	* 47
Max Q Clear Time (g_c+I1), s	3.7	25.8	4.4	58.9	14.8	50.0	11.3	5.7
Green Ext Time (p_c), s	0.0	4.2	0.0	0.0	0.1	4.0	0.1	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	56.0
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	46	103	1462	24	61	1153
Future Volume (veh/h)	46	103	1462	24	61	1153
Number	3	18	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1827	1900	1827	1827
Adj Flow Rate, veh/h	46	103	1462	24	61	1153
Adj No. of Lanes	1	1	3	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	4	4	4	4
Cap, veh/h	244	218	2265	37	235	2327
Arrive On Green	0.14	0.14	0.45	0.45	0.14	0.67
Sat Flow, veh/h	1757	1568	5219	83	1740	3563
Grp Volume(v), veh/h	46	103	962	524	61	1153
Grp Sat Flow(s),veh/h/ln	1757	1568	1663	1812	1740	1736
Q Serve(g_s), s	1.3	3.3	12.1	12.1	1.7	8.9
Cycle Q Clear(g_c), s	1.3	3.3	12.1	12.1	1.7	8.9
Prop In Lane	1.00	1.00		0.05	1.00	
Lane Grp Cap(c), veh/h	244	218	1490	812	235	2327
V/C Ratio(X)	0.19	0.47	0.65	0.65	0.26	0.50
Avail Cap(c_a), veh/h	244	218	1490	812	235	2327
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	21.4	11.6	11.6	20.9	4.4
Incr Delay (d2), s/veh	1.7	7.2	2.2	3.9	2.7	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.8	5.9	6.9	1.0	4.4
LnGrp Delay(d),s/veh	22.3	28.6	13.7	15.5	23.6	5.2
LnGrp LOS	C	C	B	B	C	A
Approach Vol, veh/h	149		1486			1214
Approach Delay, s/veh	26.7		14.4			6.1
Approach LOS	C		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		41.0			12.0	29.0		13.0
Change Period (Y+Rc), s		4.8			* 4.7	4.8		5.5
Max Green Setting (Gmax), s		36.2			* 7.3	24.2		7.5
Max Q Clear Time (g_c+I1), s		10.9			3.7	14.1		5.3
Green Ext Time (p_c), s		4.4			0.0	3.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	11.5
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	175	26	73	429	481	81	1010	55	231	842	149
Future Volume (veh/h)	64	175	26	73	429	481	81	1010	55	231	842	149
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1792	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	64	175	26	73	429	481	81	1010	55	231	842	149
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	4	4	4	4	4	4
Cap, veh/h	90	433	64	141	567	482	159	1166	522	312	1466	656
Arrive On Green	0.05	0.28	0.28	0.08	0.32	0.32	0.09	0.34	0.34	0.18	0.42	0.42
Sat Flow, veh/h	1707	1526	227	1707	1792	1524	1740	3471	1553	1740	3471	1553
Grp Volume(v), veh/h	64	0	201	73	429	481	81	1010	55	231	842	149
Grp Sat Flow(s),veh/h/ln	1707	0	1752	1707	1792	1524	1740	1736	1553	1740	1736	1553
Q Serve(g_s), s	6.3	0.0	15.8	7.0	36.6	53.7	7.6	46.4	4.2	21.4	31.5	10.4
Cycle Q Clear(g_c), s	6.3	0.0	15.8	7.0	36.6	53.7	7.6	46.4	4.2	21.4	31.5	10.4
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	90	0	497	141	567	482	159	1166	522	312	1466	656
V/C Ratio(X)	0.71	0.00	0.40	0.52	0.76	1.00	0.51	0.87	0.11	0.74	0.57	0.23
Avail Cap(c_a), veh/h	90	0	497	141	567	482	159	1166	522	312	1466	656
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	79.4	0.0	49.4	74.8	52.3	58.1	73.7	53.0	38.9	66.2	37.5	31.4
Incr Delay (d2), s/veh	37.8	0.0	2.4	12.8	9.1	40.4	11.1	8.7	0.4	14.7	1.6	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	8.0	3.8	19.5	28.0	4.1	23.7	1.8	11.6	15.4	4.6
LnGrp Delay(d),s/veh	117.2	0.0	51.8	87.7	61.4	98.5	84.8	61.7	39.3	80.9	39.2	32.3
LnGrp LOS	F		D	F	E	F	F	E	D	F	D	C
Approach Vol, veh/h		265			983			1146			1222	
Approach Delay, s/veh		67.6			81.5			62.3			46.2	
Approach LOS		E			F			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	59.3	20.3	76.7	19.6	53.7	35.0	62.0
Change Period (Y+Rc), s	5.0	* 5.4	* 4.7	4.8	5.5	* 5.4	4.5	4.8
Max Green Setting (Gmax), s	9.0	* 54	* 16	71.9	14.1	* 48	30.5	57.2
Max Q Clear Time (g_c+I1), s	8.3	55.7	9.6	33.5	9.0	17.8	23.4	48.4
Green Ext Time (p_c), s	0.0	0.0	0.0	3.1	0.0	0.9	0.1	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	62.5
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	105	32	31	105	11	95	897	19	18	584	276
Future Volume (veh/h)	180	105	32	31	105	11	95	897	19	18	584	276
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	180	105	32	31	105	11	95	897	19	18	584	276
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	171	371	315	179	330	35	193	1001	21	175	999	447
Arrive On Green	0.10	0.20	0.20	0.10	0.20	0.20	0.11	0.29	0.29	0.10	0.29	0.29
Sat Flow, veh/h	1757	1845	1568	1757	1642	172	1740	3476	74	1740	3471	1553
Grp Volume(v), veh/h	180	105	32	31	0	116	95	448	468	18	584	276
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1814	1740	1736	1814	1740	1736	1553
Q Serve(g_s), s	6.5	3.2	1.1	1.1	0.0	3.6	3.4	16.5	16.5	0.6	9.6	10.3
Cycle Q Clear(g_c), s	6.5	3.2	1.1	1.1	0.0	3.6	3.4	16.5	16.5	0.6	9.6	10.3
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	171	371	315	179	0	364	193	500	522	175	999	447
V/C Ratio(X)	1.05	0.28	0.10	0.17	0.00	0.32	0.49	0.90	0.90	0.10	0.58	0.62
Avail Cap(c_a), veh/h	171	371	315	179	0	364	193	500	522	175	999	447
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.1	22.6	21.7	27.4	0.0	22.8	27.9	22.8	22.8	27.3	20.3	20.6
Incr Delay (d2), s/veh	83.0	1.9	0.6	2.1	0.0	2.3	8.7	21.4	20.7	1.2	2.5	6.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	1.8	0.5	0.6	0.0	2.0	2.1	10.8	11.2	0.4	4.9	5.2
LnGrp Delay(d),s/veh	113.2	24.5	22.4	29.5	0.0	25.0	36.6	44.2	43.5	28.4	22.8	26.8
LnGrp LOS	F	C	C	C		C	D	D	D	C	C	C
Approach Vol, veh/h		317			147			1011			878	
Approach Delay, s/veh		74.6			26.0			43.1			24.2	
Approach LOS		E			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	24.0	12.0	18.7	12.0	24.0	12.0	18.7
Change Period (Y+Rc), s	* 4.6	4.8	5.5	* 5.3	* 5.3	4.8	* 5.2	* 5.3
Max Green Setting (Gmax), s	* 7.4	19.2	6.5	* 13	* 6.7	19.2	* 6.8	* 13
Max Q Clear Time (g_c+I1), s	5.4	12.3	8.5	5.6	2.6	18.5	3.1	5.2
Green Ext Time (p_c), s	0.0	1.6	0.0	0.2	0.0	0.3	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	39.2
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	153	36	21	183	56	87	846	18	34	350	221
Future Volume (veh/h)	115	153	36	21	183	56	87	846	18	34	350	221
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	115	153	36	21	183	56	87	846	18	34	350	221
Adj No. of Lanes	0	1	1	1	1	1	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	142	189	287	291	306	260	163	887	754	47	771	656
Arrive On Green	0.18	0.18	0.18	0.17	0.17	0.17	0.09	0.49	0.49	0.03	0.42	0.42
Sat Flow, veh/h	775	1031	1568	1757	1845	1568	1740	1827	1553	1740	1827	1553
Grp Volume(v), veh/h	268	0	36	21	183	56	87	846	18	34	350	221
Grp Sat Flow(s),veh/h/ln	1806	0	1568	1757	1845	1568	1740	1827	1553	1740	1827	1553
Q Serve(g_s), s	24.9	0.0	3.4	1.8	16.1	5.4	8.3	77.6	1.1	3.4	24.0	16.8
Cycle Q Clear(g_c), s	24.9	0.0	3.4	1.8	16.1	5.4	8.3	77.6	1.1	3.4	24.0	16.8
Prop In Lane	0.43		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	330	0	287	291	306	260	163	887	754	47	771	656
V/C Ratio(X)	0.81	0.00	0.13	0.07	0.60	0.22	0.53	0.95	0.02	0.73	0.45	0.34
Avail Cap(c_a), veh/h	330	0	287	291	306	260	163	887	754	47	771	656
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.6	0.0	59.8	61.6	67.6	63.2	75.7	43.1	23.4	84.5	36.1	34.0
Incr Delay (d2), s/veh	19.2	0.0	0.9	0.5	8.4	1.9	11.9	20.8	0.1	66.6	1.9	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.2	0.0	1.5	0.9	8.9	2.5	4.6	44.1	0.5	2.5	12.5	7.4
LnGrp Delay(d),s/veh	87.8	0.0	60.7	62.1	76.0	65.1	87.6	63.9	23.5	151.2	38.0	35.4
LnGrp LOS	F		E	E	E	E	F	E	C	F	D	D
Approach Vol, veh/h		304			260			951			605	
Approach Delay, s/veh		84.6			72.5			65.3			43.5	
Approach LOS		F			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	21.1	79.0		35.8	10.0	90.1		39.1
Change Period (Y+Rc), s	* 4.7	5.1		6.8	* 5.3	5.1		7.1
Max Green Setting (Gmax), s	* 16	73.9		29.0	* 4.7	85.0		32.0
Max Q Clear Time (g_c+I1), s	10.3	26.0		18.1	5.4	79.6		26.9
Green Ext Time (p_c), s	0.0	1.5		0.2	0.0	1.1		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	62.7
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	286	101	44	242	7	340	860	182	9	303	94
Future Volume (veh/h)	73	286	101	44	242	7	340	860	182	9	303	94
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1827	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	73	286	101	44	242	7	340	860	182	9	303	94
Adj No. of Lanes	1	2	0	1	2	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	199	290	100	200	397	178	803	1313	278	260	403	123
Arrive On Green	0.11	0.11	0.11	0.12	0.11	0.11	0.46	0.46	0.46	0.15	0.15	0.15
Sat Flow, veh/h	1740	2532	876	1740	3471	1553	1740	2852	604	1740	2622	799
Grp Volume(v), veh/h	73	194	193	44	242	7	340	523	519	9	199	198
Grp Sat Flow(s),veh/h/ln	1740	1736	1672	1740	1736	1553	1740	1736	1720	1740	1736	1686
Q Serve(g_s), s	5.1	14.5	14.9	3.0	8.6	0.5	17.0	30.3	30.4	0.6	14.3	14.7
Cycle Q Clear(g_c), s	5.1	14.5	14.9	3.0	8.6	0.5	17.0	30.3	30.4	0.6	14.3	14.7
Prop In Lane	1.00		0.52	1.00		1.00	1.00		0.35	1.00		0.47
Lane Grp Cap(c), veh/h	199	198	191	200	397	178	803	799	792	260	266	259
V/C Ratio(X)	0.37	0.98	1.01	0.22	0.61	0.04	0.42	0.65	0.65	0.03	0.75	0.77
Avail Cap(c_a), veh/h	199	198	191	200	397	178	803	799	792	260	266	259
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.3	57.5	57.7	52.3	54.9	51.3	23.5	27.1	27.2	47.4	52.7	52.9
Incr Delay (d2), s/veh	5.1	58.4	67.4	2.5	6.8	0.4	1.6	4.2	4.2	0.2	17.2	19.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	10.2	10.4	1.6	4.5	0.2	8.6	15.5	15.3	0.3	8.1	8.2
LnGrp Delay(d),s/veh	58.5	115.9	125.1	54.8	61.8	51.7	25.1	31.3	31.3	47.6	69.9	72.2
LnGrp LOS	E	F	F	D	E	D	C	C	C	D	E	E
Approach Vol, veh/h		460			293			1382			406	
Approach Delay, s/veh		110.7			60.5			29.8			70.5	
Approach LOS		F			E			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	65.0	25.2	20.0	20.1	25.0	65.2	20.0	20.1
Change Period (Y+Rc), s	* 4.9	* 5.2	* 5.1	* 5.2	5.5	* 5.2	5.0	* 5.2
Max Green Setting (Gmax), s	* 60	* 20	* 15	* 15	19.5	* 60	15.0	* 15
Max Q Clear Time (g_c+I1), s	19.0	16.7	7.1	10.6	2.6	32.4	5.0	16.9
Green Ext Time (p_c), s	0.4	0.8	0.0	0.4	0.0	1.6	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	54.5
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	246	257	44	277	46	660	1218	186	27	351	55
Future Volume (veh/h)	98	246	257	44	277	46	660	1218	186	27	351	55
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	98	246	257	44	277	46	660	1218	186	27	351	55
Adj No. of Lanes	2	2	1	2	2	1	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	236	750	336	142	653	292	1002	1787	272	103	1128	505
Arrive On Green	0.07	0.21	0.21	0.04	0.19	0.19	0.30	0.59	0.59	0.03	0.33	0.33
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	3022	459	3375	3471	1553
Grp Volume(v), veh/h	98	246	257	44	277	46	660	697	707	27	351	55
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1736	1746	1688	1736	1553
Q Serve(g_s), s	5.0	10.7	27.8	2.3	12.6	4.4	30.8	49.4	50.2	1.4	13.7	4.5
Cycle Q Clear(g_c), s	5.0	10.7	27.8	2.3	12.6	4.4	30.8	49.4	50.2	1.4	13.7	4.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	236	750	336	142	653	292	1002	1026	1032	103	1128	505
V/C Ratio(X)	0.41	0.33	0.77	0.31	0.42	0.16	0.66	0.68	0.69	0.26	0.31	0.11
Avail Cap(c_a), veh/h	236	750	336	142	653	292	1002	1026	1032	103	1128	505
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	80.4	59.9	66.6	83.9	64.8	61.5	55.4	25.2	25.3	85.4	45.7	42.6
Incr Delay (d2), s/veh	5.3	1.2	15.3	5.6	2.0	1.1	3.4	3.6	3.7	6.1	0.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	5.3	13.5	1.2	6.3	2.0	14.9	24.6	25.2	0.7	6.7	2.0
LnGrp Delay(d),s/veh	85.7	61.1	81.9	89.5	66.8	62.6	58.8	28.8	29.0	91.5	46.4	43.0
LnGrp LOS	F	E	F	F	E	E	E	C	C	F	D	D
Approach Vol, veh/h		601			367			2064			433	
Approach Delay, s/veh		74.0			69.0			38.5			48.8	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	59.0	64.1	18.0	39.2	11.0	112.1	13.0	44.2
Change Period (Y+Rc), s	5.5	* 5.5	5.5	5.6	5.5	* 5.5	5.5	* 5.6
Max Green Setting (Gmax), s	53.5	* 59	12.5	33.4	5.5	* 1.1E2	7.5	* 39
Max Q Clear Time (g_c+I1), s	32.8	15.7	7.0	14.6	3.4	52.2	4.3	29.8
Green Ext Time (p_c), s	1.0	2.2	0.0	0.8	0.0	2.2	0.0	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	49.2
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	391	36	26	612	8	196	42	139	7	16	55
Future Volume (veh/h)	14	391	36	26	612	8	196	42	139	7	16	55
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	14	391	36	26	612	8	196	42	139	7	16	55
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	54	803	683	85	836	710	328	124	410	56	61	210
Arrive On Green	0.03	0.45	0.45	0.05	0.47	0.47	0.19	0.33	0.33	0.03	0.17	0.17
Sat Flow, veh/h	1707	1792	1524	1707	1792	1524	1757	377	1248	1757	366	1257
Grp Volume(v), veh/h	14	391	36	26	612	8	196	0	181	7	0	71
Grp Sat Flow(s),veh/h/ln	1707	1792	1524	1707	1792	1524	1757	0	1625	1757	0	1623
Q Serve(g_s), s	1.0	19.4	1.7	1.8	34.8	0.4	12.9	0.0	10.6	0.5	0.0	4.8
Cycle Q Clear(g_c), s	1.0	19.4	1.7	1.8	34.8	0.4	12.9	0.0	10.6	0.5	0.0	4.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.77	1.00		0.77
Lane Grp Cap(c), veh/h	54	803	683	85	836	710	328	0	534	56	0	271
V/C Ratio(X)	0.26	0.49	0.05	0.30	0.73	0.01	0.60	0.00	0.34	0.13	0.00	0.26
Avail Cap(c_a), veh/h	54	803	683	85	836	710	328	0	534	56	0	271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.5	24.5	19.6	57.7	27.2	18.0	46.9	0.0	31.9	59.2	0.0	45.7
Incr Delay (d2), s/veh	11.2	2.1	0.1	9.0	5.6	0.0	7.8	0.0	1.7	4.6	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	10.0	0.7	1.1	18.5	0.2	7.0	0.0	5.0	0.3	0.0	2.3
LnGrp Delay(d),s/veh	70.7	26.6	19.8	66.6	32.9	18.1	54.7	0.0	33.6	63.8	0.0	48.0
LnGrp LOS	E	C	B	E	C	B	D		C	E		D
Approach Vol, veh/h		441			646			377			78	
Approach Delay, s/veh		27.5			34.0			44.6			49.5	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	62.8	27.9	25.4	7.5	65.1	7.5	45.8
Change Period (Y+Rc), s	3.5	6.4	4.4	* 4.4	3.5	6.4	3.5	4.4
Max Green Setting (Gmax), s	6.3	56.4	23.5	* 21	4.0	58.7	4.0	40.5
Max Q Clear Time (g_c+I1), s	3.8	21.4	14.9	6.8	3.0	36.8	2.5	12.6
Green Ext Time (p_c), s	0.0	1.0	0.1	0.3	0.0	1.0	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	35.5
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	137	114	101	114	121	99	110	437	105	40	248	133
Future Volume (veh/h)	137	114	101	114	121	99	110	437	105	40	248	133
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	137	114	101	114	121	99	110	437	105	40	248	133
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	305	418	339	263	385	291	269	779	662	137	641	545
Arrive On Green	0.17	0.23	0.23	0.15	0.20	0.20	0.15	0.42	0.42	0.08	0.35	0.35
Sat Flow, veh/h	1757	1839	1494	1757	1904	1439	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	137	108	107	114	111	109	110	437	105	40	248	133
Grp Sat Flow(s),veh/h/ln	1757	1752	1581	1757	1752	1591	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	11.2	8.1	9.0	9.5	8.6	9.4	9.1	28.7	6.6	3.4	16.2	9.7
Cycle Q Clear(g_c), s	11.2	8.1	9.0	9.5	8.6	9.4	9.1	28.7	6.6	3.4	16.2	9.7
Prop In Lane	1.00		0.95	1.00		0.90	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	305	398	359	263	354	322	269	779	662	137	641	545
V/C Ratio(X)	0.45	0.27	0.30	0.43	0.31	0.34	0.41	0.56	0.16	0.29	0.39	0.24
Avail Cap(c_a), veh/h	305	398	359	263	354	322	269	779	662	137	641	545
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.4	51.0	51.4	62.0	54.5	54.8	61.4	35.0	28.7	69.7	39.4	37.3
Incr Delay (d2), s/veh	4.7	1.7	2.1	5.1	2.3	2.9	4.6	2.9	0.5	5.3	1.8	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	4.2	4.1	5.0	4.4	4.4	4.7	15.3	3.0	1.9	8.6	4.4
LnGrp Delay(d),s/veh	64.1	52.7	53.5	67.1	56.8	57.7	65.9	38.0	29.2	75.1	41.2	38.4
LnGrp LOS	E	D	D	E	E	E	E	D	C	E	D	D
Approach Vol, veh/h		352			334			652			421	
Approach Delay, s/veh		57.4			60.6			41.3			43.5	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	33.0	37.2	30.0	60.1	29.0	41.2	18.0	72.1
Change Period (Y+Rc), s	* 5.2	4.8	5.5	* 4.4	5.0	* 4.8	5.5	* 4.4
Max Green Setting (Gmax), s	* 28	32.2	24.5	* 56	24.0	* 36	12.5	* 68
Max Q Clear Time (g_c+I1), s	13.2	11.4	11.1	18.2	11.5	11.0	5.4	30.7
Green Ext Time (p_c), s	0.1	0.4	0.1	0.8	0.1	0.5	0.0	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	48.7
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	40	32	300	30	210	57	1401	264	481	968	59
Future Volume (veh/h)	76	40	32	300	30	210	57	1401	264	481	968	59
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	76	40	32	300	30	210	57	1401	264	481	968	59
Adj No. of Lanes	1	1	0	2	1	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	159	86	69	564	305	260	140	1959	610	727	2550	155
Arrive On Green	0.09	0.09	0.09	0.17	0.17	0.17	0.08	0.39	0.39	0.22	0.53	0.53
Sat Flow, veh/h	1757	950	760	3408	1845	1568	1740	4988	1553	3375	4808	293
Grp Volume(v), veh/h	76	0	72	300	30	210	57	1401	264	481	669	358
Grp Sat Flow(s),veh/h/ln	1757	0	1711	1704	1845	1568	1740	1663	1553	1688	1663	1775
Q Serve(g_s), s	6.6	0.0	6.4	12.9	2.2	20.7	5.0	38.0	19.9	20.9	18.9	19.0
Cycle Q Clear(g_c), s	6.6	0.0	6.4	12.9	2.2	20.7	5.0	38.0	19.9	20.9	18.9	19.0
Prop In Lane	1.00		0.44	1.00		1.00	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	159	0	155	564	305	260	140	1959	610	727	1763	941
V/C Ratio(X)	0.48	0.00	0.46	0.53	0.10	0.81	0.41	0.71	0.43	0.66	0.38	0.38
Avail Cap(c_a), veh/h	159	0	155	564	305	260	140	1959	610	727	1763	941
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.2	0.0	69.1	61.1	56.7	64.4	70.0	41.0	35.5	57.5	22.1	22.1
Incr Delay (d2), s/veh	9.9	0.0	9.7	3.6	0.6	23.2	8.5	2.3	2.2	4.7	0.6	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.0	3.4	6.4	1.2	10.6	2.7	17.8	8.9	10.2	8.8	9.6
LnGrp Delay(d),s/veh	79.1	0.0	78.8	64.7	57.3	87.5	78.5	43.3	37.8	62.1	22.7	23.3
LnGrp LOS	E		E	E	E	F	E	D	D	E	C	C
Approach Vol, veh/h		148			540			1722			1508	
Approach Delay, s/veh		79.0			73.2			43.6			35.4	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.0	90.1		20.0	40.0	68.1		32.0
Change Period (Y+Rc), s	* 5.1	* 5.2		5.5	5.5	* 5.2		5.5
Max Green Setting (Gmax), s	* 13	* 85		14.5	34.5	* 63		26.5
Max Q Clear Time (g_c+I1), s	7.0	21.0		8.6	22.9	40.0		22.7
Green Ext Time (p_c), s	0.0	4.5		0.1	0.6	4.4		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	45.9
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	234	141	95	98	96	10	126	1484	184	43	561	176
Future Volume (veh/h)	234	141	95	98	96	10	126	1484	184	43	561	176
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	234	141	95	98	96	10	126	1484	184	43	561	176
Adj No. of Lanes	2	2	0	2	2	0	2	3	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	414	446	282	414	693	71	410	2006	625	410	1396	625
Arrive On Green	0.12	0.22	0.22	0.12	0.22	0.22	0.12	0.40	0.40	0.12	0.40	0.40
Sat Flow, veh/h	3408	2062	1305	3408	3209	330	3375	4988	1553	3375	3471	1553
Grp Volume(v), veh/h	234	118	118	98	52	54	126	1484	184	43	561	176
Grp Sat Flow(s),veh/h/ln	1704	1752	1614	1704	1752	1786	1688	1663	1553	1688	1736	1553
Q Serve(g_s), s	10.4	9.1	9.9	4.2	3.8	3.9	5.5	40.7	12.9	1.8	18.5	12.3
Cycle Q Clear(g_c), s	10.4	9.1	9.9	4.2	3.8	3.9	5.5	40.7	12.9	1.8	18.5	12.3
Prop In Lane	1.00		0.81	1.00		0.18	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	414	379	349	414	379	386	410	2006	625	410	1396	625
V/C Ratio(X)	0.57	0.31	0.34	0.24	0.14	0.14	0.31	0.74	0.29	0.10	0.40	0.28
Avail Cap(c_a), veh/h	414	379	349	414	379	386	410	2006	625	410	1396	625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.6	52.9	53.2	63.8	50.9	50.9	64.4	40.8	32.5	62.8	34.2	32.4
Incr Delay (d2), s/veh	5.5	2.1	2.6	1.3	0.8	0.8	1.9	2.5	1.2	0.5	0.9	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	4.7	4.7	2.1	1.9	2.0	2.7	19.2	5.7	0.9	9.0	5.5
LnGrp Delay(d),s/veh	72.1	55.1	55.8	65.2	51.6	51.7	66.3	43.3	33.7	63.3	35.1	33.5
LnGrp LOS	E	E	E	E	D	D	E	D	C	E	D	C
Approach Vol, veh/h		470			204			1794			780	
Approach Delay, s/veh		63.7			58.1			44.0			36.3	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	70.2	25.0	40.4	25.0	70.2	25.0	40.4
Change Period (Y+Rc), s	5.5	* 5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	19.5	* 65	19.5	* 35	19.5	* 64	19.5	* 34
Max Q Clear Time (g_c+I1), s	7.5	20.5	12.4	5.9	3.8	42.7	6.2	11.9
Green Ext Time (p_c), s	0.1	3.9	0.2	0.3	0.0	3.8	0.1	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	45.9
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	216	201	59	13	418	228	107	1520	24	99	556	170
Future Volume (veh/h)	216	201	59	13	418	228	107	1520	24	99	556	170
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	216	201	59	13	418	228	107	1520	24	99	556	0
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	4	4	4	4	4	4
Cap, veh/h	227	606	515	54	430	365	187	1576	25	109	1400	626
Arrive On Green	0.13	0.34	0.34	0.03	0.24	0.24	0.11	0.45	0.45	0.06	0.40	0.00
Sat Flow, veh/h	1707	1792	1524	1707	1792	1524	1740	3498	55	1740	3471	1553
Grp Volume(v), veh/h	216	201	59	13	418	228	107	754	790	99	556	0
Grp Sat Flow(s),veh/h/ln	1707	1792	1524	1707	1792	1524	1740	1736	1817	1740	1736	1553
Q Serve(g_s), s	22.0	14.7	4.7	1.3	40.6	23.5	10.3	74.0	74.2	9.9	20.0	0.0
Cycle Q Clear(g_c), s	22.0	14.7	4.7	1.3	40.6	23.5	10.3	74.0	74.2	9.9	20.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	227	606	515	54	430	365	187	782	819	109	1400	626
V/C Ratio(X)	0.95	0.33	0.11	0.24	0.97	0.62	0.57	0.96	0.97	0.91	0.40	0.00
Avail Cap(c_a), veh/h	227	606	515	54	430	365	187	782	819	109	1400	626
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	75.6	43.3	40.0	82.9	66.1	59.6	74.4	46.8	46.9	81.7	37.2	0.0
Incr Delay (d2), s/veh	48.7	1.5	0.5	10.1	37.0	7.8	12.0	24.4	24.0	63.9	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.5	7.5	2.0	0.8	24.5	10.7	5.6	40.7	42.6	6.7	9.7	0.0
LnGrp Delay(d),s/veh	124.3	44.8	40.5	92.9	103.1	67.4	86.5	71.2	70.9	145.7	38.0	0.0
LnGrp LOS	F	D	D	F	F	E	F	E	E	F	D	
Approach Vol, veh/h		476			659			1651			655	
Approach Delay, s/veh		80.3			90.6			72.0			54.3	
Approach LOS		F			F			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.3	75.9	27.6	47.7	16.0	84.2	10.4	64.9
Change Period (Y+Rc), s	* 5.4	5.1	* 4.3	5.6	5.0	5.1	* 4.8	* 5.6
Max Green Setting (Gmax), s	* 19	70.8	* 23	41.6	11.0	79.1	* 5.6	* 59
Max Q Clear Time (g_c+I1), s	12.3	22.0	24.0	42.6	11.9	76.2	3.3	16.7
Green Ext Time (p_c), s	0.0	2.7	0.0	0.0	0.0	1.2	0.0	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	73.4
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	48	51	12	129	30	214	1587	29	14	499	115
Future Volume (veh/h)	35	48	51	12	129	30	214	1587	29	14	499	115
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	35	48	51	12	129	30	214	1587	29	14	499	115
Adj No. of Lanes	2	1	0	2	1	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	117	173	183	77	288	67	364	2079	38	66	1192	273
Arrive On Green	0.03	0.21	0.21	0.02	0.20	0.20	0.21	0.60	0.60	0.04	0.43	0.43
Sat Flow, veh/h	3408	820	871	3408	1448	337	1740	3488	64	1740	2806	643
Grp Volume(v), veh/h	35	0	99	12	0	159	214	789	827	14	308	306
Grp Sat Flow(s),veh/h/ln	1704	0	1691	1704	0	1785	1740	1736	1816	1740	1736	1713
Q Serve(g_s), s	1.6	0.0	7.9	0.6	0.0	12.5	17.7	53.8	54.1	1.2	19.8	20.0
Cycle Q Clear(g_c), s	1.6	0.0	7.9	0.6	0.0	12.5	17.7	53.8	54.1	1.2	19.8	20.0
Prop In Lane	1.00		0.52	1.00		0.19	1.00		0.04	1.00		0.38
Lane Grp Cap(c), veh/h	117	0	356	77	0	355	364	1035	1083	66	738	728
V/C Ratio(X)	0.30	0.00	0.28	0.16	0.00	0.45	0.59	0.76	0.76	0.21	0.42	0.42
Avail Cap(c_a), veh/h	117	0	356	77	0	355	364	1035	1083	66	738	728
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	75.4	0.0	52.9	76.7	0.0	56.4	57.0	23.9	24.0	74.6	32.1	32.2
Incr Delay (d2), s/veh	6.4	0.0	1.9	4.3	0.0	4.1	6.8	5.3	5.1	7.1	1.7	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	3.9	0.3	0.0	6.6	9.2	27.2	28.4	0.7	9.8	9.8
LnGrp Delay(d),s/veh	81.8	0.0	54.9	81.0	0.0	60.4	63.8	29.2	29.1	81.7	33.9	34.0
LnGrp LOS	F		D	F		E	E	C	C	F	C	C
Approach Vol, veh/h		134			171			1830			628	
Approach Delay, s/veh		61.9			61.9			33.2			35.0	
Approach LOS		E			E			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	39.0	73.0	11.0	37.0	11.6	100.4	9.1	38.9
Change Period (Y+Rc), s	5.5	5.0	5.5	* 5.2	5.5	5.0	5.5	* 5.2
Max Green Setting (Gmax), s	33.5	68.0	5.5	* 32	6.1	95.4	3.6	* 34
Max Q Clear Time (g_c+I1), s	19.7	22.0	3.6	14.5	3.2	56.1	2.6	9.9
Green Ext Time (p_c), s	0.2	2.7	0.0	0.2	0.0	2.7	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	36.8
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	87	55	23	81	17	131	1834	69	7	439	79
Future Volume (veh/h)	63	87	55	23	81	17	131	1834	69	7	439	79
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1792	1792	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	63	87	55	23	81	17	131	1834	69	7	439	79
Adj No. of Lanes	2	1	0	2	1	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	6	6	6	4	4	4	4	4	4
Cap, veh/h	116	212	134	85	279	58	236	2114	79	36	1485	265
Arrive On Green	0.03	0.20	0.20	0.03	0.19	0.19	0.14	0.62	0.62	0.02	0.50	0.50
Sat Flow, veh/h	3375	1048	662	3312	1438	302	1740	3412	128	1740	2943	526
Grp Volume(v), veh/h	63	0	142	23	0	98	131	928	975	7	258	260
Grp Sat Flow(s),veh/h/ln	1688	0	1710	1656	0	1739	1740	1736	1804	1740	1736	1734
Q Serve(g_s), s	2.9	0.0	11.6	1.1	0.0	7.7	11.3	69.9	71.7	0.6	13.8	14.0
Cycle Q Clear(g_c), s	2.9	0.0	11.6	1.1	0.0	7.7	11.3	69.9	71.7	0.6	13.8	14.0
Prop In Lane	1.00		0.39	1.00		0.17	1.00		0.07	1.00		0.30
Lane Grp Cap(c), veh/h	116	0	346	85	0	337	236	1075	1118	36	875	875
V/C Ratio(X)	0.54	0.00	0.41	0.27	0.00	0.29	0.56	0.86	0.87	0.20	0.29	0.30
Avail Cap(c_a), veh/h	116	0	346	85	0	337	236	1075	1118	36	875	875
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	76.0	0.0	55.5	76.5	0.0	55.1	64.6	24.9	25.2	77.0	23.1	23.1
Incr Delay (d2), s/veh	17.0	0.0	3.6	7.7	0.0	2.2	9.1	9.2	9.5	11.8	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	5.8	0.6	0.0	3.9	6.0	36.0	38.4	0.4	6.8	6.9
LnGrp Delay(d),s/veh	93.0	0.0	59.1	84.2	0.0	57.3	73.7	34.1	34.7	88.8	23.9	24.0
LnGrp LOS	F		E	F		E	E	C	C	F	C	C
Approach Vol, veh/h		205			121			2034			525	
Approach Delay, s/veh		69.5			62.4			36.9			24.8	
Approach LOS		E			E			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.2	85.8	11.0	36.0	8.8	104.2	9.6	37.4
Change Period (Y+Rc), s	5.5	* 5.1	5.5	* 5	5.5	* 5.1	5.5	* 5
Max Green Setting (Gmax), s	21.7	* 81	5.5	* 31	3.3	* 99	4.1	* 32
Max Q Clear Time (g_c+I1), s	13.3	16.0	4.9	9.7	2.6	73.7	3.1	13.6
Green Ext Time (p_c), s	0.1	3.2	0.0	0.2	0.0	3.1	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	38.1
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	380	141	128	22	134	268	69	1388	49	57	380	77
Future Volume (veh/h)	380	141	128	22	134	268	69	1388	49	57	380	77
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	380	141	128	22	134	268	69	1388	49	57	380	77
Adj No. of Lanes	2	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	465	319	290	61	141	282	138	1542	54	88	1219	245
Arrive On Green	0.14	0.36	0.36	0.03	0.26	0.26	0.08	0.45	0.45	0.05	0.42	0.42
Sat Flow, veh/h	3408	892	810	1757	550	1100	1740	3421	121	1740	2882	578
Grp Volume(v), veh/h	380	0	269	22	0	402	69	703	734	57	227	230
Grp Sat Flow(s),veh/h/ln	1704	0	1702	1757	0	1650	1740	1736	1806	1740	1736	1725
Q Serve(g_s), s	21.7	0.0	24.1	2.5	0.0	48.0	7.6	74.9	75.3	6.4	17.4	17.8
Cycle Q Clear(g_c), s	21.7	0.0	24.1	2.5	0.0	48.0	7.6	74.9	75.3	6.4	17.4	17.8
Prop In Lane	1.00		0.48	1.00		0.67	1.00		0.07	1.00		0.34
Lane Grp Cap(c), veh/h	465	0	609	61	0	423	138	782	814	88	734	729
V/C Ratio(X)	0.82	0.00	0.44	0.36	0.00	0.95	0.50	0.90	0.90	0.65	0.31	0.31
Avail Cap(c_a), veh/h	465	0	609	61	0	423	138	782	814	88	734	729
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	84.1	0.0	49.0	94.6	0.0	73.3	88.4	50.8	50.9	93.4	38.4	38.5
Incr Delay (d2), s/veh	14.8	0.0	2.3	16.1	0.0	33.1	12.3	15.3	15.1	31.7	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.2	0.0	11.7	1.5	0.0	25.8	4.2	39.3	40.9	3.9	8.6	8.7
LnGrp Delay(d),s/veh	98.8	0.0	51.3	110.6	0.0	106.3	100.7	66.1	66.0	125.0	39.5	39.6
LnGrp LOS	F		D	F		F	F	E	E	F	D	D
Approach Vol, veh/h		649			424			1506			514	
Approach Delay, s/veh		79.2			106.6			67.6			49.0	
Approach LOS		E			F			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.0	89.8	32.8	56.7	15.4	95.4	12.4	77.1
Change Period (Y+Rc), s	* 5.1	5.1	5.5	* 5.4	* 5.3	5.1	5.5	* 5.4
Max Green Setting (Gmax), s	* 16	84.7	27.3	* 51	* 10	90.3	6.9	* 71
Max Q Clear Time (g_c+I1), s	9.6	19.8	23.7	50.0	8.4	77.3	4.5	26.1
Green Ext Time (p_c), s	0.0	2.1	0.2	0.2	0.0	2.0	0.0	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	72.3
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	210	24	71	532	4	102	398	97	6	63	63
Future Volume (veh/h)	40	210	24	71	532	4	102	398	97	6	63	63
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	40	210	24	71	532	4	102	398	97	6	63	63
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	116	794	90	172	1006	8	223	623	152	46	280	280
Arrive On Green	0.07	0.26	0.26	0.10	0.29	0.29	0.13	0.43	0.43	0.03	0.33	0.33
Sat Flow, veh/h	1707	3085	349	1707	3465	26	1757	1434	349	1757	848	848
Grp Volume(v), veh/h	40	115	119	71	261	275	102	0	495	6	0	126
Grp Sat Flow(s),veh/h/ln	1707	1703	1731	1707	1703	1788	1757	0	1783	1757	0	1695
Q Serve(g_s), s	2.6	6.2	6.3	4.5	14.8	14.8	6.2	0.0	25.0	0.4	0.0	6.2
Cycle Q Clear(g_c), s	2.6	6.2	6.3	4.5	14.8	14.8	6.2	0.0	25.0	0.4	0.0	6.2
Prop In Lane	1.00		0.20	1.00		0.01	1.00		0.20	1.00		0.50
Lane Grp Cap(c), veh/h	116	438	446	172	495	519	223	0	775	46	0	560
V/C Ratio(X)	0.35	0.26	0.27	0.41	0.53	0.53	0.46	0.00	0.64	0.13	0.00	0.22
Avail Cap(c_a), veh/h	116	438	446	172	495	519	223	0	775	46	0	560
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.2	34.0	34.1	48.5	34.2	34.2	46.5	0.0	25.4	54.7	0.0	27.8
Incr Delay (d2), s/veh	8.0	1.5	1.5	7.1	4.0	3.8	6.6	0.0	4.0	5.8	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	3.1	3.2	2.5	7.5	7.9	3.4	0.0	13.1	0.3	0.0	3.0
LnGrp Delay(d),s/veh	59.2	35.5	35.5	55.6	38.2	38.0	53.1	0.0	29.4	60.6	0.0	28.8
LnGrp LOS	E	D	D	E	D	D	D		C	E		C
Approach Vol, veh/h		274			607			597			132	
Approach Delay, s/veh		38.9			40.2			33.5			30.2	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	36.0	19.0	44.0	12.2	39.8	7.0	56.0
Change Period (Y+Rc), s	4.4	6.4	4.4	6.0	4.4	6.4	* 4	6.0
Max Green Setting (Gmax), s	11.6	29.6	14.6	38.0	7.8	33.4	* 3	50.0
Max Q Clear Time (g_c+I1), s	6.5	8.3	8.2	8.2	4.6	16.8	2.4	27.0
Green Ext Time (p_c), s	0.0	0.7	0.0	0.7	0.0	0.7	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	36.7
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	326	47	323	25	63	161	194	614	13	105	1248	867
Future Volume (veh/h)	326	47	323	25	63	161	194	614	13	105	1248	867
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1900	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	360	0	323	25	63	161	194	614	13	105	1248	0
Adj No. of Lanes	2	0	1	0	1	1	1	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	1042	0	465	32	79	96	218	1427	30	233	1443	449
Arrive On Green	0.30	0.00	0.30	0.06	0.06	0.06	0.13	0.28	0.28	0.13	0.29	0.00
Sat Flow, veh/h	3480	0	1553	517	1302	1568	1740	5027	106	1740	4988	1553
Grp Volume(v), veh/h	360	0	323	88	0	161	194	406	221	105	1248	0
Grp Sat Flow(s),veh/h/ln	1740	0	1553	1819	0	1568	1740	1663	1808	1740	1663	1553
Q Serve(g_s), s	7.3	0.0	16.6	4.3	0.0	5.5	9.9	9.0	9.0	5.0	21.4	0.0
Cycle Q Clear(g_c), s	7.3	0.0	16.6	4.3	0.0	5.5	9.9	9.0	9.0	5.0	21.4	0.0
Prop In Lane	1.00		1.00	0.28		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	1042	0	465	111	0	96	218	944	513	233	1443	449
V/C Ratio(X)	0.35	0.00	0.69	0.79	0.00	1.68	0.89	0.43	0.43	0.45	0.86	0.00
Avail Cap(c_a), veh/h	1042	0	465	111	0	96	218	944	513	233	1443	449
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.7	0.0	28.0	41.8	0.0	42.3	38.8	26.3	26.4	36.0	30.4	0.0
Incr Delay (d2), s/veh	0.9	0.0	8.3	42.7	0.0	348.7	37.9	1.4	2.6	6.2	7.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.0	8.2	3.5	0.0	11.6	7.0	4.3	4.9	2.8	10.8	0.0
LnGrp Delay(d),s/veh	25.6	0.0	36.3	84.5	0.0	391.1	76.7	27.8	29.0	42.1	37.5	0.0
LnGrp LOS	C		D	F		F	E	C	C	D	D	
Approach Vol, veh/h		683			249			821			1353	
Approach Delay, s/veh		30.6			282.7			39.7			37.9	
Approach LOS		C			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.0	30.9		11.0	16.5	30.4		32.3
Change Period (Y+Rc), s	* 4.7	4.8		5.5	* 4.4	* 4.8		5.3
Max Green Setting (Gmax), s	* 11	25.9		5.5	* 12	* 26		27.0
Max Q Clear Time (g_c+I1), s	11.9	23.4		7.5	7.0	11.0		18.6
Green Ext Time (p_c), s	0.0	1.1		0.0	0.0	2.8		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	56.4
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	226	114	35	44	117	282	37	886	30	668	1355	644
Future Volume (veh/h)	226	114	35	44	117	282	37	886	30	668	1355	644
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	226	114	35	44	117	282	37	886	30	668	1355	644
Adj No. of Lanes	2	3	0	2	1	2	2	3	0	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	410	987	281	135	316	1476	113	1477	50	1020	2826	880
Arrive On Green	0.12	0.25	0.25	0.04	0.17	0.17	0.03	0.30	0.30	0.30	0.56	0.56
Sat Flow, veh/h	3408	3898	1109	3514	1845	3136	3408	5003	169	3408	5036	1568
Grp Volume(v), veh/h	226	97	52	44	117	282	37	594	322	668	1355	644
Grp Sat Flow(s),veh/h/ln	1704	1679	1649	1757	1845	1568	1704	1679	1815	1704	1679	1568
Q Serve(g_s), s	12.2	4.3	4.8	2.4	11.0	10.2	2.1	29.6	29.7	33.4	31.6	59.8
Cycle Q Clear(g_c), s	12.2	4.3	4.8	2.4	11.0	10.2	2.1	29.6	29.7	33.4	31.6	59.8
Prop In Lane	1.00		0.67	1.00		1.00	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	410	850	418	135	316	1476	113	991	536	1020	2826	880
V/C Ratio(X)	0.55	0.11	0.12	0.33	0.37	0.19	0.33	0.60	0.60	0.65	0.48	0.73
Avail Cap(c_a), veh/h	410	850	418	135	316	1476	113	991	536	1020	2826	880
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	81.0	56.1	56.3	91.5	71.7	30.1	92.4	59.0	59.0	59.7	25.8	32.0
Incr Delay (d2), s/veh	5.3	0.3	0.6	6.3	3.3	0.3	7.5	2.7	4.9	3.3	0.6	5.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	2.1	2.2	1.3	5.9	4.5	1.1	14.1	15.7	16.2	14.8	27.2
LnGrp Delay(d),s/veh	86.3	56.4	56.9	97.9	75.0	30.4	99.9	61.7	64.0	63.0	26.3	37.3
LnGrp LOS	F	E	E	F	E	C	F	E	E	E	C	D
Approach Vol, veh/h		375			443			953			2667	
Approach Delay, s/veh		74.5			48.9			63.9			38.2	
Approach LOS		E			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	115.3	29.0	39.2	64.0	63.3	13.0	55.2
Change Period (Y+Rc), s	5.5	5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	6.5	109.4	23.5	* 34	58.5	* 58	7.5	* 49
Max Q Clear Time (g_c+I1), s	4.1	61.8	14.2	13.0	35.4	31.7	4.4	6.8
Green Ext Time (p_c), s	0.0	4.6	0.2	0.6	1.0	4.5	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	47.8
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	64	13	38	46	66	37	817	63	133	754	215
Future Volume (veh/h)	105	64	13	38	46	66	37	817	63	133	754	215
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	91	84	13	38	46	66	37	817	63	133	754	215
Adj No. of Lanes	1	1	0	1	1	1	1	3	0	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	346	308	48	346	364	309	203	1777	137	205	1455	411
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.12	0.37	0.37	0.12	0.37	0.37
Sat Flow, veh/h	1757	1561	242	1757	1845	1568	1757	4771	366	1757	3905	1102
Grp Volume(v), veh/h	91	0	97	38	46	66	37	574	306	133	647	322
Grp Sat Flow(s),veh/h/ln	1757	0	1802	1757	1845	1568	1757	1679	1780	1757	1679	1650
Q Serve(g_s), s	7.7	0.0	8.0	3.1	3.6	6.2	3.3	22.6	22.8	12.7	26.2	26.6
Cycle Q Clear(g_c), s	7.7	0.0	8.0	3.1	3.6	6.2	3.3	22.6	22.8	12.7	26.2	26.6
Prop In Lane	1.00		0.13	1.00		1.00	1.00		0.21	1.00		0.67
Lane Grp Cap(c), veh/h	346	0	355	346	364	309	203	1251	663	205	1251	615
V/C Ratio(X)	0.26	0.00	0.27	0.11	0.13	0.21	0.18	0.46	0.46	0.65	0.52	0.52
Avail Cap(c_a), veh/h	346	0	355	346	364	309	203	1251	663	205	1251	615
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.5	0.0	59.6	57.6	57.8	58.9	69.9	41.5	41.6	73.9	42.7	42.8
Incr Delay (d2), s/veh	1.8	0.0	1.9	0.6	0.7	1.6	2.0	1.2	2.3	14.9	1.5	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	4.2	1.6	1.9	2.8	1.7	10.7	11.6	7.0	12.4	12.7
LnGrp Delay(d),s/veh	61.3	0.0	61.5	58.3	58.6	60.5	71.9	42.8	43.9	88.8	44.2	46.0
LnGrp LOS	E		E	E	E	E	E	D	D	F	D	D
Approach Vol, veh/h		188			150			917			1102	
Approach Delay, s/veh		61.4			59.3			44.3			50.1	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	25.0	70.0		40.0	25.0	70.0		40.0
Change Period (Y+Rc), s	* 4.8	4.8		5.5	* 4.6	4.8		5.5
Max Green Setting (Gmax), s	* 20	65.2		34.5	* 20	65.2		34.5
Max Q Clear Time (g_c+I1), s	5.3	28.6		8.2	14.7	24.8		10.0
Green Ext Time (p_c), s	0.0	2.6		0.1	0.1	2.6		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	49.3
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

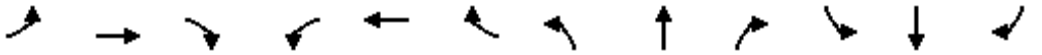
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	289	128	70	279	123	242	673	89	120	261	160
Future Volume (veh/h)	109	289	128	70	279	123	242	673	89	120	261	160
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	109	289	128	70	279	123	242	673	89	120	261	160
Adj No. of Lanes	2	3	0	2	3	1	2	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	136	1120	463	144	1623	505	258	1662	517	201	1052	491
Arrive On Green	0.04	0.32	0.32	0.04	0.32	0.32	0.08	0.33	0.33	0.06	0.31	0.31
Sat Flow, veh/h	3408	3501	1446	3408	5036	1568	3408	5036	1568	3408	3357	1568
Grp Volume(v), veh/h	109	276	141	70	279	123	242	673	89	120	261	160
Grp Sat Flow(s),veh/h/ln	1704	1679	1590	1704	1679	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	2.9	5.5	5.9	1.8	3.6	5.2	6.4	9.3	3.6	3.1	5.2	7.0
Cycle Q Clear(g_c), s	2.9	5.5	5.9	1.8	3.6	5.2	6.4	9.3	3.6	3.1	5.2	7.0
Prop In Lane	1.00		0.91	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	136	1074	509	144	1623	505	258	1662	517	201	1052	491
V/C Ratio(X)	0.80	0.26	0.28	0.49	0.17	0.24	0.94	0.40	0.17	0.60	0.25	0.33
Avail Cap(c_a), veh/h	136	1074	509	144	1623	505	258	1662	517	201	1052	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.8	22.7	22.8	42.1	21.9	22.4	41.4	23.3	21.4	41.3	23.0	23.6
Incr Delay (d2), s/veh	37.3	0.6	1.3	11.3	0.2	1.1	42.5	0.7	0.7	12.5	0.6	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	2.6	2.8	1.1	1.7	2.4	4.5	4.4	1.7	1.8	2.5	3.3
LnGrp Delay(d),s/veh	80.1	23.3	24.2	53.4	22.1	23.6	83.9	24.1	22.1	53.8	23.6	25.4
LnGrp LOS	F	C	C	D	C	C	F	C	C	D	C	C
Approach Vol, veh/h		526			472			1004			541	
Approach Delay, s/veh		35.3			27.1			38.3			30.8	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.3	33.8	9.1	34.8	10.8	35.3	9.3	34.6
Change Period (Y+Rc), s	5.5	* 5.6	5.5	5.8	5.5	* 5.6	5.5	5.8
Max Green Setting (Gmax), s	6.8	* 28	3.6	29.0	5.3	* 30	3.8	28.8
Max Q Clear Time (g_c+I1), s	8.4	9.0	4.9	7.2	5.1	11.3	3.8	7.9
Green Ext Time (p_c), s	0.0	1.6	0.0	1.0	0.0	1.6	0.0	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	34.0
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	298	181	11	34	264	226	13	75	45	64	32	57
Future Volume (veh/h)	298	181	11	34	264	226	13	75	45	64	32	57
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	298	181	11	34	264	226	13	75	45	64	32	57
Adj No. of Lanes	1	2	0	1	1	1	1	1	0	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	577	1873	113	119	544	463	78	223	134	206	409	348
Arrive On Green	0.33	0.56	0.56	0.07	0.30	0.30	0.04	0.21	0.21	0.06	0.22	0.22
Sat Flow, veh/h	1757	3359	203	1757	1845	1568	1757	1081	649	3408	1845	1568
Grp Volume(v), veh/h	298	94	98	34	264	226	13	0	120	64	32	57
Grp Sat Flow(s),veh/h/ln	1757	1752	1809	1757	1845	1568	1757	0	1730	1704	1845	1568
Q Serve(g_s), s	26.1	4.8	4.8	3.5	22.4	22.6	1.4	0.0	11.3	3.4	2.6	5.6
Cycle Q Clear(g_c), s	26.1	4.8	4.8	3.5	22.4	22.6	1.4	0.0	11.3	3.4	2.6	5.6
Prop In Lane	1.00		0.11	1.00		1.00	1.00		0.38	1.00		1.00
Lane Grp Cap(c), veh/h	577	977	1009	119	544	463	78	0	356	206	409	348
V/C Ratio(X)	0.52	0.10	0.10	0.29	0.48	0.49	0.17	0.00	0.34	0.31	0.08	0.16
Avail Cap(c_a), veh/h	577	977	1009	119	544	463	78	0	356	206	409	348
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.7	19.7	19.7	84.4	55.2	55.3	87.5	0.0	64.5	85.7	58.7	59.9
Incr Delay (d2), s/veh	3.3	0.2	0.2	5.9	3.1	3.7	4.5	0.0	2.5	3.9	0.4	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.2	2.4	2.5	1.9	11.9	10.3	0.8	0.0	5.7	1.7	1.4	2.5
LnGrp Delay(d),s/veh	55.0	19.9	19.9	90.3	58.3	58.9	92.0	0.0	67.1	89.6	59.1	60.9
LnGrp LOS	E	B	B	F	E	E	F		E	F	E	E
Approach Vol, veh/h		490			524			133			153	
Approach Delay, s/veh		41.2			60.6			69.5			72.5	
Approach LOS		D			E			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	68.0	61.1	14.0	47.3	18.0	111.1	17.0	44.3
Change Period (Y+Rc), s	5.5	* 4.9	5.5	* 5.1	* 5.1	* 4.9	5.5	* 5.1
Max Green Setting (Gmax), s	62.5	* 56	8.5	* 42	* 13	* 1.1E2	11.5	* 39
Max Q Clear Time (g_c+I1), s	28.1	24.6	3.4	7.6	5.5	6.8	5.4	13.3
Green Ext Time (p_c), s	0.3	0.6	0.0	0.2	0.0	0.6	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	55.6
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	106	60	399	279	187	56	1147	86	224	1919	319
Future Volume (veh/h)	159	106	60	399	279	187	56	1147	86	224	1919	319
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	159	106	60	399	327	155	56	1147	86	224	1919	319
Adj No. of Lanes	2	2	1	2	2	1	2	4	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	415	751	336	428	790	527	411	2536	627	411	2012	627
Arrive On Green	0.12	0.21	0.21	0.12	0.21	0.21	0.12	0.40	0.40	0.12	0.40	0.40
Sat Flow, veh/h	3408	3505	1568	3514	3689	1568	3375	6285	1553	3375	4988	1553
Grp Volume(v), veh/h	159	106	60	399	327	155	56	1147	86	224	1919	319
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1757	1845	1568	1688	1571	1553	1688	1663	1553
Q Serve(g_s), s	6.9	3.9	5.0	18.0	12.2	11.7	2.4	21.3	5.6	10.0	59.7	24.7
Cycle Q Clear(g_c), s	6.9	3.9	5.0	18.0	12.2	11.7	2.4	21.3	5.6	10.0	59.7	24.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	415	751	336	428	790	527	411	2536	627	411	2012	627
V/C Ratio(X)	0.38	0.14	0.18	0.93	0.41	0.29	0.14	0.45	0.14	0.54	0.95	0.51
Avail Cap(c_a), veh/h	415	751	336	428	790	527	411	2536	627	411	2012	627
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.8	51.0	51.4	69.6	54.2	39.2	62.8	34.8	30.2	66.1	46.3	35.8
Incr Delay (d2), s/veh	2.7	0.4	1.2	29.5	1.6	1.4	0.7	0.6	0.5	5.1	11.8	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	1.9	2.3	10.5	6.4	5.3	1.1	9.3	2.5	5.0	29.6	11.1
LnGrp Delay(d),s/veh	67.4	51.4	52.6	99.1	55.8	40.6	63.5	35.4	30.6	71.2	58.1	38.8
LnGrp LOS	E	D	D	F	E	D	E	D	C	E	E	D
Approach Vol, veh/h		325			881			1289			2462	
Approach Delay, s/veh		59.4			72.7			36.3			56.8	
Approach LOS		E			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	70.0	25.0	40.1	25.0	70.0	25.0	40.1
Change Period (Y+Rc), s	5.5	* 5.4	5.5	5.8	5.5	* 5.4	5.5	* 5.8
Max Green Setting (Gmax), s	19.5	* 65	19.5	34.2	19.5	* 65	19.5	* 34
Max Q Clear Time (g_c+I1), s	4.4	61.7	8.9	14.2	12.0	23.3	20.0	7.0
Green Ext Time (p_c), s	0.0	2.1	0.1	0.7	0.2	7.6	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	54.5
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	195	118	138	328	129	316	1117	62	217	853	326
Future Volume (veh/h)	107	195	118	138	328	129	316	1117	62	217	853	326
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1827	1827	1827	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	107	195	118	138	328	129	316	1117	62	217	853	326
Adj No. of Lanes	2	2	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	4	4	4	4	4	4
Cap, veh/h	414	747	334	410	1063	331	410	2002	623	410	2002	623
Arrive On Green	0.12	0.21	0.21	0.12	0.21	0.21	0.12	0.40	0.40	0.12	0.40	0.40
Sat Flow, veh/h	3408	3505	1568	3375	4988	1553	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	107	195	118	138	328	129	316	1117	62	217	853	326
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1688	1663	1553	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	4.6	7.4	10.3	6.0	8.9	11.4	14.6	27.7	4.0	9.7	19.8	25.5
Cycle Q Clear(g_c), s	4.6	7.4	10.3	6.0	8.9	11.4	14.6	27.7	4.0	9.7	19.8	25.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	414	747	334	410	1063	331	410	2002	623	410	2002	623
V/C Ratio(X)	0.26	0.26	0.35	0.34	0.31	0.39	0.77	0.56	0.10	0.53	0.43	0.52
Avail Cap(c_a), veh/h	414	747	334	410	1063	331	410	2002	623	410	2002	623
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.9	52.6	53.7	64.5	53.1	54.1	68.3	37.0	29.9	66.1	34.7	36.4
Incr Delay (d2), s/veh	1.5	0.8	2.9	2.2	0.8	3.4	13.0	1.1	0.3	4.8	0.7	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	3.7	4.7	2.9	4.2	5.2	7.5	12.9	1.8	4.8	9.2	11.5
LnGrp Delay(d),s/veh	65.4	53.4	56.6	66.7	53.9	57.6	81.3	38.1	30.2	71.0	35.3	39.5
LnGrp LOS	E	D	E	E	D	E	F	D	C	E	D	D
Approach Vol, veh/h		420			595			1495			1396	
Approach Delay, s/veh		57.4			57.7			46.9			41.8	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	70.2	25.0	40.2	25.0	70.2	25.0	40.2
Change Period (Y+Rc), s	5.5	* 5.8	5.5	* 6	5.5	* 5.8	5.5	6.0
Max Green Setting (Gmax), s	19.5	* 64	19.5	* 34	19.5	* 64	19.5	34.0
Max Q Clear Time (g_c+I1), s	16.6	27.5	6.6	13.4	11.7	29.7	8.0	12.3
Green Ext Time (p_c), s	0.2	3.8	0.1	0.9	0.2	3.8	0.1	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	47.9
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	70	151	12	30	14	354	1360	5	51	643	214
Future Volume (veh/h)	107	70	151	12	30	14	354	1360	5	51	643	214
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	107	70	151	12	30	14	354	1360	5	51	643	214
Adj No. of Lanes	2	1	2	1	1	0	2	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	413	394	589	213	254	119	409	2057	8	211	2000	623
Arrive On Green	0.12	0.21	0.21	0.12	0.21	0.21	0.12	0.40	0.40	0.12	0.40	0.40
Sat Flow, veh/h	3408	1845	2760	1757	1191	556	3375	5130	19	1740	4988	1553
Grp Volume(v), veh/h	107	70	151	12	0	44	354	882	483	51	643	214
Grp Sat Flow(s),veh/h/ln	1704	1845	1380	1757	0	1747	1688	1663	1824	1740	1663	1553
Q Serve(g_s), s	4.6	5.0	7.3	1.0	0.0	3.3	16.6	34.8	34.8	4.3	14.3	15.4
Cycle Q Clear(g_c), s	4.6	5.0	7.3	1.0	0.0	3.3	16.6	34.8	34.8	4.3	14.3	15.4
Prop In Lane	1.00		1.00	1.00		0.32	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	413	394	589	213	0	373	409	1333	731	211	2000	623
V/C Ratio(X)	0.26	0.18	0.26	0.06	0.00	0.12	0.87	0.66	0.66	0.24	0.32	0.34
Avail Cap(c_a), veh/h	413	394	589	213	0	373	409	1333	731	211	2000	623
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.2	51.8	52.7	62.7	0.0	51.1	69.5	39.3	39.3	64.1	33.2	33.5
Incr Delay (d2), s/veh	1.5	1.0	1.0	0.5	0.0	0.6	21.1	2.6	4.7	2.7	0.4	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	2.7	2.9	0.5	0.0	1.6	9.0	16.4	18.4	2.2	6.6	6.9
LnGrp Delay(d),s/veh	65.8	52.8	53.8	63.2	0.0	51.8	90.7	41.9	44.0	66.8	33.6	35.0
LnGrp LOS	E	D	D	E		D	F	D	D	E	C	D
Approach Vol, veh/h		328			56			1719			908	
Approach Delay, s/veh		57.5			54.2			52.5			35.8	
Approach LOS		E			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	70.6	25.0	40.5	25.0	70.6	25.0	40.5
Change Period (Y+Rc), s	5.5	6.0	5.5	* 6.1	5.5	* 6	5.5	* 6.1
Max Green Setting (Gmax), s	19.5	64.0	19.5	* 34	19.5	* 65	19.5	* 34
Max Q Clear Time (g_c+I1), s	18.6	17.4	6.6	5.3	6.3	36.8	3.0	9.3
Green Ext Time (p_c), s	0.1	3.2	0.1	0.2	0.0	3.2	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	48.1
HCM 2010 LOS	D

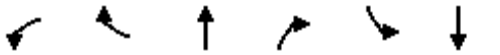
Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	42	71	31	163	191	383	1484	47	50	433	65
Future Volume (veh/h)	146	42	71	31	163	191	383	1484	47	50	433	65
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1759	1759	1759	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	146	42	71	31	163	191	383	1484	47	50	433	65
Adj No. of Lanes	2	2	0	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	8	8	8	4	4	4	4	4	4
Cap, veh/h	415	378	338	396	721	322	411	2011	626	411	2011	626
Arrive On Green	0.12	0.22	0.22	0.12	0.22	0.22	0.12	0.40	0.40	0.12	0.40	0.40
Sat Flow, veh/h	3408	1752	1568	3250	3343	1495	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	146	42	71	31	163	191	383	1484	47	50	433	65
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1625	1671	1495	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	6.3	3.1	6.0	1.4	6.4	18.4	18.0	40.5	3.0	2.1	9.1	4.2
Cycle Q Clear(g_c), s	6.3	3.1	6.0	1.4	6.4	18.4	18.0	40.5	3.0	2.1	9.1	4.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	415	378	338	396	721	322	411	2011	626	411	2011	626
V/C Ratio(X)	0.35	0.11	0.21	0.08	0.23	0.59	0.93	0.74	0.08	0.12	0.22	0.10
Avail Cap(c_a), veh/h	415	378	338	396	721	322	411	2011	626	411	2011	626
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.4	50.4	51.6	62.3	51.7	56.4	69.6	40.6	29.4	62.6	31.2	29.7
Incr Delay (d2), s/veh	2.3	0.6	1.4	0.4	0.7	7.8	30.0	2.5	0.2	0.6	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	1.6	2.7	0.6	3.0	8.3	10.1	19.0	1.3	1.0	4.2	1.9
LnGrp Delay(d),s/veh	66.8	51.0	53.0	62.7	52.5	64.2	99.6	43.0	29.6	63.2	31.5	30.1
LnGrp LOS	E	D	D	E	D	E	F	D	C	E	C	C
Approach Vol, veh/h		259			385			1914			548	
Approach Delay, s/veh		60.4			59.1			54.0			34.2	
Approach LOS		E			E			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	70.0	25.0	40.0	25.0	70.0	25.0	40.0
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	19.5	64.5	19.5	34.5	19.5	64.5	19.5	34.5
Max Q Clear Time (g_c+I1), s	20.0	11.1	8.3	20.4	4.1	42.5	3.4	8.0
Green Ext Time (p_c), s	0.0	3.5	0.1	0.4	0.0	3.4	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	51.7
HCM 2010 LOS	D



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	38	269	1356	36	57	445
Future Volume (veh/h)	38	269	1356	36	57	445
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1827	1827	1827	1827
Adj Flow Rate, veh/h	38	269	1356	36	57	445
Adj No. of Lanes	2	1	3	1	2	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	4	4	4	4
Cap, veh/h	871	401	2364	736	513	2314
Arrive On Green	0.26	0.26	0.47	0.47	0.15	0.67
Sat Flow, veh/h	3408	1568	5152	1553	3375	3563
Grp Volume(v), veh/h	38	269	1356	36	57	445
Grp Sat Flow(s),veh/h/ln	1704	1568	1663	1553	1688	1736
Q Serve(g_s), s	1.1	20.8	26.5	1.7	2.0	6.6
Cycle Q Clear(g_c), s	1.1	20.8	26.5	1.7	2.0	6.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	871	401	2364	736	513	2314
V/C Ratio(X)	0.04	0.67	0.57	0.05	0.11	0.19
Avail Cap(c_a), veh/h	871	401	2364	736	513	2314
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.8	45.2	25.6	19.1	49.4	8.6
Incr Delay (d2), s/veh	0.1	8.7	1.0	0.1	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	18.5	12.4	0.7	0.9	3.2
LnGrp Delay(d),s/veh	37.9	53.8	26.7	19.2	49.8	8.8
LnGrp LOS	D	D	C	B	D	A
Approach Vol, veh/h	307		1392			502
Approach Delay, s/veh	51.9		26.5			13.4
Approach LOS	D		C			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		95.0		40.0	26.0	69.0		
Change Period (Y+Rc), s		5.0		5.5	5.5	5.0		
Max Green Setting (Gmax), s		90.0		34.5	20.5	64.0		
Max Q Clear Time (g_c+I1), s		8.6		22.8	4.0	28.5		
Green Ext Time (p_c), s		3.1		0.2	0.0	3.1		

Intersection Summary	
HCM 2010 Ctrl Delay	27.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	1	3	46	3	143	5	1062	29	59	423	12
Future Volume (veh/h)	74	1	3	46	3	143	5	1062	29	59	423	12
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1759	1900	1900	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	74	1	3	46	3	143	5	1062	29	59	423	12
Adj No. of Lanes	0	1	0	0	1	1	1	2	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	8	8	8	3	3	3	4	4	4	4	4	4
Cap, veh/h	312	4	13	327	21	310	203	1289	577	388	1281	36
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.12	0.37	0.37	0.11	0.37	0.37
Sat Flow, veh/h	1583	21	64	1654	108	1568	1740	3471	1553	3375	3448	98
Grp Volume(v), veh/h	78	0	0	49	0	143	5	1062	29	59	213	222
Grp Sat Flow(s),veh/h/ln	1669	0	0	1762	0	1568	1740	1736	1553	1688	1736	1810
Q Serve(g_s), s	6.9	0.0	0.0	4.0	0.0	14.1	0.4	48.5	2.1	2.8	15.4	15.4
Cycle Q Clear(g_c), s	6.9	0.0	0.0	4.0	0.0	14.1	0.4	48.5	2.1	2.8	15.4	15.4
Prop In Lane	0.95		0.04	0.94		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	329	0	0	348	0	310	203	1289	577	388	645	672
V/C Ratio(X)	0.24	0.00	0.00	0.14	0.00	0.46	0.02	0.82	0.05	0.15	0.33	0.33
Avail Cap(c_a), veh/h	329	0	0	348	0	310	203	1289	577	388	645	672
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.2	0.0	0.0	57.9	0.0	62.0	68.5	49.8	35.2	69.8	39.4	39.4
Incr Delay (d2), s/veh	1.7	0.0	0.0	0.8	0.0	4.9	0.2	6.1	0.2	0.8	1.4	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	0.0	2.0	0.0	6.5	0.2	24.4	0.9	1.3	7.6	8.0
LnGrp Delay(d),s/veh	60.9	0.0	0.0	58.8	0.0	66.8	68.7	55.9	35.4	70.6	40.8	40.7
LnGrp LOS	E			E		E	E	E	D	E	D	D
Approach Vol, veh/h		78			192			1096			494	
Approach Delay, s/veh		60.9			64.8			55.4			44.3	
Approach LOS		E			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	25.0	70.0		40.0	25.0	70.0		40.0
Change Period (Y+Rc), s	* 4.6	5.0		* 5.4	* 4.9	5.0		5.5
Max Green Setting (Gmax), s	* 20	65.0		* 35	* 20	65.0		34.5
Max Q Clear Time (g_c+I1), s	2.4	17.4		16.1	4.8	50.5		8.9
Green Ext Time (p_c), s	0.0	2.1		0.1	0.0	2.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	53.6
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	187	3	31	510	276	11	670	21	110	307	86
Future Volume (veh/h)	84	187	3	31	510	276	11	670	21	110	307	86
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	84	187	3	31	510	276	11	670	21	110	307	86
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	4	4	4	4	4	4
Cap, veh/h	102	621	528	80	597	620	35	705	22	128	828	797
Arrive On Green	0.06	0.35	0.35	0.05	0.33	0.33	0.02	0.40	0.40	0.07	0.45	0.45
Sat Flow, veh/h	1707	1792	1524	1707	1792	1524	1740	1762	55	1740	1827	1553
Grp Volume(v), veh/h	84	187	3	31	510	276	11	0	691	110	307	86
Grp Sat Flow(s),veh/h/ln	1707	1792	1524	1707	1792	1524	1740	0	1817	1740	1827	1553
Q Serve(g_s), s	7.3	11.4	0.2	2.6	39.8	19.7	0.9	0.0	55.2	9.4	16.6	4.3
Cycle Q Clear(g_c), s	7.3	11.4	0.2	2.6	39.8	19.7	0.9	0.0	55.2	9.4	16.6	4.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	102	621	528	80	597	620	35	0	727	128	828	797
V/C Ratio(X)	0.82	0.30	0.01	0.39	0.85	0.45	0.32	0.00	0.95	0.86	0.37	0.11
Avail Cap(c_a), veh/h	102	621	528	80	597	620	35	0	727	128	828	797
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.7	35.7	32.1	69.4	46.6	32.2	72.5	0.0	43.6	68.7	26.9	18.8
Incr Delay (d2), s/veh	49.7	1.2	0.0	13.7	14.4	2.3	22.3	0.0	23.3	49.2	1.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	5.9	0.1	1.6	22.1	8.7	0.7	0.0	32.3	6.3	8.7	1.9
LnGrp Delay(d),s/veh	119.4	37.0	32.1	83.1	61.0	34.6	94.8	0.0	66.9	117.9	28.2	19.1
LnGrp LOS	F	D	C	F	E	C	F		E	F	C	B
Approach Vol, veh/h		274			817			702			503	
Approach Delay, s/veh		62.2			52.9			67.3			46.3	
Approach LOS		E			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	58.0	7.0	74.0	13.0	56.0	15.0	66.0
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	7.0	52.0	3.0	68.0	9.0	50.0	11.0	60.0
Max Q Clear Time (g_c+I1), s	4.6	13.4	2.9	18.6	9.3	41.8	11.4	57.2
Green Ext Time (p_c), s	0.0	0.9	0.0	1.1	0.0	0.8	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	57.0
HCM 2010 LOS	E

Notes

User approved changes to right turn type.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	123	8	31	570	228	118
Future Volume (veh/h)	123	8	31	570	228	118
Number	7	14	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1900	1827	1827	1827	1900
Adj Flow Rate, veh/h	123	8	31	570	228	118
Adj No. of Lanes	0	0	1	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	4	4	4	4
Cap, veh/h	252	16	208	1199	495	256
Arrive On Green	0.17	0.17	0.12	0.66	0.44	0.44
Sat Flow, veh/h	1522	99	1740	1827	1136	588
Grp Volume(v), veh/h	132	0	31	570	0	346
Grp Sat Flow(s),veh/h/ln	1634	0	1740	1827	0	1723
Q Serve(g_s), s	4.0	0.0	0.9	8.5	0.0	7.7
Cycle Q Clear(g_c), s	4.0	0.0	0.9	8.5	0.0	7.7
Prop In Lane	0.93	0.06	1.00			0.34
Lane Grp Cap(c), veh/h	270	0	208	1199	0	751
V/C Ratio(X)	0.49	0.00	0.15	0.48	0.00	0.46
Avail Cap(c_a), veh/h	270	0	208	1199	0	751
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.6	0.0	21.5	4.7	0.0	10.8
Incr Delay (d2), s/veh	6.2	0.0	1.5	1.4	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	0.5	4.6	0.0	4.1
LnGrp Delay(d),s/veh	26.8	0.0	23.0	6.0	0.0	12.9
LnGrp LOS	C		C	A		B
Approach Vol, veh/h	132			601	346	
Approach Delay, s/veh	26.8			6.9	12.9	
Approach LOS	C			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	12.0	29.4		13.0		41.4		
Change Period (Y+Rc), s	5.5	* 5.7		4.0		* 5.7		
Max Green Setting (Gmax), s	6.5	* 23		9.0		* 36		
Max Q Clear Time (g_c+I1), s	2.9	9.7		6.0		10.5		
Green Ext Time (p_c), s	0.0	0.9		0.0		0.9		

Intersection Summary	
HCM 2010 Ctrl Delay	11.2
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	113	126	17	24	499	288	9	25	4	280	206	652
Future Volume (veh/h)	113	126	17	24	499	288	9	25	4	280	206	652
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1792	1792	1900	1792	1792	1792
Adj Flow Rate, veh/h	113	126	17	24	499	288	9	25	4	187	296	679
Adj No. of Lanes	2	2	0	1	1	1	1	1	0	1	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	6	6	6	6	6	6
Cap, veh/h	145	874	116	99	536	456	355	313	50	405	426	723
Arrive On Green	0.04	0.28	0.28	0.06	0.29	0.29	0.21	0.21	0.21	0.24	0.24	0.24
Sat Flow, veh/h	3408	3111	413	1757	1845	1568	1707	1508	241	1707	1792	3047
Grp Volume(v), veh/h	113	70	73	24	499	288	9	0	29	187	296	679
Grp Sat Flow(s),veh/h/ln	1704	1752	1772	1757	1845	1568	1707	0	1750	1707	1792	1524
Q Serve(g_s), s	3.3	3.0	3.1	1.3	26.6	16.1	0.4	0.0	1.3	9.5	15.3	22.1
Cycle Q Clear(g_c), s	3.3	3.0	3.1	1.3	26.6	16.1	0.4	0.0	1.3	9.5	15.3	22.1
Prop In Lane	1.00		0.23	1.00		1.00	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	145	492	498	99	536	456	355	0	363	405	426	723
V/C Ratio(X)	0.78	0.14	0.15	0.24	0.93	0.63	0.03	0.00	0.08	0.46	0.70	0.94
Avail Cap(c_a), veh/h	145	492	498	99	536	456	355	0	363	405	426	723
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.9	27.2	27.3	45.6	34.9	31.1	31.9	0.0	32.3	33.0	35.2	37.8
Incr Delay (d2), s/veh	33.0	0.6	0.6	5.7	24.9	6.5	0.1	0.0	0.4	3.7	9.1	21.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	1.5	1.6	0.8	17.3	7.8	0.2	0.0	0.7	4.9	8.6	11.4
LnGrp Delay(d),s/veh	80.9	27.8	27.9	51.3	59.8	37.7	32.0	0.0	32.7	36.8	44.3	59.3
LnGrp LOS	F	C	C	D	E	D	C		C	D	D	E
Approach Vol, veh/h		256			811			38			1162	
Approach Delay, s/veh		51.3			51.7			32.5			51.8	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.8	35.3		29.5	10.8	34.3		26.5
Change Period (Y+Rc), s	5.5	* 5.9		5.5	* 5.1	* 5.9		5.5
Max Green Setting (Gmax), s	4.3	* 29		24.0	* 5.7	* 27		21.0
Max Q Clear Time (g_c+I1), s	5.3	28.6		24.1	3.3	5.1		3.3
Green Ext Time (p_c), s	0.0	0.2		0.0	0.0	0.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	51.4
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	252	5	70	724	40	2	282	31	13	222	13
Future Volume (veh/h)	38	252	5	70	724	40	2	282	31	13	222	13
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1900	1900	1810	1900	1900	1810	1900
Adj Flow Rate, veh/h	38	252	5	70	724	40	2	282	31	13	222	13
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	5	5	5	5	5	5
Cap, veh/h	68	755	15	143	799	44	2	327	36	15	263	15
Arrive On Green	0.04	0.43	0.43	0.08	0.47	0.47	0.21	0.21	0.21	0.16	0.16	0.16
Sat Flow, veh/h	1707	1752	35	1707	1683	93	11	1592	175	94	1601	94
Grp Volume(v), veh/h	38	0	257	70	0	764	315	0	0	248	0	0
Grp Sat Flow(s),veh/h/ln	1707	0	1786	1707	0	1776	1778	0	0	1788	0	0
Q Serve(g_s), s	4.3	0.0	18.6	7.6	0.0	77.3	33.4	0.0	0.0	26.2	0.0	0.0
Cycle Q Clear(g_c), s	4.3	0.0	18.6	7.6	0.0	77.3	33.4	0.0	0.0	26.2	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.05	0.01		0.10	0.05		0.05
Lane Grp Cap(c), veh/h	68	0	770	143	0	843	365	0	0	293	0	0
V/C Ratio(X)	0.56	0.00	0.33	0.49	0.00	0.91	0.86	0.00	0.00	0.85	0.00	0.00
Avail Cap(c_a), veh/h	68	0	770	143	0	843	365	0	0	293	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	91.9	0.0	36.8	85.4	0.0	47.2	74.9	0.0	0.0	79.1	0.0	0.0
Incr Delay (d2), s/veh	28.9	0.0	1.2	11.6	0.0	15.1	22.8	0.0	0.0	24.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	9.5	4.1	0.0	41.3	18.8	0.0	0.0	15.0	0.0	0.0
LnGrp Delay(d),s/veh	120.8	0.0	38.0	96.9	0.0	62.3	97.7	0.0	0.0	103.8	0.0	0.0
LnGrp LOS	F		D	F		E	F			F		
Approach Vol, veh/h		295			834			315			248	
Approach Delay, s/veh		48.7			65.2			97.7			103.8	
Approach LOS		D			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.4	98.6		38.0	20.9	90.1		46.0
Change Period (Y+Rc), s	4.6	6.0		6.0	4.6	6.0		6.0
Max Green Setting (Gmax), s	7.8	92.6		32.0	16.3	84.1		40.0
Max Q Clear Time (g_c+I1), s	6.3	79.3		28.2	9.6	20.6		35.4
Green Ext Time (p_c), s	0.0	1.1		0.1	0.0	1.1		0.2

Intersection Summary		
HCM 2010 Ctrl Delay		74.0
HCM 2010 LOS		E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	177	456	92	119	451	206	110	992	170	114	547	154
Future Volume (veh/h)	177	456	92	119	451	206	110	992	170	114	547	154
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	177	456	92	119	451	206	110	992	170	114	547	154
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	189	716	144	189	863	386	216	1132	507	135	971	434
Arrive On Green	0.11	0.25	0.25	0.11	0.25	0.25	0.12	0.32	0.32	0.08	0.28	0.28
Sat Flow, veh/h	1757	2911	583	1757	3505	1568	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	177	273	275	119	451	206	110	992	170	114	547	154
Grp Sat Flow(s),veh/h/ln	1757	1752	1742	1757	1752	1568	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	6.5	9.1	9.2	4.2	7.2	7.4	3.8	17.4	5.4	4.2	8.7	5.1
Cycle Q Clear(g_c), s	6.5	9.1	9.2	4.2	7.2	7.4	3.8	17.4	5.4	4.2	8.7	5.1
Prop In Lane	1.00		0.34	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	189	431	429	189	863	386	216	1132	507	135	971	434
V/C Ratio(X)	0.94	0.63	0.64	0.63	0.52	0.53	0.51	0.88	0.34	0.84	0.56	0.35
Avail Cap(c_a), veh/h	189	431	429	189	863	386	216	1132	507	135	971	434
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.8	21.9	21.9	27.8	21.2	21.3	26.7	20.8	16.7	29.6	20.1	18.8
Incr Delay (d2), s/veh	50.4	6.9	7.2	14.8	2.3	5.2	8.3	9.6	1.8	44.1	2.4	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	5.2	5.2	2.8	3.8	3.8	2.3	9.8	2.6	3.7	4.5	2.5
LnGrp Delay(d),s/veh	79.2	28.8	29.1	42.6	23.5	26.5	35.0	30.4	18.5	73.8	22.5	21.1
LnGrp LOS	E	C	C	D	C	C	C	C	B	E	C	C
Approach Vol, veh/h		725			776			1272			815	
Approach Delay, s/veh		41.2			27.2			29.2			29.4	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	25.0	11.0	20.0	12.0	22.0	11.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	21.0	7.0	16.0	8.0	18.0	7.0	16.0
Max Q Clear Time (g_c+I1), s	6.2	19.4	6.2	11.2	5.8	10.7	8.5	9.4
Green Ext Time (p_c), s	0.0	0.7	0.0	0.9	0.0	2.0	0.0	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	31.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	177	341	113	79	291	95	73	1087	108	70	458	109
Future Volume (veh/h)	177	341	113	79	291	95	73	1087	108	70	458	109
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	177	341	113	79	291	95	73	1087	108	70	458	109
Adj No. of Lanes	1	2	1	1	2	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	201	801	358	201	597	191	174	1185	118	99	916	216
Arrive On Green	0.11	0.23	0.23	0.11	0.23	0.23	0.10	0.37	0.37	0.06	0.33	0.33
Sat Flow, veh/h	1757	3505	1568	1757	2613	836	1740	3190	317	1740	2787	659
Grp Volume(v), veh/h	177	341	113	79	193	193	73	591	604	70	284	283
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1697	1740	1736	1771	1740	1736	1711
Q Serve(g_s), s	6.9	5.8	4.2	2.9	6.7	6.9	2.8	22.7	22.8	2.8	9.2	9.3
Cycle Q Clear(g_c), s	6.9	5.8	4.2	2.9	6.7	6.9	2.8	22.7	22.8	2.8	9.2	9.3
Prop In Lane	1.00		1.00	1.00		0.49	1.00		0.18	1.00		0.39
Lane Grp Cap(c), veh/h	201	801	358	201	401	388	174	645	658	99	570	562
V/C Ratio(X)	0.88	0.43	0.32	0.39	0.48	0.50	0.42	0.92	0.92	0.70	0.50	0.50
Avail Cap(c_a), veh/h	201	801	358	201	401	388	174	645	658	99	570	562
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	23.1	22.4	28.7	23.4	23.5	29.6	21.0	21.0	32.4	18.9	18.9
Incr Delay (d2), s/veh	38.7	1.7	2.3	5.7	4.1	4.5	7.3	20.0	19.9	34.3	3.1	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	3.0	2.0	1.7	3.7	3.7	1.7	14.4	14.7	2.3	4.8	4.9
LnGrp Delay(d),s/veh	69.2	24.7	24.7	34.4	27.5	28.0	36.9	41.0	40.9	66.7	22.0	22.1
LnGrp LOS	E	C	C	C	C	C	D	D	D	E	C	C
Approach Vol, veh/h		631			465			1268			637	
Approach Delay, s/veh		37.2			28.9			40.7			26.9	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	30.0	12.0	20.0	11.0	27.0	12.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	26.0	8.0	16.0	7.0	23.0	8.0	16.0
Max Q Clear Time (g_c+I1), s	4.8	24.8	4.9	7.8	4.8	11.3	8.9	8.9
Green Ext Time (p_c), s	0.0	0.5	0.0	0.8	0.0	1.8	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	35.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	518	166	55	683	137	209	1009	152	106	462	125
Future Volume (veh/h)	156	518	166	55	683	137	209	1009	152	106	462	125
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1827	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	156	518	166	55	683	137	209	1009	152	106	462	125
Adj No. of Lanes	1	3	0	1	2	1	1	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	174	916	285	149	793	355	298	1124	169	124	942	421
Arrive On Green	0.10	0.24	0.24	0.09	0.23	0.23	0.17	0.37	0.37	0.07	0.27	0.27
Sat Flow, veh/h	1740	3771	1174	1740	3471	1553	1740	3027	456	1740	3471	1553
Grp Volume(v), veh/h	156	455	229	55	683	137	209	578	583	106	462	125
Grp Sat Flow(s),veh/h/ln	1740	1663	1620	1740	1736	1553	1740	1736	1747	1740	1736	1553
Q Serve(g_s), s	6.2	8.4	8.7	2.1	13.2	5.2	7.9	22.0	22.0	4.2	7.8	4.5
Cycle Q Clear(g_c), s	6.2	8.4	8.7	2.1	13.2	5.2	7.9	22.0	22.0	4.2	7.8	4.5
Prop In Lane	1.00		0.72	1.00		1.00	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	174	808	393	149	793	355	298	645	649	124	942	421
V/C Ratio(X)	0.90	0.56	0.58	0.37	0.86	0.39	0.70	0.90	0.90	0.85	0.49	0.30
Avail Cap(c_a), veh/h	174	808	393	149	793	355	298	645	649	124	942	421
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.1	23.2	23.4	30.2	25.9	22.8	27.3	20.7	20.8	32.1	21.4	20.2
Incr Delay (d2), s/veh	45.4	2.8	6.2	6.9	11.8	3.2	12.9	17.6	17.7	48.5	1.8	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	4.2	4.6	1.3	7.6	2.6	4.8	13.6	13.7	3.7	4.0	2.1
LnGrp Delay(d),s/veh	76.5	26.1	29.5	37.1	37.7	26.0	40.2	38.3	38.4	80.6	23.3	22.0
LnGrp LOS	E	C	C	D	D	C	D	D	D	F	C	C
Approach Vol, veh/h		840			875			1370			693	
Approach Delay, s/veh		36.4			35.9			38.7			31.8	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	30.0	10.0	21.0	16.0	23.0	11.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	26.0	6.0	17.0	12.0	19.0	7.0	16.0
Max Q Clear Time (g_c+I1), s	6.2	24.0	4.1	10.7	9.9	9.8	8.2	15.2
Green Ext Time (p_c), s	0.0	0.8	0.0	1.5	0.1	1.8	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	36.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	232	307	93	59	556	203	148	726	41	44	170	81
Future Volume (veh/h)	232	307	93	59	556	203	148	726	41	44	170	81
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	232	307	93	59	556	203	148	726	41	44	170	81
Adj No. of Lanes	1	2	0	1	2	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	3	3	3	3	3	3
Cap, veh/h	268	812	242	161	614	224	162	1024	458	108	917	410
Arrive On Green	0.15	0.31	0.31	0.09	0.25	0.25	0.09	0.29	0.29	0.06	0.26	0.26
Sat Flow, veh/h	1740	2638	785	1740	2494	908	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	232	200	200	59	386	373	148	726	41	44	170	81
Grp Sat Flow(s),veh/h/ln	1740	1736	1688	1740	1736	1667	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	8.5	5.9	6.0	2.1	14.0	14.1	5.4	12.0	1.2	1.6	2.4	2.6
Cycle Q Clear(g_c), s	8.5	5.9	6.0	2.1	14.0	14.1	5.4	12.0	1.2	1.6	2.4	2.6
Prop In Lane	1.00		0.47	1.00		0.54	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	268	534	519	161	427	410	162	1024	458	108	917	410
V/C Ratio(X)	0.87	0.37	0.38	0.37	0.90	0.91	0.91	0.71	0.09	0.41	0.19	0.20
Avail Cap(c_a), veh/h	268	534	519	161	427	410	162	1024	458	108	917	410
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	17.6	17.7	27.7	23.8	23.8	29.2	20.5	16.7	29.4	18.6	18.7
Incr Delay (d2), s/veh	29.4	2.0	2.2	6.4	25.2	26.5	50.7	4.1	0.4	11.0	0.4	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	3.1	3.1	1.3	9.6	9.4	4.9	6.3	0.6	1.1	1.2	1.2
LnGrp Delay(d),s/veh	56.2	19.6	19.8	34.1	48.9	50.3	79.9	24.7	17.1	40.3	19.1	19.8
LnGrp LOS	E	B	B	C	D	D	E	C	B	D	B	B
Approach Vol, veh/h		632			818			915			295	
Approach Delay, s/veh		33.1			48.5			33.3			22.4	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	23.0	10.0	24.0	10.0	21.0	14.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	19.0	6.0	20.0	6.0	17.0	10.0	16.0
Max Q Clear Time (g_c+I1), s	3.6	14.0	4.1	8.0	7.4	4.6	10.5	16.1
Green Ext Time (p_c), s	0.0	0.9	0.0	1.2	0.0	1.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	36.7
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	367	393	17	70	541	254	45	476	39	95	267	284
Future Volume (veh/h)	367	393	17	70	541	254	45	476	39	95	267	284
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1827	1900	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	367	393	17	70	541	254	45	476	39	95	267	284
Adj No. of Lanes	2	2	1	2	2	0	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	450	1157	518	225	613	287	225	867	71	225	926	414
Arrive On Green	0.13	0.33	0.33	0.07	0.27	0.27	0.07	0.27	0.27	0.07	0.27	0.27
Sat Flow, veh/h	3375	3471	1553	3375	2297	1076	3375	3250	265	3375	3471	1553
Grp Volume(v), veh/h	367	393	17	70	408	387	45	254	261	95	267	284
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1688	1736	1637	1688	1736	1780	1688	1736	1553
Q Serve(g_s), s	6.3	5.1	0.4	1.2	13.5	13.6	0.8	7.5	7.6	1.6	3.7	9.8
Cycle Q Clear(g_c), s	6.3	5.1	0.4	1.2	13.5	13.6	0.8	7.5	7.6	1.6	3.7	9.8
Prop In Lane	1.00		1.00	1.00		0.66	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	450	1157	518	225	463	437	225	463	475	225	926	414
V/C Ratio(X)	0.82	0.34	0.03	0.31	0.88	0.89	0.20	0.55	0.55	0.42	0.29	0.69
Avail Cap(c_a), veh/h	450	1157	518	225	463	437	225	463	475	225	926	414
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	15.0	13.5	26.7	21.1	21.1	26.5	18.9	18.9	26.9	17.5	19.7
Incr Delay (d2), s/veh	15.0	0.8	0.1	3.6	20.9	22.3	2.0	4.6	4.5	5.7	0.8	8.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	2.5	0.2	0.7	9.2	8.8	0.4	4.2	4.3	0.9	1.8	5.2
LnGrp Delay(d),s/veh	40.3	15.8	13.6	30.3	42.0	43.4	28.5	23.5	23.5	32.6	18.3	28.7
LnGrp LOS	D	B	B	C	D	D	C	C	C	C	B	C
Approach Vol, veh/h		777			865			560			646	
Approach Delay, s/veh		27.3			41.7			23.9			24.9	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	20.0	8.0	24.0	8.0	20.0	12.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	4.0	20.0	4.0	16.0	8.0	16.0
Max Q Clear Time (g_c+I1), s	3.6	9.6	3.2	7.1	2.8	11.8	8.3	15.6
Green Ext Time (p_c), s	0.0	0.8	0.0	1.4	0.0	0.7	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	30.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1	1	110	3	1	20	941	37	0	488	0
Future Volume (veh/h)	0	1	1	110	3	1	20	941	37	0	488	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1759	1900	1845	1845	1900	1792	1792	1792	1792	1792	1900
Adj Flow Rate, veh/h	0	1	1	110	3	1	20	941	37	0	488	0
Adj No. of Lanes	0	1	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	8	8	8	3	3	3	6	6	6	6	6	6
Cap, veh/h	0	134	134	291	219	73	29	890	757	12	872	0
Arrive On Green	0.00	0.17	0.17	0.17	0.17	0.17	0.02	0.50	0.50	0.00	0.49	0.00
Sat Flow, veh/h	0	808	808	1757	1325	442	1707	1792	1524	1707	1792	0
Grp Volume(v), veh/h	0	0	2	110	0	4	20	941	37	0	488	0
Grp Sat Flow(s),veh/h/ln	0	0	1617	1757	0	1767	1707	1792	1524	1707	1792	0
Q Serve(g_s), s	0.0	0.0	0.1	5.4	0.0	0.2	1.1	48.0	1.2	0.0	18.6	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.1	5.4	0.0	0.2	1.1	48.0	1.2	0.0	18.6	0.0
Prop In Lane	0.00		0.50	1.00		0.25	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	0	0	268	291	0	292	29	890	757	12	872	0
V/C Ratio(X)	0.00	0.00	0.01	0.38	0.00	0.01	0.68	1.06	0.05	0.00	0.56	0.00
Avail Cap(c_a), veh/h	0	0	268	291	0	292	88	890	757	71	872	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	33.7	35.9	0.0	33.7	47.2	24.3	12.6	0.0	17.5	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	3.7	0.0	0.1	9.8	46.5	0.1	0.0	2.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	2.9	0.0	0.1	0.6	35.0	0.5	0.0	9.7	0.0
LnGrp Delay(d),s/veh	0.0	0.0	33.8	39.6	0.0	33.8	57.1	70.8	12.7	0.0	20.1	0.0
LnGrp LOS			C	D		C	E	F	B		C	
Approach Vol, veh/h		2			114			998			488	
Approach Delay, s/veh		33.7			39.4			68.4			20.1	
Approach LOS		C			D			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.7	52.0		20.0	5.7	51.0		20.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	48.0		16.0	5.0	47.0		16.0
Max Q Clear Time (g_c+I1), s	0.0	50.0		2.1	3.1	20.6		7.4
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.5		0.1

Intersection Summary		
HCM 2010 Ctrl Delay		51.6
HCM 2010 LOS		D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	2	2	250	1	404	3	727	122	186	527	0
Future Volume (veh/h)	2	2	2	250	1	404	3	727	122	186	527	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	2	2	2	250	1	404	3	727	122	186	527	0
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	59	113	113	264	1	391	59	732	123	190	1015	0
Arrive On Green	0.03	0.13	0.13	0.15	0.25	0.25	0.03	0.47	0.47	0.11	0.55	0.00
Sat Flow, veh/h	1757	848	848	1757	4	1565	1757	1541	259	1757	1845	0
Grp Volume(v), veh/h	2	0	4	250	0	405	3	0	849	186	527	0
Grp Sat Flow(s),veh/h/ln	1757	0	1695	1757	0	1569	1757	0	1799	1757	1845	0
Q Serve(g_s), s	0.1	0.0	0.2	16.9	0.0	30.0	0.2	0.0	56.3	12.7	21.6	0.0
Cycle Q Clear(g_c), s	0.1	0.0	0.2	16.9	0.0	30.0	0.2	0.0	56.3	12.7	21.6	0.0
Prop In Lane	1.00		0.50	1.00		1.00	1.00		0.14	1.00		0.00
Lane Grp Cap(c), veh/h	59	0	226	264	0	392	59	0	855	190	1015	0
V/C Ratio(X)	0.03	0.00	0.02	0.95	0.00	1.03	0.05	0.00	0.99	0.98	0.52	0.00
Avail Cap(c_a), veh/h	59	0	226	264	0	392	59	0	855	190	1015	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.1	0.0	45.2	50.5	0.0	45.0	56.2	0.0	31.3	53.4	17.0	0.0
Incr Delay (d2), s/veh	1.1	0.0	0.1	43.7	0.0	54.2	1.7	0.0	29.3	59.6	1.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.1	11.4	0.0	18.9	0.1	0.0	34.8	9.3	11.5	0.0
LnGrp Delay(d),s/veh	57.2	0.0	45.3	94.2	0.0	99.2	57.8	0.0	60.6	112.9	18.9	0.0
LnGrp LOS	E		D	F		F	E		E	F	B	
Approach Vol, veh/h		6			655			852			713	
Approach Delay, s/veh		49.3			97.3			60.6			43.4	
Approach LOS		D			F			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	61.0	22.0	20.0	8.0	70.0	8.0	34.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	13.0	57.0	18.0	16.0	4.0	66.0	4.0	30.0
Max Q Clear Time (g_c+I1), s	14.7	58.3	18.9	2.2	2.2	23.6	2.1	32.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.5	0.0	1.6	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	65.9
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	6	4	1	5	7	3	378	1	0	480	286
Future Volume (veh/h)	290	6	4	1	5	7	3	378	1	0	480	286
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1900	1845	1900	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	290	6	4	1	5	7	3	378	1	0	480	0
Adj No. of Lanes	0	1	1	0	1	0	1	1	0	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	368	8	334	28	138	193	94	760	2	2	566	481
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.05	0.41	0.41	0.00	0.31	0.00
Sat Flow, veh/h	1723	36	1568	129	646	904	1757	1839	5	1757	1845	1568
Grp Volume(v), veh/h	296	0	4	13	0	0	3	0	379	0	480	0
Grp Sat Flow(s),veh/h/ln	1759	0	1568	1679	0	0	1757	0	1844	1757	1845	1568
Q Serve(g_s), s	11.9	0.0	0.2	0.5	0.0	0.0	0.1	0.0	11.4	0.0	18.3	0.0
Cycle Q Clear(g_c), s	11.9	0.0	0.2	0.5	0.0	0.0	0.1	0.0	11.4	0.0	18.3	0.0
Prop In Lane	0.98		1.00	0.08		0.54	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	375	0	334	358	0	0	94	0	762	2	566	481
V/C Ratio(X)	0.79	0.00	0.01	0.04	0.00	0.00	0.03	0.00	0.50	0.00	0.85	0.00
Avail Cap(c_a), veh/h	375	0	334	358	0	0	94	0	762	94	566	481
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	27.9	0.0	23.3	23.4	0.0	0.0	33.7	0.0	16.2	0.0	24.4	0.0
Incr Delay (d2), s/veh	15.4	0.0	0.1	0.2	0.0	0.0	0.6	0.0	2.3	0.0	14.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	0.0	0.1	0.2	0.0	0.0	0.1	0.0	6.3	0.0	11.5	0.0
LnGrp Delay(d),s/veh	43.3	0.0	23.3	23.6	0.0	0.0	34.3	0.0	18.6	0.0	39.0	0.0
LnGrp LOS	D		C	C			C		B		D	
Approach Vol, veh/h		300			13			382			480	
Approach Delay, s/veh		43.1			23.6			18.7			39.0	
Approach LOS		D			C			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	35.0		20.0	8.0	27.0		20.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	23.0		16.0	4.0	23.0		16.0
Max Q Clear Time (g_c+I1), s	0.0	13.4		13.9	2.1	20.3		2.5
Green Ext Time (p_c), s	0.0	0.8		0.1	0.0	0.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	33.3
HCM 2010 LOS	C

Intersection	
Intersection Delay, s/veh	13.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	97	10	68	72	17	44	311	144	7	46	17
Future Vol, veh/h	32	97	10	68	72	17	44	311	144	7	46	17
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	32	97	10	68	72	17	44	311	144	7	46	17
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.3	10.6	16.7	9.1
HCM LOS	B	B	C	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	23%	43%	10%
Vol Thru, %	62%	70%	46%	66%
Vol Right, %	29%	7%	11%	24%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	499	139	157	70
LT Vol	44	32	68	7
Through Vol	311	97	72	46
RT Vol	144	10	17	17
Lane Flow Rate	499	139	157	70
Geometry Grp	1	1	1	1
Degree of Util (X)	0.663	0.219	0.247	0.105
Departure Headway (Hd)	4.785	5.676	5.662	5.382
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	758	632	634	665
Service Time	2.785	3.717	3.701	3.421
HCM Lane V/C Ratio	0.658	0.22	0.248	0.105
HCM Control Delay	16.7	10.3	10.6	9.1
HCM Lane LOS	C	B	B	A
HCM 95th-tile Q	5.1	0.8	1	0.4

Intersection	
Intersection Delay, s/veh	16
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	147	3	5	250	140	18	335	21	29	87	12
Future Vol, veh/h	27	147	3	5	250	140	18	335	21	29	87	12
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	27	147	3	5	250	140	18	335	21	29	87	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.2	17.4	18	11.4
HCM LOS	B	C	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	15%	1%	23%
Vol Thru, %	90%	83%	63%	68%
Vol Right, %	6%	2%	35%	9%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	374	177	395	128
LT Vol	18	27	5	29
Through Vol	335	147	250	87
RT Vol	21	3	140	12
Lane Flow Rate	374	177	395	128
Geometry Grp	1	1	1	1
Degree of Util (X)	0.617	0.311	0.614	0.23
Departure Headway (Hd)	5.935	6.324	5.716	6.472
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	613	568	636	556
Service Time	3.935	4.357	3.716	4.498
HCM Lane V/C Ratio	0.61	0.312	0.621	0.23
HCM Control Delay	18	12.2	17.4	11.4
HCM Lane LOS	C	B	C	B
HCM 95th-tile Q	4.2	1.3	4.2	0.9

Intersection	
Intersection Delay, s/veh	12.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	285	188	5	1	211	76	10	3	2	17	4	72
Future Vol, veh/h	285	188	5	1	211	76	10	3	2	17	4	72
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	4	4	4	4	4	4	3	3	3	3	3	3
Mvmt Flow	285	188	5	1	211	76	10	3	2	17	4	72
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	15.2	10.4	9.1	9.2
HCM LOS	C	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	67%	60%	0%	18%
Vol Thru, %	20%	39%	73%	4%
Vol Right, %	13%	1%	26%	77%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	15	478	288	93
LT Vol	10	285	1	17
Through Vol	3	188	211	4
RT Vol	2	5	76	72
Lane Flow Rate	15	478	288	93
Geometry Grp	1	1	1	1
Degree of Util (X)	0.025	0.622	0.37	0.136
Departure Headway (Hd)	5.897	4.681	4.63	5.261
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	601	770	772	676
Service Time	3.994	2.731	2.686	3.339
HCM Lane V/C Ratio	0.025	0.621	0.373	0.138
HCM Control Delay	9.1	15.2	10.4	9.2
HCM Lane LOS	A	C	B	A
HCM 95th-tile Q	0.1	4.4	1.7	0.5

Intersection	
Intersection Delay, s/veh	24.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	63	105	6	38	81	11	20	507	113	3	69	15
Future Vol, veh/h	63	105	6	38	81	11	20	507	113	3	69	15
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	6	6	6	8	8	8	3	3	3	3	3	3
Mvmt Flow	63	105	6	38	81	11	20	507	113	3	69	15
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12	11.3	33.3	9.8
HCM LOS	B	B	D	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	36%	29%	3%
Vol Thru, %	79%	60%	62%	79%
Vol Right, %	18%	3%	8%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	640	174	130	87
LT Vol	20	63	38	3
Through Vol	507	105	81	69
RT Vol	113	6	11	15
Lane Flow Rate	640	174	130	87
Geometry Grp	1	1	1	1
Degree of Util (X)	0.882	0.301	0.228	0.14
Departure Headway (Hd)	4.963	6.234	6.321	5.778
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	730	574	566	618
Service Time	2.998	4.293	4.385	3.839
HCM Lane V/C Ratio	0.877	0.303	0.23	0.141
HCM Control Delay	33.3	12	11.3	9.8
HCM Lane LOS	D	B	B	A
HCM 95th-tile Q	11	1.3	0.9	0.5

Intersection	
Intersection Delay, s/veh	14
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	223	2	11	8	1	1	25	459	2	0	62	41
Future Vol, veh/h	223	2	11	8	1	1	25	459	2	0	62	41
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	223	2	11	8	1	1	25	459	2	0	62	41
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.8	9.1	16.2	9
HCM LOS	B	A	C	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	94%	80%	0%
Vol Thru, %	94%	1%	10%	60%
Vol Right, %	0%	5%	10%	40%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	486	236	10	103
LT Vol	25	223	8	0
Through Vol	459	2	1	62
RT Vol	2	11	1	41
Lane Flow Rate	486	236	10	103
Geometry Grp	1	1	1	1
Degree of Util (X)	0.644	0.362	0.017	0.146
Departure Headway (Hd)	4.772	5.62	5.991	5.095
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	748	644	601	708
Service Time	2.844	3.62	3.996	3.095
HCM Lane V/C Ratio	0.65	0.366	0.017	0.145
HCM Control Delay	16.2	11.8	9.1	9
HCM Lane LOS	C	B	A	A
HCM 95th-tile Q	4.7	1.6	0.1	0.5

Intersection	
Intersection Delay, s/veh	39.3
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	99	0	235	0	297	440	48	40	0
Future Vol, veh/h	0	0	0	99	0	235	0	297	440	48	40	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	0	99	0	235	0	297	440	48	40	0
Number of Lanes	0	1	0	0	1	0	0	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	0	14.8	53.9	10.1
HCM LOS	-	B	F	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	0%	0%	30%	100%	0%
Vol Thru, %	40%	100%	0%	0%	100%
Vol Right, %	60%	0%	70%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	737	0	334	48	40
LT Vol	0	0	99	48	0
Through Vol	297	0	0	0	40
RT Vol	440	0	235	0	0
Lane Flow Rate	737	0	334	48	40
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.996	0	0.525	0.093	0.072
Departure Headway (Hd)	4.863	6.792	5.659	6.958	6.448
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	744	0	635	514	554
Service Time	2.899	4.877	3.71	4.721	4.211
HCM Lane V/C Ratio	0.991	0	0.526	0.093	0.072
HCM Control Delay	53.9	9.9	14.8	10.4	9.7
HCM Lane LOS	F	N	B	B	A
HCM 95th-tile Q	16.4	0	3.1	0.3	0.2

Intersection	
Intersection Delay, s/veh	15.5
Intersection LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	161	21	82	424	217	61
Future Vol, veh/h	161	21	82	424	217	61
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	8	8	6	6	5	5
Mvmt Flow	161	21	82	424	217	61
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	11.8	19.1	11.4
HCM LOS	B	C	B

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	16%	88%	0%
Vol Thru, %	84%	0%	78%
Vol Right, %	0%	12%	22%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	506	182	278
LT Vol	82	161	0
Through Vol	424	0	217
RT Vol	0	21	61
Lane Flow Rate	506	182	278
Geometry Grp	1	1	1
Degree of Util (X)	0.706	0.307	0.394
Departure Headway (Hd)	5.021	6.07	5.108
Convergence, Y/N	Yes	Yes	Yes
Cap	724	592	706
Service Time	3.021	4.106	3.138
HCM Lane V/C Ratio	0.699	0.307	0.394
HCM Control Delay	19.1	11.8	11.4
HCM Lane LOS	C	B	B
HCM 95th-tile Q	5.9	1.3	1.9

Intersection	
Intersection Delay, s/veh	11.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1	0	6	0	81	0	409	31	16	220	0
Future Vol, veh/h	0	1	0	6	0	81	0	409	31	16	220	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	20	20	20	5	5	5	6	6	6
Mvmt Flow	0	1	0	6	0	81	0	409	31	16	220	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.7	9	12.6	9.9
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	7%	7%
Vol Thru, %	93%	100%	0%	93%
Vol Right, %	7%	0%	93%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	440	1	87	236
LT Vol	0	0	6	16
Through Vol	409	1	0	220
RT Vol	31	0	81	0
Lane Flow Rate	440	1	87	236
Geometry Grp	1	1	1	1
Degree of Util (X)	0.542	0.002	0.125	0.309
Departure Headway (Hd)	4.434	5.605	5.192	4.708
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	814	634	687	762
Service Time	2.466	3.675	3.247	2.747
HCM Lane V/C Ratio	0.541	0.002	0.127	0.31
HCM Control Delay	12.6	8.7	9	9.9
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	3.3	0	0.4	1.3

Intersection	
Intersection Delay, s/veh	16.6
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	142	210	42	9	151	23	64	296	22	10	67	28
Future Vol, veh/h	142	210	42	9	151	23	64	296	22	10	67	28
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	3	3	3
Mvmt Flow	142	210	42	9	151	23	64	296	22	10	67	28
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	18.6	12.1	18.3	10.9
HCM LOS	C	B	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	17%	36%	5%	10%
Vol Thru, %	77%	53%	83%	64%
Vol Right, %	6%	11%	13%	27%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	382	394	183	105
LT Vol	64	142	9	10
Through Vol	296	210	151	67
RT Vol	22	42	23	28
Lane Flow Rate	382	394	183	105
Geometry Grp	1	1	1	1
Degree of Util (X)	0.622	0.635	0.316	0.187
Departure Headway (Hd)	5.866	5.8	6.225	6.418
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	611	619	580	562
Service Time	3.963	3.893	4.232	4.429
HCM Lane V/C Ratio	0.625	0.637	0.316	0.187
HCM Control Delay	18.3	18.6	12.1	10.9
HCM Lane LOS	C	C	B	B
HCM 95th-tile Q	4.3	4.5	1.3	0.7

Intersection	
Int Delay, s/veh	2.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	62	148	776	50	74	320
Future Vol, veh/h	62	148	776	50	74	320
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	70	0	-	-	85	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	4	4	3	3	3	3
Mvmt Flow	62	148	776	50	74	320

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1109	413	0	0	826	0
Stage 1	801	-	-	-	-	-
Stage 2	308	-	-	-	-	-
Critical Hdwy	6.88	6.98	-	-	4.16	-
Critical Hdwy Stg 1	5.88	-	-	-	-	-
Critical Hdwy Stg 2	5.88	-	-	-	-	-
Follow-up Hdwy	3.54	3.34	-	-	2.23	-
Pot Cap-1 Maneuver	201	583	-	-	794	-
Stage 1	397	-	-	-	-	-
Stage 2	713	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	182	583	-	-	794	-
Mov Cap-2 Maneuver	300	-	-	-	-	-
Stage 1	397	-	-	-	-	-
Stage 2	647	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.3	0	1.9
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	300	583	794	-
HCM Lane V/C Ratio	-	-	0.207	0.254	0.093	-
HCM Control Delay (s)	-	-	20.1	13.3	10	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.8	1	0.3	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	952	0	0	409
Future Vol, veh/h	0	0	952	0	0	409
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	4	4	4	4
Mvmt Flow	0	0	952	0	0	409

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1361	952	0	0	952	0
Stage 1	952	-	-	-	-	-
Stage 2	409	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.14	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.236	-
Pot Cap-1 Maneuver	163	313	-	-	714	-
Stage 1	373	-	-	-	-	-
Stage 2	668	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	163	313	-	-	714	-
Mov Cap-2 Maneuver	163	-	-	-	-	-
Stage 1	373	-	-	-	-	-
Stage 2	668	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	714	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	27	418	844	34	10	93
Future Vol, veh/h	27	418	844	34	10	93
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	190	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	6	6	6	6	3	3
Mvmt Flow	27	418	844	34	10	93

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	878	0	-	0	1333	861
Stage 1	-	-	-	-	861	-
Stage 2	-	-	-	-	472	-
Critical Hdwy	4.16	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.254	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	753	-	-	-	169	354
Stage 1	-	-	-	-	412	-
Stage 2	-	-	-	-	626	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	753	-	-	-	163	354
Mov Cap-2 Maneuver	-	-	-	-	163	-
Stage 1	-	-	-	-	412	-
Stage 2	-	-	-	-	604	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	21.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	753	-	-	-	318
HCM Lane V/C Ratio	0.036	-	-	-	0.324
HCM Control Delay (s)	10	-	-	-	21.7
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	1.4

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	1	0	3	1	6	0	365	1	1	89	1
Future Vol, veh/h	3	1	0	3	1	6	0	365	1	1	89	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	3	1	0	3	1	6	0	365	1	1	89	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	461	458	90	458	458	366	90	0	0	366	0	0
Stage 1	92	92	-	366	366	-	-	-	-	-	-	-
Stage 2	369	366	-	92	92	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	509	498	965	511	498	677	1499	-	-	1187	-	-
Stage 1	913	817	-	651	621	-	-	-	-	-	-	-
Stage 2	649	621	-	913	817	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	503	498	965	510	498	677	1499	-	-	1187	-	-
Mov Cap-2 Maneuver	503	498	-	510	498	-	-	-	-	-	-	-
Stage 1	913	816	-	651	621	-	-	-	-	-	-	-
Stage 2	642	621	-	911	816	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.2	11.1	0	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1499	-	-	502	597	1187	-	-
HCM Lane V/C Ratio	-	-	-	0.008	0.017	0.001	-	-
HCM Control Delay (s)	0	-	-	12.2	11.1	8	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	401	2	58	616	3	3	0	119	2	0	5
Future Vol, veh/h	11	401	2	58	616	3	3	0	119	2	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	80	-	90	200	-	-	-	-	240	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	6	6	6	6	6	6	3	3	3	3	3	3
Mvmt Flow	11	401	2	58	616	3	3	0	119	2	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	619	0	0	401	0	0	1159	1158	401	1157	1157	618
Stage 1	-	-	-	-	-	-	423	423	-	734	734	-
Stage 2	-	-	-	-	-	-	736	735	-	423	423	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.254	-	-	2.254	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	942	-	-	1136	-	-	172	195	647	173	195	487
Stage 1	-	-	-	-	-	-	607	586	-	410	424	-
Stage 2	-	-	-	-	-	-	409	424	-	607	586	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	942	-	-	1136	-	-	162	183	647	134	183	487
Mov Cap-2 Maneuver	-	-	-	-	-	-	162	183	-	134	183	-
Stage 1	-	-	-	-	-	-	600	579	-	405	402	-
Stage 2	-	-	-	-	-	-	384	402	-	490	579	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.7	12.2	18.3
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	162	647	942	-	-	1136	-	-	278
HCM Lane V/C Ratio	0.019	0.184	0.012	-	-	0.051	-	-	0.025
HCM Control Delay (s)	27.6	11.8	8.9	-	-	8.3	-	-	18.3
HCM Lane LOS	D	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.1	0.7	0	-	-	0.2	-	-	0.1

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	118	1	0	2	3	54
Future Vol, veh/h	118	1	0	2	3	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	118	1	0	2	3	54

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	32	30	57	0	-	0
Stage 1	30	-	-	-	-	-
Stage 2	2	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	979	1042	1541	-	-	-
Stage 1	990	-	-	-	-	-
Stage 2	1019	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	979	1042	1541	-	-	-
Mov Cap-2 Maneuver	979	-	-	-	-	-
Stage 1	990	-	-	-	-	-
Stage 2	1019	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.2	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1541	-	979	-	-
HCM Lane V/C Ratio	-	-	0.122	-	-
HCM Control Delay (s)	0	-	9.2	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	134	6	1	464	0	4	0	1	0	0	5
Future Vol, veh/h	1	134	6	1	464	0	4	0	1	0	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	1	134	6	1	464	0	4	0	1	0	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	464	0	0	140	0	0	608	605	137	606	608	464
Stage 1	-	-	-	-	-	-	139	139	-	466	466	-
Stage 2	-	-	-	-	-	-	469	466	-	140	142	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1092	-	-	1437	-	-	406	411	909	408	409	596
Stage 1	-	-	-	-	-	-	862	780	-	575	561	-
Stage 2	-	-	-	-	-	-	573	561	-	861	777	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1092	-	-	1437	-	-	402	410	909	407	408	596
Mov Cap-2 Maneuver	-	-	-	-	-	-	402	410	-	407	408	-
Stage 1	-	-	-	-	-	-	861	779	-	574	560	-
Stage 2	-	-	-	-	-	-	568	560	-	859	776	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	13.1	11.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	452	1092	-	-	1437	-	-	596
HCM Lane V/C Ratio	0.011	0.001	-	-	0.001	-	-	0.008
HCM Control Delay (s)	13.1	8.3	0	-	7.5	0	-	11.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	133	0	0	0	0	77
Future Vol, veh/h	133	0	0	0	0	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	133	0	0	0	0	77

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	39	39	77	0	-	0
Stage 1	39	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	970	1030	1515	-	-	-
Stage 1	981	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	970	1030	1515	-	-	-
Mov Cap-2 Maneuver	970	-	-	-	-	-
Stage 1	981	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1515	-	970	-	-
HCM Lane V/C Ratio	-	-	0.137	-	-
HCM Control Delay (s)	0	-	9.3	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

Intersection	
Int Delay, s/veh	7.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	639	26	243	621	10	347
Future Vol, veh/h	639	26	243	621	10	347
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	300	250	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	639	26	243	621	10	347

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	639	0	1746	639
Stage 1	-	-	-	-	639	-
Stage 2	-	-	-	-	1107	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	940	-	94	474
Stage 1	-	-	-	-	524	-
Stage 2	-	-	-	-	315	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	940	-	70	474
Mov Cap-2 Maneuver	-	-	-	-	70	-
Stage 1	-	-	-	-	524	-
Stage 2	-	-	-	-	234	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.9	31.6
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	70	474	-	-	940	-
HCM Lane V/C Ratio	0.143	0.732	-	-	0.259	-
HCM Control Delay (s)	64.8	30.6	-	-	10.2	-
HCM Lane LOS	F	D	-	-	B	-
HCM 95th %tile Q(veh)	0.5	6	-	-	1	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	450	0	0	117
Future Vol, veh/h	0	0	450	0	0	117
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	0	450	0	0	117

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	567	450	0	0	450	0
Stage 1	450	-	-	-	-	-
Stage 2	117	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	483	607	-	-	1105	-
Stage 1	640	-	-	-	-	-
Stage 2	906	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	483	607	-	-	1105	-
Mov Cap-2 Maneuver	483	-	-	-	-	-
Stage 1	640	-	-	-	-	-
Stage 2	906	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1105	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	109	7	66	512	82	85
Future Vol, veh/h	109	7	66	512	82	85
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Free
Storage Length	0	-	-	-	-	90
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	109	7	66	512	82	85

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	726	82	82	0	-	0
Stage 1	82	-	-	-	-	-
Stage 2	644	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	390	975	1509	-	-	0
Stage 1	939	-	-	-	-	0
Stage 2	521	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	366	975	1509	-	-	-
Mov Cap-2 Maneuver	366	-	-	-	-	-
Stage 1	939	-	-	-	-	-
Stage 2	489	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.6	0.9	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	1509	-	380	-
HCM Lane V/C Ratio	0.044	-	0.305	-
HCM Control Delay (s)	7.5	0	18.6	-
HCM Lane LOS	A	A	C	-
HCM 95th %tile Q(veh)	0.1	-	1.3	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	272	1	9	591	0	10	57	19	0	2	7
Future Vol, veh/h	19	272	1	9	591	0	10	57	19	0	2	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	355	-	-	350	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	6	6	6	6	6	6	8	8	8	8	8	8
Mvmt Flow	19	272	1	9	591	0	10	57	19	0	2	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	591	0	0	273	0	0	925	920	273	958	920	591
Stage 1	-	-	-	-	-	-	311	311	-	609	609	-
Stage 2	-	-	-	-	-	-	614	609	-	349	311	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.18	6.58	6.28	7.18	6.58	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Follow-up Hdwy	2.254	-	-	2.254	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	965	-	-	1267	-	-	243	265	752	231	265	496
Stage 1	-	-	-	-	-	-	687	648	-	472	476	-
Stage 2	-	-	-	-	-	-	469	476	-	655	648	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	965	-	-	1267	-	-	233	258	752	183	258	496
Mov Cap-2 Maneuver	-	-	-	-	-	-	233	258	-	183	258	-
Stage 1	-	-	-	-	-	-	673	635	-	463	473	-
Stage 2	-	-	-	-	-	-	457	473	-	570	635	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.1	22	13.9
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	297	965	-	-	1267	-	-	412
HCM Lane V/C Ratio	0.29	0.02	-	-	0.007	-	-	0.022
HCM Control Delay (s)	22	8.8	-	-	7.9	-	-	13.9
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.2	0.1	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	72	135	0	0	142	7	5	10	0	0	3	9
Future Vol, veh/h	72	135	0	0	142	7	5	10	0	0	3	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	8	8	8	10	10	10	8	8	8	8	8	8
Mvmt Flow	72	135	0	0	142	7	5	10	0	0	3	9

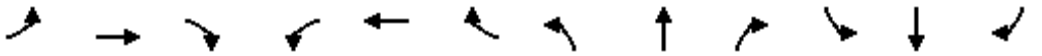
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	149	0	0	135	0	0	431	428	135	430	425	146
Stage 1	-	-	-	-	-	-	279	279	-	146	146	-
Stage 2	-	-	-	-	-	-	152	149	-	284	279	-
Critical Hdwy	4.18	-	-	4.2	-	-	7.18	6.58	6.28	7.18	6.58	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Follow-up Hdwy	2.272	-	-	2.29	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	1396	-	-	1401	-	-	524	510	898	525	512	885
Stage 1	-	-	-	-	-	-	715	669	-	843	765	-
Stage 2	-	-	-	-	-	-	836	763	-	710	669	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1396	-	-	1401	-	-	494	481	898	495	483	885
Mov Cap-2 Maneuver	-	-	-	-	-	-	494	481	-	495	483	-
Stage 1	-	-	-	-	-	-	675	632	-	796	765	-
Stage 2	-	-	-	-	-	-	824	763	-	660	632	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.7	0	12.7	10
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	485	1396	-	-	1401	-	-	733
HCM Lane V/C Ratio	0.031	0.052	-	-	-	-	-	0.016
HCM Control Delay (s)	12.7	7.7	0	-	0	-	-	10
HCM Lane LOS	B	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0	-	-	0.1

Existing No Project

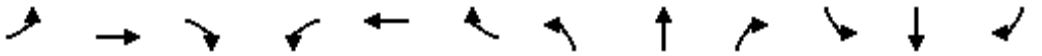
PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	729	0	688	0	0	0	0	1581	509	0	1679	789
Future Volume (vph)	729	0	688	0	0	0	0	1581	509	0	1679	789
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	4.0		4.0	4.0
Lane Util. Factor	0.97		0.88					0.91	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3367		2733					4988	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3367		2733					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	729	0	688	0	0	0	0	1581	509	0	1679	789
RTOR Reduction (vph)	0	0	4	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	729	0	684	0	0	0	0	1581	509	0	1679	789
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	61.0		61.0					51.0	120.0		51.0	120.0
Effective Green, g (s)	61.0		61.0					51.0	120.0		51.0	120.0
Actuated g/C Ratio	0.51		0.51					0.42	1.00		0.42	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Lane Grp Cap (vph)	1711		1389					2119	1553		2119	1553
v/s Ratio Prot								0.32			c0.34	
v/s Ratio Perm	0.22		0.25						0.33			c0.51
v/c Ratio	0.43		0.49					0.75	0.33		0.79	0.51
Uniform Delay, d1	18.5		19.3					29.0	0.0		29.9	0.0
Progression Factor	1.00		1.00					0.67	1.00		1.15	1.00
Incremental Delay, d2	0.8		1.2					1.6	0.4		1.7	0.6
Delay (s)	19.3		20.6					20.9	0.4		36.1	0.6
Level of Service	B		C					C	A		D	A
Approach Delay (s)		19.9			0.0			15.9			24.8	
Approach LOS		B			A			B			C	

Intersection Summary			
HCM 2000 Control Delay	20.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		

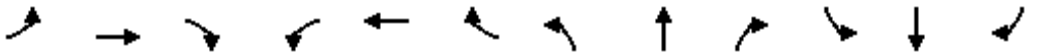
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	245	631	147	284	473	765	228	1078	165	889	1443	150
Future Volume (vph)	245	631	147	284	473	765	228	1078	165	889	1443	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		0.97	0.95	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	3373		3367	3471	2733	3367	4988	1553	3367	4988	1553
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	3373		3367	3471	2733	3367	4988	1553	3367	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	245	631	147	284	473	765	228	1078	165	889	1443	150
RTOR Reduction (vph)	0	17	0	0	0	561	0	0	95	0	0	82
Lane Group Flow (vph)	245	761	0	284	473	204	228	1078	70	889	1443	68
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	7.0	25.0		14.0	32.0	32.0	16.0	35.0	35.0	30.0	49.0	49.0
Effective Green, g (s)	7.0	25.0		14.0	32.0	32.0	16.0	35.0	35.0	30.0	49.0	49.0
Actuated g/C Ratio	0.06	0.21		0.12	0.27	0.27	0.13	0.29	0.29	0.25	0.41	0.41
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	196	702		392	925	728	448	1454	452	841	2036	634
v/s Ratio Prot	0.07	c0.23		c0.08	0.14		0.07	c0.22		c0.26	0.29	
v/s Ratio Perm						0.07			0.05			0.04
v/c Ratio	1.25	1.08		0.72	0.51	0.28	0.51	0.74	0.16	1.06	0.71	0.11
Uniform Delay, d1	56.5	47.5		51.1	37.4	34.9	48.3	38.4	31.5	45.0	29.6	22.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.78	0.79	0.64	0.86	0.80	0.67
Incremental Delay, d2	147.5	59.2		11.1	2.0	1.0	4.0	3.4	0.7	43.0	1.6	0.3
Delay (s)	204.0	106.7		62.2	39.4	35.8	41.7	33.8	21.0	81.7	25.2	15.1
Level of Service	F	F		E	D	D	D	C	C	F	C	B
Approach Delay (s)		130.0			41.9			33.6			44.8	
Approach LOS		F			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	55.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	89.8%	ICU Level of Service	E
Analysis Period (min)	15		

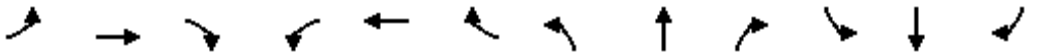
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	125	788	696	12	920	19	309	2	3	14	11	89
Future Volume (vph)	125	788	696	12	920	19	309	2	3	14	11	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.97	1.00
Satd. Flow (prot)	1736	3471	1553	1736	3471	1553	1618	1623	1524		1794	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.97	1.00
Satd. Flow (perm)	1736	3471	1553	1736	3471	1553	1618	1623	1524		1794	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	125	788	696	12	920	19	309	2	3	14	11	89
RTOR Reduction (vph)	0	0	272	0	0	13	0	0	2	0	0	75
Lane Group Flow (vph)	125	788	424	12	920	6	154	157	1	0	25	14
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4	2	3	8		2	2		6	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	11.0	39.0	64.0	4.0	32.0	32.0	25.0	25.0	25.0		16.0	16.0
Effective Green, g (s)	11.0	39.0	64.0	4.0	32.0	32.0	25.0	25.0	25.0		16.0	16.0
Actuated g/C Ratio	0.10	0.37	0.61	0.04	0.30	0.30	0.24	0.24	0.24		0.15	0.15
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Lane Grp Cap (vph)	181	1289	946	66	1057	473	385	386	362		273	238
v/s Ratio Prot	c0.07	0.23	c0.11	0.01	c0.27		0.10	0.10			c0.01	
v/s Ratio Perm			0.17			0.00			0.00			0.01
v/c Ratio	0.69	0.61	0.45	0.18	0.87	0.01	0.40	0.41	0.00		0.09	0.06
Uniform Delay, d1	45.4	26.8	11.0	48.9	34.5	25.5	33.7	33.7	30.5		38.3	38.0
Progression Factor	1.00	1.00	1.00	1.04	0.99	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	19.5	2.2	1.5	4.9	8.2	0.0	3.1	3.2	0.0		0.7	0.5
Delay (s)	64.8	29.0	12.6	55.9	42.6	25.5	36.8	36.9	30.5		38.9	38.5
Level of Service	E	C	B	E	D	C	D	D	C		D	D
Approach Delay (s)		24.7			42.4			36.8			38.6	
Approach LOS		C			D			D			D	

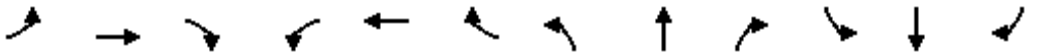
Intersection Summary			
HCM 2000 Control Delay	32.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	437	189	136	530	98	383	149	329	123	99	37
Future Volume (vph)	38	437	189	136	530	98	383	149	329	123	99	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		0.95	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85		0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00		0.98	
Satd. Flow (prot)	1752	3505	1568	1752	3423		1665	1714	1568		3350	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00		0.98	
Satd. Flow (perm)	1752	3505	1568	1752	3423		1665	1714	1568		3350	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	38	437	189	136	530	98	383	149	329	123	99	37
RTOR Reduction (vph)	0	0	160	0	14	0	0	0	222	0	13	0
Lane Group Flow (vph)	38	437	29	136	614	0	264	268	107	0	246	0
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4						2			
Actuated Green, G (s)	5.0	16.0	16.0	18.0	29.0		34.0	34.0	34.0		16.0	
Effective Green, g (s)	5.0	16.0	16.0	18.0	29.0		34.0	34.0	34.0		16.0	
Actuated g/C Ratio	0.05	0.15	0.15	0.17	0.28		0.32	0.32	0.32		0.15	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Lane Grp Cap (vph)	83	534	238	300	945		539	555	507		510	
v/s Ratio Prot	0.02	c0.12		c0.08	c0.18		c0.16	0.16			c0.07	
v/s Ratio Perm			0.02						0.07			
v/c Ratio	0.46	0.82	0.12	0.45	0.65		0.49	0.48	0.21		0.48	
Uniform Delay, d1	48.7	43.1	38.4	39.1	33.5		28.5	28.5	25.8		40.7	
Progression Factor	0.79	1.49	5.58	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	13.9	10.8	0.8	4.9	3.5		3.2	3.0	0.9		3.3	
Delay (s)	52.4	74.9	215.3	44.0	37.0		31.7	31.4	26.7		44.0	
Level of Service	D	E	F	D	D		C	C	C		D	
Approach Delay (s)		113.5			38.2			29.7			44.0	
Approach LOS		F			D			C			D	

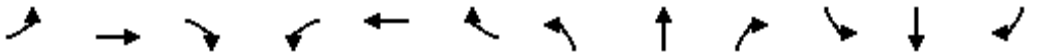
Intersection Summary			
HCM 2000 Control Delay	55.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	618	767	226	463	40	366	160	305	36	80	31
Future Volume (vph)	34	618	767	226	463	40	366	160	305	36	80	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	3.9	3.9	5.5	4.0	4.0	4.3	4.3		5.1	5.1	5.1
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.90		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1568	3400	3505	1568	3367	3130		1752	3505	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	3505	1568	3400	3505	1568	3367	3130		1752	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	34	618	767	226	463	40	366	160	305	36	80	31
RTOR Reduction (vph)	0	0	366	0	0	19	0	190	0	0	0	27
Lane Group Flow (vph)	34	618	401	226	463	21	366	275	0	36	80	4
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	3%	3%	3%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		8	8		4	4	
Permitted Phases			6			2						4
Actuated Green, G (s)	9.5	82.9	82.9	19.5	92.8	92.8	29.7	29.7		24.1	24.1	24.1
Effective Green, g (s)	9.5	82.9	82.9	19.5	92.8	92.8	29.7	29.7		24.1	24.1	24.1
Actuated g/C Ratio	0.05	0.46	0.46	0.11	0.52	0.52	0.16	0.16		0.13	0.13	0.13
Clearance Time (s)	5.5	3.9	3.9	5.5	4.0	4.0	4.3	4.3		5.1	5.1	5.1
Lane Grp Cap (vph)	92	1614	722	368	1807	808	555	516		234	469	209
v/s Ratio Prot	0.02	0.18		c0.07	0.13		c0.11	0.09		0.02	c0.02	
v/s Ratio Perm			c0.26			0.01						0.00
v/c Ratio	0.37	0.38	0.56	0.61	0.26	0.03	0.66	0.53		0.15	0.17	0.02
Uniform Delay, d1	82.4	31.8	35.2	76.7	24.3	21.4	70.4	68.8		68.9	69.1	67.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	11.0	0.7	3.1	7.5	0.3	0.1	6.0	3.9		1.4	0.8	0.2
Delay (s)	93.4	32.5	38.3	84.1	24.7	21.5	76.5	72.7		70.3	69.9	67.9
Level of Service	F	C	D	F	C	C	E	E		E	E	E
Approach Delay (s)		37.1			42.9			74.3			69.6	
Approach LOS		D			D			E			E	

Intersection Summary			
HCM 2000 Control Delay	49.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	22.9
Intersection Capacity Utilization	69.4%	ICU Level of Service	C
Analysis Period (min)	15		

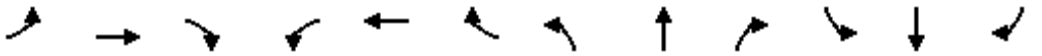
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	914	0	280	0	599	860	0	883	590
Future Volume (vph)	0	0	0	914	0	280	0	599	860	0	883	590
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.6		4.6		3.5	4.0		5.1	4.0
Lane Util. Factor				0.97		0.88		0.91	1.00		0.91	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3367		2733		4988	1553		4988	1553
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3367		2733		4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	914	0	280	0	599	860	0	883	590
RTOR Reduction (vph)	0	0	0	0	0	190	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	914	0	90	0	599	860	0	883	590
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type				Prot		Perm		NA	Free		NA	Free
Protected Phases				4				6			2	
Permitted Phases						4			Free			Free
Actuated Green, G (s)				35.4		35.4		66.5	110.0		64.9	110.0
Effective Green, g (s)				35.4		35.4		66.5	110.0		64.9	110.0
Actuated g/C Ratio				0.32		0.32		0.60	1.00		0.59	1.00
Clearance Time (s)				4.6		4.6		3.5			5.1	
Lane Grp Cap (vph)				1083		879		3015	1553		2942	1553
v/s Ratio Prot				c0.27				0.12			0.18	
v/s Ratio Perm						0.03			c0.55			0.38
v/c Ratio				0.84		0.10		0.20	0.55		0.30	0.38
Uniform Delay, d1				34.7		26.2		9.8	0.0		11.2	0.0
Progression Factor				1.00		1.00		0.72	1.00		1.00	1.00
Incremental Delay, d2				8.1		0.2		0.1	1.4		0.3	0.7
Delay (s)				42.8		26.4		7.2	1.4		11.5	0.7
Level of Service				D		C		A	A		B	A
Approach Delay (s)		0.0			38.9			3.7			7.2	
Approach LOS		A			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	15.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.7
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		

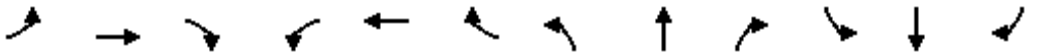
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	415	0	813	0	0	0	0	1043	801	0	1372	422
Future Volume (vph)	415	0	813	0	0	0	0	1043	801	0	1372	422
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4		6.4					5.1	4.0		4.6	4.0
Lane Util. Factor	0.97		0.88					0.91	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3367		2733					4988	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3367		2733					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	415	0	813	0	0	0	0	1043	801	0	1372	422
RTOR Reduction (vph)	0	0	60	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	415	0	753	0	0	0	0	1043	801	0	1372	422
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	33.6		33.6					64.9	110.0		65.4	110.0
Effective Green, g (s)	33.6		33.6					64.9	110.0		65.4	110.0
Actuated g/C Ratio	0.31		0.31					0.59	1.00		0.59	1.00
Clearance Time (s)	6.4		6.4					5.1			4.6	
Lane Grp Cap (vph)	1028		834					2942	1553		2965	1553
v/s Ratio Prot								0.21			0.28	
v/s Ratio Perm	0.12		c0.28						c0.52			0.27
v/c Ratio	0.40		0.90					0.35	0.52		0.46	0.27
Uniform Delay, d1	30.3		36.6					11.7	0.0		12.5	0.0
Progression Factor	1.00		1.00					1.00	1.00		0.50	1.00
Incremental Delay, d2	1.2		14.9					0.3	1.2		0.4	0.4
Delay (s)	31.4		51.5					12.0	1.2		6.7	0.4
Level of Service	C		D					B	A		A	A
Approach Delay (s)		44.7			0.0			7.3			5.2	
Approach LOS		D			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	16.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		

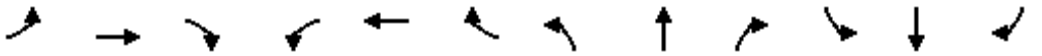
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	268	0	198	0	857	980	0	574	390
Future Volume (vph)	0	0	0	268	0	198	0	857	980	0	574	390
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.9	4.9			4.8	4.0		4.8	4.0
Lane Util. Factor				0.95	0.95			0.95	1.00		0.95	1.00
Frt				1.00	0.87			1.00	0.85		1.00	0.85
Flt Protected				0.95	0.99			1.00	1.00		1.00	1.00
Satd. Flow (prot)				1649	1497			3471	1553		3471	1553
Flt Permitted				0.95	0.99			1.00	1.00		1.00	1.00
Satd. Flow (perm)				1649	1497			3471	1553		3471	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	268	0	198	0	857	980	0	574	390
RTOR Reduction (vph)	0	0	0	0	111	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	241	114	0	0	857	980	0	574	390
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type				Perm	NA			NA	Free		NA	Free
Protected Phases					8			2			6	
Permitted Phases				8					Free			Free
Actuated Green, G (s)				35.1	35.1			65.2	110.0		65.2	110.0
Effective Green, g (s)				35.1	35.1			65.2	110.0		65.2	110.0
Actuated g/C Ratio				0.32	0.32			0.59	1.00		0.59	1.00
Clearance Time (s)				4.9	4.9			4.8			4.8	
Lane Grp Cap (vph)				526	477			2057	1553		2057	1553
v/s Ratio Prot								0.25			0.17	
v/s Ratio Perm				0.15	0.08				c0.63			0.25
v/c Ratio				0.46	0.24			0.42	0.63		0.28	0.25
Uniform Delay, d1				29.9	27.6			12.1	0.0		10.9	0.0
Progression Factor				1.00	1.00			0.73	1.00		1.00	1.00
Incremental Delay, d2				2.9	1.2			0.5	1.7		0.3	0.4
Delay (s)				32.7	28.8			9.3	1.7		11.3	0.4
Level of Service				C	C			A	A		B	A
Approach Delay (s)		0.0			30.8			5.3			6.9	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.7
Intersection Capacity Utilization	45.3%	ICU Level of Service	A
Analysis Period (min)	15		

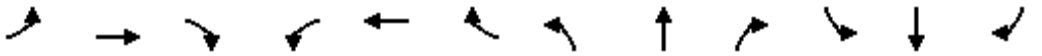
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	414	0	426	0	0	0	0	1424	852	0	608	235
Future Volume (vph)	414	0	426	0	0	0	0	1424	852	0	608	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	5.1					4.9	4.0		4.8	4.0
Lane Util. Factor	0.95	0.91	0.95					0.91	1.00		0.95	1.00
Frt	1.00	0.92	0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95	0.98	1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	1649	1490	1475					4988	1553		3471	1553
Flt Permitted	0.95	0.98	1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	1649	1490	1475					4988	1553		3471	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	414	0	426	0	0	0	0	1424	852	0	608	235
RTOR Reduction (vph)	0	42	183	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	290	240	85	0	0	0	0	1424	852	0	608	235
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA	Perm					NA	Free		NA	Free
Protected Phases		4						2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	34.9	34.9	34.9					65.1	110.0		65.2	110.0
Effective Green, g (s)	34.9	34.9	34.9					65.1	110.0		65.2	110.0
Actuated g/C Ratio	0.32	0.32	0.32					0.59	1.00		0.59	1.00
Clearance Time (s)	5.1	5.1	5.1					4.9			4.8	
Lane Grp Cap (vph)	523	472	467					2951	1553		2057	1553
v/s Ratio Prot								0.29			0.18	
v/s Ratio Perm	0.18	0.16	0.06						c0.55			0.15
v/c Ratio	0.55	0.51	0.18					0.48	0.55		0.30	0.15
Uniform Delay, d1	31.1	30.6	27.2					12.8	0.0		11.1	0.0
Progression Factor	1.00	1.00	1.00					1.00	1.00		0.73	1.00
Incremental Delay, d2	4.2	3.9	0.9					0.6	1.4		0.4	0.2
Delay (s)	35.3	34.5	28.1					13.4	1.4		8.5	0.2
Level of Service	D	C	C					B	A		A	A
Approach Delay (s)		32.7			0.0			8.9			6.2	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		

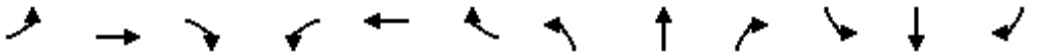
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	352	0	256	0	1429	1790	0	720	540
Future Volume (vph)	0	0	0	352	0	256	0	1429	1790	0	720	540
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.8		6.8		4.6	4.0		4.6	4.0
Lane Util. Factor				0.97		1.00		0.91	1.00		0.95	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3400		1568		5036	1568		3505	1568
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3400		1568		5036	1568		3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	352	0	256	0	1429	1790	0	720	540
RTOR Reduction (vph)	0	0	0	0	0	23	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	352	0	233	0	1429	1790	0	720	540
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				Perm		Perm		NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases				8		8			Free			Free
Actuated Green, G (s)				37.2		37.2		61.4	110.0		61.4	110.0
Effective Green, g (s)				37.2		37.2		61.4	110.0		61.4	110.0
Actuated g/C Ratio				0.34		0.34		0.56	1.00		0.56	1.00
Clearance Time (s)				6.8		6.8		4.6			4.6	
Lane Grp Cap (vph)				1149		530		2811	1568		1956	1568
v/s Ratio Prot								0.28			0.21	
v/s Ratio Perm				0.10		0.15			c1.14			0.34
v/c Ratio				0.31		0.44		0.51	1.14		0.37	0.34
Uniform Delay, d1				26.9		28.3		15.0	55.0		13.5	0.0
Progression Factor				1.00		1.00		0.97	1.00		1.00	1.00
Incremental Delay, d2				0.7		2.6		0.1	64.5		0.5	0.6
Delay (s)				27.6		31.0		14.5	119.5		14.0	0.6
Level of Service				C		C		B	F		B	A
Approach Delay (s)		0.0			29.0			72.9			8.3	
Approach LOS		A			C			E			A	

Intersection Summary			
HCM 2000 Control Delay	51.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.27		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	11.4
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		

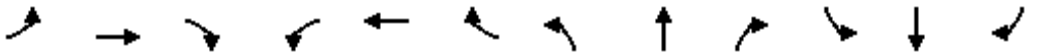
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	578	135	419	0	0	923	0	2340	8	0	942	128
Future Volume (vph)	578	135	419	0	0	923	0	2340	8	0	942	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0		4.0			4.0	4.0
Lane Util. Factor	0.91	0.86	0.91			0.88		*0.75			0.95	1.00
Frt	1.00	0.96	0.85			0.85		1.00			1.00	0.85
Flt Protected	0.95	0.98	1.00			1.00		1.00			1.00	1.00
Satd. Flow (prot)	1595	2971	1427			2733		5531			3505	1568
Flt Permitted	0.95	0.98	1.00			1.00		1.00			1.00	1.00
Satd. Flow (perm)	1595	2971	1427			2733		5531			3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	578	135	419	0	0	923	0	2340	8	0	942	128
RTOR Reduction (vph)	0	29	171	0	0	35	0	1	0	0	0	33
Lane Group Flow (vph)	295	544	93	0	0	888	0	2347	0	0	942	95
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Turn Type	Split	NA	Perm			Prot		NA			NA	Perm
Protected Phases	4	4				1		2			6	
Permitted Phases			4									6
Actuated Green, G (s)	20.0	20.0	20.0			33.0		45.0			82.0	82.0
Effective Green, g (s)	20.0	20.0	20.0			33.0		45.0			82.0	82.0
Actuated g/C Ratio	0.18	0.18	0.18			0.30		0.41			0.75	0.75
Clearance Time (s)	4.0	4.0	4.0			4.0		4.0			4.0	4.0
Lane Grp Cap (vph)	290	540	259			819		2262			2612	1168
v/s Ratio Prot	c0.18	0.18				c0.32		c0.42			0.27	
v/s Ratio Perm			0.07									0.06
v/c Ratio	1.02	1.01	0.36			1.08		1.04			0.36	0.08
Uniform Delay, d1	45.0	45.0	39.4			38.5		32.5			4.9	3.8
Progression Factor	1.00	1.00	1.00			1.00		1.00			0.77	1.17
Incremental Delay, d2	57.3	40.7	3.8			56.8		29.6			0.4	0.1
Delay (s)	102.3	85.7	43.2			95.3		62.1			4.1	4.6
Level of Service	F	F	D			F		E			A	A
Approach Delay (s)		80.2			95.3			62.1			4.2	
Approach LOS		F			F			E			A	

Intersection Summary			
HCM 2000 Control Delay	60.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.0%	ICU Level of Service	F
Analysis Period (min)	15		

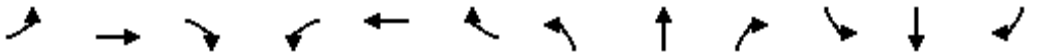
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	349	0	409	0	2985	520	0	1205	1078
Future Volume (vph)	0	0	0	349	0	409	0	2985	520	0	1205	1078
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.5		3.5		4.8	4.0		5.1	4.0
Lane Util. Factor				0.97		0.88		0.91	1.00		0.91	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3303		2682		4988	1553		4988	1553
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3303		2682		4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	349	0	409	0	2985	520	0	1205	1078
RTOR Reduction (vph)	0	0	0	0	0	14	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	349	0	395	0	2985	520	0	1205	1078
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	4%	4%	4%	4%	4%	4%
Turn Type				Perm		Perm		NA	Free		NA	Free
Protected Phases								6			2	
Permitted Phases				8		8			Free			Free
Actuated Green, G (s)				36.5		36.5		65.2	110.0		64.9	110.0
Effective Green, g (s)				36.5		36.5		65.2	110.0		64.9	110.0
Actuated g/C Ratio				0.33		0.33		0.59	1.00		0.59	1.00
Clearance Time (s)				3.5		3.5		4.8			5.1	
Lane Grp Cap (vph)				1095		889		2956	1553		2942	1553
v/s Ratio Prot								c0.60			0.24	
v/s Ratio Perm				0.11		0.15			0.33			c0.69
v/c Ratio				0.32		0.44		1.01	0.33		0.41	0.69
Uniform Delay, d1				27.5		28.8		22.4	0.0		12.2	0.0
Progression Factor				1.00		1.00		0.58	1.00		1.00	1.00
Incremental Delay, d2				0.8		1.6		16.6	0.4		0.4	2.6
Delay (s)				28.2		30.4		29.6	0.4		12.6	2.6
Level of Service				C		C		C	A		B	A
Approach Delay (s)		0.0			29.4			25.3			7.9	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.6
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		

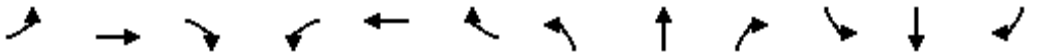
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1327	0	304	0	0	0	0	2177	394	0	1095	458
Future Volume (vph)	1327	0	304	0	0	0	0	2177	394	0	1095	458
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		3.5					4.8	4.0		5.1	4.0
Lane Util. Factor	0.94		0.88					0.86	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	4894		2733					6285	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	4894		2733					6285	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1327	0	304	0	0	0	0	2177	394	0	1095	458
RTOR Reduction (vph)	0	0	109	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	1327	0	195	0	0	0	0	2177	394	0	1095	458
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								6			2	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	36.5		36.5					65.2	110.0		64.9	110.0
Effective Green, g (s)	36.5		36.5					65.2	110.0		64.9	110.0
Actuated g/C Ratio	0.33		0.33					0.59	1.00		0.59	1.00
Clearance Time (s)	3.5		3.5					4.8			5.1	
Lane Grp Cap (vph)	1623		906					3725	1553		2942	1553
v/s Ratio Prot								c0.35			0.22	
v/s Ratio Perm	c0.27		0.07						0.25			0.29
v/c Ratio	0.82		0.22					0.58	0.25		0.37	0.29
Uniform Delay, d1	33.7		26.4					14.0	0.0		11.8	0.0
Progression Factor	1.00		1.00					1.00	1.00		0.75	1.00
Incremental Delay, d2	4.7		0.5					0.7	0.4		0.3	0.5
Delay (s)	38.4		27.0					14.6	0.4		9.3	0.5
Level of Service	D		C					B	A		A	A
Approach Delay (s)		36.3			0.0			12.5			6.7	
Approach LOS		D			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	17.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.6
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		

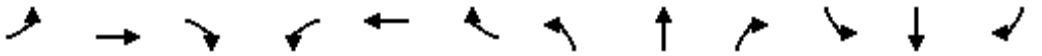
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	203	328	9	2	344	6	7	15	2	5	21	581
Future Volume (vph)	203	328	9	2	344	6	7	15	2	5	21	581
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.9	6.9	5.5	6.0			6.1			6.2	5.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00			0.99			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (prot)	1703	1792	1524	1719	1805			1798			1810	1553
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (perm)	1703	1792	1524	1719	1805			1798			1810	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	203	328	9	2	344	6	7	15	2	5	21	581
RTOR Reduction (vph)	0	0	3	0	1	0	0	2	0	0	0	177
Lane Group Flow (vph)	203	328	6	2	349	0	0	22	0	0	26	404
Heavy Vehicles (%)	6%	6%	6%	5%	5%	5%	3%	3%	3%	4%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	pm+ov
Protected Phases	1	6		5	2		8	8		4	4	1
Permitted Phases			6									4
Actuated Green, G (s)	66.5	121.1	121.1	3.5	59.0			7.9			22.8	89.3
Effective Green, g (s)	66.5	121.1	121.1	3.5	59.0			7.9			22.8	89.3
Actuated g/C Ratio	0.37	0.67	0.67	0.02	0.33			0.04			0.13	0.50
Clearance Time (s)	5.5	6.9	6.9	5.5	6.0			6.1			6.2	5.5
Lane Grp Cap (vph)	629	1205	1025	33	591			78			229	770
v/s Ratio Prot	0.12	0.18		0.00	c0.19			c0.01			0.01	c0.19
v/s Ratio Perm			0.00									0.07
v/c Ratio	0.32	0.27	0.01	0.06	0.59			0.28			0.11	0.52
Uniform Delay, d1	40.6	11.8	9.7	86.6	50.4			83.3			69.6	30.9
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	1.4	0.6	0.0	3.5	4.3			8.9			1.0	2.5
Delay (s)	42.0	12.4	9.7	90.1	54.7			92.2			70.6	33.4
Level of Service	D	B	A	F	D			F			E	C
Approach Delay (s)		23.4			54.9			92.2			35.0	
Approach LOS		C			D			F			D	

Intersection Summary			
HCM 2000 Control Delay	36.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	24.7
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		

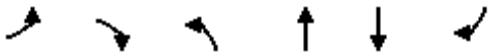
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	333	39	187	643	167	1915	0	0	1266	77
Future Volume (vph)	0	0	333	39	187	643	167	1915	0	0	1266	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.6		6.2	6.2	4.6	5.0			5.3	5.3
Lane Util. Factor			1.00		1.00	0.88	0.97	0.91			0.86	1.00
Frt			0.86		1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected			1.00		0.99	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)			1596		1777	2682	3303	4893			6166	1524
Flt Permitted			1.00		0.99	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)			1596		1777	2682	3303	4893			6166	1524
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	333	39	187	643	167	1915	0	0	1266	77
RTOR Reduction (vph)	0	0	210	0	0	46	0	0	0	0	0	35
Lane Group Flow (vph)	0	0	123	0	226	597	167	1915	0	0	1266	42
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type			Over	Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases			1	4	4		1	6			2	
Permitted Phases						4						2
Actuated Green, G (s)			20.0		24.8	24.8	20.0	99.0			74.1	74.1
Effective Green, g (s)			20.0		24.8	24.8	20.0	99.0			74.1	74.1
Actuated g/C Ratio			0.15		0.18	0.18	0.15	0.73			0.55	0.55
Clearance Time (s)			4.6		6.2	6.2	4.6	5.0			5.3	5.3
Lane Grp Cap (vph)			236		326	492	489	3588			3384	836
v/s Ratio Prot			0.08		0.13		0.05	c0.39			0.21	
v/s Ratio Perm						c0.22						0.03
v/c Ratio			0.52		0.69	1.21	0.34	0.53			0.37	0.05
Uniform Delay, d1			53.1		51.5	55.1	51.6	7.9			17.3	14.1
Progression Factor			1.00		1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2			8.1		11.5	113.9	1.9	0.6			0.3	0.1
Delay (s)			61.2		63.1	169.0	53.5	8.5			17.6	14.2
Level of Service			E		E	F	D	A			B	B
Approach Delay (s)		61.2			141.4			12.1			17.4	
Approach LOS		E			F			B			B	

Intersection Summary			
HCM 2000 Control Delay	41.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	135.0	Sum of lost time (s)	16.1
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		

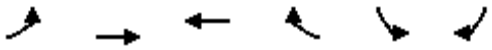
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1468	73	0	0	264	779
Future Volume (vph)	1468	73	0	0	264	779
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5			4.7	4.0
Lane Util. Factor	0.97	0.91			0.95	1.00
Frt	1.00	0.85			1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00
Satd. Flow (prot)	3310	1386			3406	1524
Flt Permitted	0.95	1.00			1.00	1.00
Satd. Flow (perm)	3310	1386			3406	1524
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1468	73	0	0	264	779
RTOR Reduction (vph)	0	35	0	0	0	0
Lane Group Flow (vph)	1475	31	0	0	264	779
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%
Turn Type	Prot	Perm			NA	Free
Protected Phases	4				2	
Permitted Phases		4				Free
Actuated Green, G (s)	66.5	66.5			65.3	140.0
Effective Green, g (s)	66.5	66.5			65.3	140.0
Actuated g/C Ratio	0.48	0.48			0.47	1.00
Clearance Time (s)	3.5	3.5			4.7	
Lane Grp Cap (vph)	1572	658			1588	1524
v/s Ratio Prot	c0.45				0.08	
v/s Ratio Perm		0.02				c0.51
v/c Ratio	0.94	0.05			0.17	0.51
Uniform Delay, d1	34.8	19.7			21.6	0.0
Progression Factor	1.00	1.00			1.00	1.00
Incremental Delay, d2	12.1	0.1			0.2	1.2
Delay (s)	46.9	19.9			21.8	1.2
Level of Service	D	B			C	A
Approach Delay (s)	45.8			0.0	6.4	
Approach LOS	D			A	A	

Intersection Summary			
HCM 2000 Control Delay	29.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		

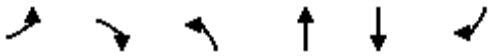
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	190	395	250	69	65	230
Future Volume (vph)	190	395	250	69	65	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1671	3343	3343	1495	1752	1568
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1671	3343	3343	1495	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	190	395	250	69	65	230
RTOR Reduction (vph)	0	0	0	51	0	157
Lane Group Flow (vph)	190	395	250	18	65	73
Heavy Vehicles (%)	8%	8%	8%	8%	3%	3%
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	13.0	33.0	16.0	16.0	19.0	19.0
Effective Green, g (s)	13.0	33.0	16.0	16.0	19.0	19.0
Actuated g/C Ratio	0.22	0.55	0.27	0.27	0.32	0.32
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	362	1838	891	398	554	496
v/s Ratio Prot	c0.11	0.12	c0.07		0.04	
v/s Ratio Perm				0.01		c0.05
v/c Ratio	0.52	0.21	0.28	0.05	0.12	0.15
Uniform Delay, d1	20.8	6.9	17.4	16.3	14.5	14.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.4	0.3	0.8	0.2	0.4	0.6
Delay (s)	26.1	7.2	18.2	16.6	15.0	15.3
Level of Service	C	A	B	B	B	B
Approach Delay (s)		13.3	17.9		15.2	
Approach LOS		B	B		B	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	31.0%	ICU Level of Service	A
Analysis Period (min)	15		

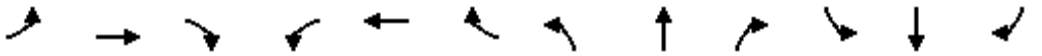
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	289	24	6	323	433	33
Future Volume (vph)	289	24	6	323	433	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3367	1553	1719	3438	3343	1495
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3367	1553	1719	3438	3343	1495
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	289	24	6	323	433	33
RTOR Reduction (vph)	0	22	0	0	0	22
Lane Group Flow (vph)	289	2	6	323	433	11
Heavy Vehicles (%)	4%	4%	5%	5%	8%	8%
Turn Type	Prot	Over	Prot	NA	NA	Over
Protected Phases	4	5	5	2	6	4
Permitted Phases						
Actuated Green, G (s)	16.0	4.0	4.0	26.0	18.0	16.0
Effective Green, g (s)	16.0	4.0	4.0	26.0	18.0	16.0
Actuated g/C Ratio	0.32	0.08	0.08	0.52	0.36	0.32
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	1077	124	137	1787	1203	478
v/s Ratio Prot	c0.09	0.00	0.00	c0.09	c0.13	0.01
v/s Ratio Perm						
v/c Ratio	0.27	0.02	0.04	0.18	0.36	0.02
Uniform Delay, d1	12.6	21.2	21.2	6.4	11.8	11.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.2	0.6	0.2	0.8	0.1
Delay (s)	13.3	21.4	21.8	6.6	12.6	11.7
Level of Service	B	C	C	A	B	B
Approach Delay (s)	13.9			6.9	12.5	
Approach LOS	B			A	B	

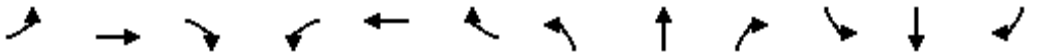
Intersection Summary			
HCM 2000 Control Delay	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	26.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	943	0	691	0	0	0	0	2139	616	0	1888	1108
Future Volume (vph)	943	0	691	0	0	0	0	2139	616	0	1888	1108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	4.0		4.0	4.0
Lane Util. Factor	0.97		0.88					0.86	1.00		0.86	0.86
Frt	1.00		0.85					1.00	0.85		0.97	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3400		2760					6346	1568		4626	1348
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3400		2760					6346	1568		4626	1348
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	943	0	691	0	0	0	0	2139	616	0	1888	1108
RTOR Reduction (vph)	0	0	12	0	0	0	0	0	0	0	56	0
Lane Group Flow (vph)	943	0	679	0	0	0	0	2139	616	0	2264	676
Turn Type	Prot		Perm					NA	Free		NA	Free
Protected Phases	4							2			6	
Permitted Phases			4						Free			Free
Actuated Green, G (s)	20.0		20.0					32.0	60.0		32.0	60.0
Effective Green, g (s)	20.0		20.0					32.0	60.0		32.0	60.0
Actuated g/C Ratio	0.33		0.33					0.53	1.00		0.53	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Lane Grp Cap (vph)	1133		920					3384	1568		2467	1348
v/s Ratio Prot	c0.28							0.34			c0.49	
v/s Ratio Perm			0.25						0.39			0.50
v/c Ratio	0.83		0.74					0.63	0.39		0.92	0.50
Uniform Delay, d1	18.5		17.7					9.9	0.0		12.8	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	7.2		5.3					0.9	0.7		6.9	1.3
Delay (s)	25.7		23.0					10.8	0.7		19.7	1.3
Level of Service	C		C					B	A		B	A
Approach Delay (s)		24.5			0.0			8.5			15.5	
Approach LOS		C			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	14.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



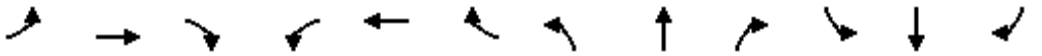
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	342	0	1317	0	2515	572	0	2715	750
Future Volume (vph)	0	0	0	342	0	1317	0	2515	572	0	2715	750
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0		4.0		4.0	4.0		4.0	4.0
Lane Util. Factor				0.97		0.76		0.86	0.86		0.81	0.81
Frt				1.00		0.85		1.00	0.85		0.99	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3400		3575		4743	1348		5934	1270
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3400		3575		4743	1348		5934	1270
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	342	0	1317	0	2515	572	0	2715	750
RTOR Reduction (vph)	0	0	0	0	0	9	0	3	0	0	8	0
Lane Group Flow (vph)	0	0	0	342	0	1308	0	2569	515	0	2842	615
Turn Type				Prot		Perm		NA	Free		NA	Free
Protected Phases				8				2			6	
Permitted Phases						8			Free			Free
Actuated Green, G (s)				29.0		29.0		43.0	80.0		43.0	80.0
Effective Green, g (s)				29.0		29.0		43.0	80.0		43.0	80.0
Actuated g/C Ratio				0.36		0.36		0.54	1.00		0.54	1.00
Clearance Time (s)				4.0		4.0		4.0			4.0	
Lane Grp Cap (vph)				1232		1295		2549	1348		3189	1270
v/s Ratio Prot				0.10				c0.54			0.48	
v/s Ratio Perm						c0.37			0.38			0.48
v/c Ratio				0.28		1.01		1.01	0.38		0.89	0.48
Uniform Delay, d1				18.1		25.5		18.5	0.0		16.4	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				0.6		27.5		19.8	0.8		4.2	1.3
Delay (s)				18.6		53.0		38.3	0.8		20.7	1.3
Level of Service				B		D		D	A		C	A
Approach Delay (s)		0.0			45.9			32.0			17.2	
Approach LOS		A			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	28.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	90.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	662	216	163	920	387	262
Future Volume (vph)	662	216	163	920	387	262
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3154	1411	1577	3154	3060	1411
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3154	1411	1577	3154	3060	1411
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	662	216	163	920	387	262
RTOR Reduction (vph)	0	158	0	0	0	198
Lane Group Flow (vph)	662	58	163	920	387	64
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	17.0	17.0	15.0	36.0	16.0	16.0
Effective Green, g (s)	17.0	17.0	15.0	36.0	16.0	16.0
Actuated g/C Ratio	0.26	0.26	0.23	0.55	0.25	0.25
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	824	369	363	1746	753	347
v/s Ratio Prot	c0.21		0.10	c0.29	c0.13	
v/s Ratio Perm		0.04				0.05
v/c Ratio	0.80	0.16	0.45	0.53	0.51	0.19
Uniform Delay, d1	22.4	18.5	21.5	9.1	21.1	19.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.2	0.9	4.0	1.1	2.5	1.2
Delay (s)	30.6	19.4	25.4	10.3	23.6	20.5
Level of Service	C	B	C	B	C	C
Approach Delay (s)	27.8			12.6	22.4	
Approach LOS	C			B	C	

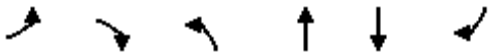
Intersection Summary			
HCM 2000 Control Delay	20.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	309	235	1	0	335	23	0	0	0	21	0	247
Future Volume (vph)	309	235	1	0	335	23	0	0	0	21	0	247
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0					4.0	4.0	4.0
Lane Util. Factor	1.00	0.95			0.95					0.95	0.95	1.00
Frt	1.00	1.00			0.99					1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00					0.95	0.95	1.00
Satd. Flow (prot)	1736	3469			3438					1665	1665	1568
Flt Permitted	0.95	1.00			1.00					0.95	0.95	1.00
Satd. Flow (perm)	1736	3469			3438					1665	1665	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	309	235	1	0	335	23	0	0	0	21	0	247
RTOR Reduction (vph)	0	1	0	0	6	0	0	0	0	0	0	198
Lane Group Flow (vph)	309	235	0	0	352	0	0	0	0	10	11	49
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA					Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases												6
Actuated Green, G (s)	16.0	28.0			16.0					16.0	16.0	16.0
Effective Green, g (s)	16.0	28.0			16.0					16.0	16.0	16.0
Actuated g/C Ratio	0.20	0.35			0.20					0.20	0.20	0.20
Clearance Time (s)	4.0	4.0			4.0					4.0	4.0	4.0
Lane Grp Cap (vph)	347	1214			687					333	333	313
v/s Ratio Prot	c0.18	0.07			c0.10					0.01	0.01	
v/s Ratio Perm												c0.03
v/c Ratio	0.89	0.19			0.51					0.03	0.03	0.16
Uniform Delay, d1	31.1	18.1			28.5					25.8	25.8	26.4
Progression Factor	1.00	1.00			1.00					1.00	1.00	1.00
Incremental Delay, d2	27.2	0.4			2.7					0.2	0.2	1.1
Delay (s)	58.3	18.5			31.2					25.9	26.0	27.5
Level of Service	E	B			C					C	C	C
Approach Delay (s)		41.1			31.2			0.0			27.4	
Approach LOS		D			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	34.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	40.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	104	47	22	426	819	267
Future Volume (vph)	104	47	22	426	819	267
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frt	0.96		1.00	1.00	0.97	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1708		1752	1845	1783	
Flt Permitted	0.97		0.95	1.00	1.00	
Satd. Flow (perm)	1708		1752	1845	1783	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	104	47	22	426	819	267
RTOR Reduction (vph)	18	0	0	0	13	0
Lane Group Flow (vph)	133	0	22	426	1073	0
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	16.0		4.0	66.0	58.0	
Effective Green, g (s)	16.0		4.0	66.0	58.0	
Actuated g/C Ratio	0.18		0.04	0.73	0.64	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	303		77	1353	1149	
v/s Ratio Prot	c0.08		0.01	c0.23	c0.60	
v/s Ratio Perm						
v/c Ratio	0.44		0.29	0.31	0.93	
Uniform Delay, d1	33.0		41.6	4.2	14.3	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	4.6		9.1	0.6	14.8	
Delay (s)	37.6		50.7	4.8	29.0	
Level of Service	D		D	A	C	
Approach Delay (s)	37.6			7.0	29.0	
Approach LOS	D			A	C	

Intersection Summary			
HCM 2000 Control Delay	24.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	0	508	567	249	603	0	1628	681	0	2030	359
Future Volume (veh/h)	230	0	508	567	249	603	0	1628	681	0	2030	359
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1827	1827	1827	0	1827	1827	0	1827	1827
Adj Flow Rate, veh/h	230	0	508	454	327	657	0	1628	0	0	2030	359
Adj No. of Lanes	0	1	2	2	1	3	0	3	1	0	4	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	0	4	4	0	4	4
Cap, veh/h	366	0	575	1189	624	1592	0	1746	544	0	2200	544
Arrive On Green	0.21	0.00	0.21	0.34	0.34	0.34	0.00	0.35	0.00	0.00	0.35	0.35
Sat Flow, veh/h	1757	0	2760	3480	1827	4659	0	5152	1553	0	6540	1553
Grp Volume(v), veh/h	230	0	508	454	327	657	0	1628	0	0	2030	359
Grp Sat Flow(s),veh/h/ln	1757	0	1380	1740	1827	1553	0	1663	1553	0	1571	1553
Q Serve(g_s), s	14.3	0.0	21.4	11.9	17.2	13.0	0.0	37.8	0.0	0.0	37.2	23.5
Cycle Q Clear(g_c), s	14.3	0.0	21.4	11.9	17.2	13.0	0.0	37.8	0.0	0.0	37.2	23.5
Prop In Lane	1.00		1.00	1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	366	0	575	1189	624	1592	0	1746	544	0	2200	544
V/C Ratio(X)	0.63	0.00	0.88	0.38	0.52	0.41	0.00	0.93	0.00	0.00	0.92	0.66
Avail Cap(c_a), veh/h	366	0	575	1189	624	1592	0	1746	544	0	2200	544
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	43.3	0.0	46.1	29.9	31.7	30.3	0.0	37.6	0.0	0.0	37.4	33.0
Incr Delay (d2), s/veh	7.9	0.0	17.8	0.9	3.1	0.8	0.0	10.6	0.0	0.0	8.0	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	0.0	9.6	5.8	9.3	5.7	0.0	19.0	0.0	0.0	17.3	11.0
LnGrp Delay(d),s/veh	51.2	0.0	63.8	30.8	34.8	31.1	0.0	48.2	0.0	0.0	45.4	39.2
LnGrp LOS	D		E	C	C	C		D			D	D
Approach Vol, veh/h		738			1438			1628			2389	
Approach Delay, s/veh		59.9			31.8			48.2			44.5	
Approach LOS		E			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		46.0		29.0		46.0		45.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		42.0		25.0		42.0		41.0
Max Q Clear Time (g_c+I1), s		39.8		23.4		39.2		19.2
Green Ext Time (p_c), s		2.2		0.6		2.7		7.2

Intersection Summary	
HCM 2010 Ctrl Delay	44.4
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	191	33	163	17	47	15	133	881	6	5	1418	402
Future Volume (veh/h)	191	33	163	17	47	15	133	881	6	5	1418	402
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1827	1900	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	215	0	163	17	47	15	133	881	6	5	1418	402
Adj No. of Lanes	2	0	1	0	1	0	2	3	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	4	4	4	4	4	4
Cap, veh/h	644	0	287	60	165	53	338	2385	16	101	1475	660
Arrive On Green	0.18	0.00	0.18	0.16	0.16	0.16	0.10	0.47	0.47	0.06	0.43	0.43
Sat Flow, veh/h	3514	0	1568	376	1041	332	3375	5111	35	1740	3471	1553
Grp Volume(v), veh/h	215	0	163	79	0	0	133	573	314	5	1418	402
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1749	0	0	1688	1663	1821	1740	1736	1553
Q Serve(g_s), s	6.4	0.0	11.4	4.8	0.0	0.0	4.4	13.3	13.3	0.3	47.7	24.1
Cycle Q Clear(g_c), s	6.4	0.0	11.4	4.8	0.0	0.0	4.4	13.3	13.3	0.3	47.7	24.1
Prop In Lane	1.00		1.00	0.22		0.19	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	644	0	287	277	0	0	338	1552	850	101	1475	660
V/C Ratio(X)	0.33	0.00	0.57	0.29	0.00	0.00	0.39	0.37	0.37	0.05	0.96	0.61
Avail Cap(c_a), veh/h	644	0	287	277	0	0	338	1552	850	101	1475	660
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.6	0.0	44.7	44.5	0.0	0.0	50.6	20.6	20.6	53.4	33.5	26.8
Incr Delay (d2), s/veh	1.4	0.0	7.9	2.6	0.0	0.0	3.4	0.7	1.2	0.9	15.8	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	5.6	2.5	0.0	0.0	2.2	6.3	7.0	0.2	25.9	11.0
LnGrp Delay(d),s/veh	44.0	0.0	52.5	47.1	0.0	0.0	54.0	21.3	21.9	54.3	49.4	30.9
LnGrp LOS	D		D	D			D	C	C	D	D	C
Approach Vol, veh/h		378			79			1020			1825	
Approach Delay, s/veh		47.7			47.1			25.7			45.3	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.0	60.0		26.0	16.0	55.0		23.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	7.0	56.0		22.0	12.0	51.0		19.0
Max Q Clear Time (g_c+I1), s	2.3	15.3		13.4	6.4	49.7		6.8
Green Ext Time (p_c), s	3.5	4.6		1.0	0.2	1.1		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	39.6
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	144	304	106	123	484	228	127	605	79	147	1158	269
Future Volume (veh/h)	144	304	106	123	484	228	127	605	79	147	1158	269
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	144	304	106	123	484	228	127	605	79	147	1158	269
Adj No. of Lanes	1	2	0	1	2	1	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	273	570	195	195	623	279	188	1270	165	263	1504	673
Arrive On Green	0.16	0.22	0.22	0.11	0.18	0.18	0.06	0.41	0.41	0.08	0.43	0.43
Sat Flow, veh/h	1757	2565	877	1757	3505	1568	3375	3089	403	3375	3471	1553
Grp Volume(v), veh/h	144	206	204	123	484	228	127	339	345	147	1158	269
Grp Sat Flow(s),veh/h/ln	1757	1752	1690	1757	1752	1568	1688	1736	1756	1688	1736	1553
Q Serve(g_s), s	6.8	9.3	9.6	6.0	11.9	12.6	3.3	12.9	12.9	3.8	25.5	10.7
Cycle Q Clear(g_c), s	6.8	9.3	9.6	6.0	11.9	12.6	3.3	12.9	12.9	3.8	25.5	10.7
Prop In Lane	1.00		0.52	1.00		1.00	1.00		0.23	1.00		1.00
Lane Grp Cap(c), veh/h	273	389	376	195	623	279	188	714	722	263	1504	673
V/C Ratio(X)	0.53	0.53	0.54	0.63	0.78	0.82	0.68	0.48	0.48	0.56	0.77	0.40
Avail Cap(c_a), veh/h	273	389	376	195	623	279	188	714	722	263	1504	673
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	30.8	31.0	38.2	35.3	35.6	41.7	19.4	19.4	40.0	21.7	17.5
Incr Delay (d2), s/veh	7.1	5.1	5.6	14.5	9.2	22.7	17.9	2.3	2.3	8.4	3.9	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	5.1	5.1	3.7	6.5	7.2	2.0	6.6	6.7	2.1	13.0	4.9
LnGrp Delay(d),s/veh	42.1	35.9	36.5	52.7	44.5	58.3	59.6	21.7	21.7	48.4	25.5	19.2
LnGrp LOS	D	D	D	D	D	E	E	C	C	D	C	B
Approach Vol, veh/h		554			835			811			1574	
Approach Delay, s/veh		37.7			49.5			27.6			26.6	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	41.0	14.0	24.0	9.0	43.0	18.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	37.0	10.0	20.0	5.0	39.0	14.0	16.0
Max Q Clear Time (g_c+I1), s	5.8	14.9	8.0	11.6	5.3	27.5	8.8	14.6
Green Ext Time (p_c), s	0.1	11.6	0.1	3.3	0.0	7.6	0.2	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	33.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	436	325	134	163	48	141	736	192	50	265	5
Future Volume (veh/h)	25	436	325	134	163	48	141	736	192	50	265	5
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1900	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	25	436	325	134	163	48	141	736	192	50	265	5
Adj No. of Lanes	1	1	2	1	2	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	66	677	1013	247	1264	361	254	1110	497	127	860	16
Arrive On Green	0.04	0.38	0.38	0.14	0.48	0.48	0.14	0.32	0.32	0.07	0.24	0.24
Sat Flow, veh/h	1707	1792	2682	1707	2616	748	1757	3505	1568	1757	3519	66
Grp Volume(v), veh/h	25	436	325	134	104	107	141	736	192	50	132	138
Grp Sat Flow(s),veh/h/ln	1707	1792	1341	1707	1703	1661	1757	1752	1568	1757	1752	1833
Q Serve(g_s), s	2.6	36.0	15.4	13.1	6.1	6.4	13.4	32.7	17.2	4.9	11.1	11.1
Cycle Q Clear(g_c), s	2.6	36.0	15.4	13.1	6.1	6.4	13.4	32.7	17.2	4.9	11.1	11.1
Prop In Lane	1.00		1.00	1.00		0.45	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	66	677	1013	247	823	803	254	1110	497	127	428	448
V/C Ratio(X)	0.38	0.64	0.32	0.54	0.13	0.13	0.56	0.66	0.39	0.39	0.31	0.31
Avail Cap(c_a), veh/h	66	677	1013	247	823	803	254	1110	497	127	428	448
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	84.4	46.0	39.7	71.5	25.6	25.7	71.6	53.2	47.9	79.7	55.6	55.6
Incr Delay (d2), s/veh	15.5	4.7	0.8	8.3	0.3	0.3	8.5	3.1	2.3	8.9	1.9	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	18.7	5.9	6.8	2.9	3.0	7.1	16.3	7.8	2.7	5.6	5.9
LnGrp Delay(d),s/veh	99.9	50.7	40.5	79.8	25.9	26.0	80.1	56.3	50.2	88.7	57.4	57.4
LnGrp LOS	F	D	D	E	C	C	F	E	D	F	E	E
Approach Vol, veh/h		786			345			1069			320	
Approach Delay, s/veh		48.0			46.9			58.4			62.3	
Approach LOS		D			D			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	61.0	30.0	72.0	30.0	48.0	11.0	91.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	13.0	57.0	26.0	68.0	26.0	44.0	7.0	87.0
Max Q Clear Time (g_c+I1), s	6.9	34.7	15.1	38.0	15.4	13.1	4.6	8.4
Green Ext Time (p_c), s	0.0	5.8	0.3	4.6	0.3	6.2	0.0	4.7

Intersection Summary	
HCM 2010 Ctrl Delay	54.1
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	233	179	112	331	64	136	544	172	35	769	149
Future Volume (veh/h)	89	233	179	112	331	64	136	544	172	35	769	149
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	89	233	179	112	331	64	136	544	172	35	769	149
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	146	935	418	146	783	150	205	1110	497	117	935	418
Arrive On Green	0.08	0.27	0.27	0.08	0.27	0.27	0.12	0.32	0.32	0.07	0.27	0.27
Sat Flow, veh/h	1757	3505	1568	1757	2937	561	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	89	233	179	112	196	199	136	544	172	35	769	149
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1746	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	2.9	3.1	5.7	3.7	5.5	5.7	4.4	7.5	5.1	1.1	12.4	4.6
Cycle Q Clear(g_c), s	2.9	3.1	5.7	3.7	5.5	5.7	4.4	7.5	5.1	1.1	12.4	4.6
Prop In Lane	1.00		1.00	1.00		0.32	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	146	935	418	146	467	465	205	1110	497	117	935	418
V/C Ratio(X)	0.61	0.25	0.43	0.77	0.42	0.43	0.66	0.49	0.35	0.30	0.82	0.36
Avail Cap(c_a), veh/h	146	935	418	146	467	465	205	1110	497	117	935	418
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.6	17.3	18.2	26.9	18.2	18.2	25.4	16.6	15.7	26.7	20.7	17.8
Incr Delay (d2), s/veh	17.4	0.6	3.2	31.0	2.8	2.9	15.7	1.5	1.9	6.4	8.1	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	1.6	2.8	3.1	3.0	3.1	3.0	3.9	2.4	0.8	7.0	2.3
LnGrp Delay(d),s/veh	43.9	17.9	21.4	57.9	20.9	21.1	41.1	18.1	17.6	33.1	28.8	20.2
LnGrp LOS	D	B	C	E	C	C	D	B	B	C	C	C
Approach Vol, veh/h		501			507			852			953	
Approach Delay, s/veh		23.8			29.1			21.7			27.6	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	23.0	9.0	20.0	11.0	20.0	9.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	19.0	5.0	16.0	7.0	16.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	3.1	9.5	5.7	7.7	6.4	14.4	4.9	7.7
Green Ext Time (p_c), s	0.0	5.3	0.0	2.3	0.0	1.2	0.0	2.3

Intersection Summary	
HCM 2010 Ctrl Delay	25.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	267	131	112	333	47	121	374	96	52	838	154
Future Volume (veh/h)	105	267	131	112	333	47	121	374	96	52	838	154
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	105	267	131	112	333	47	121	374	96	52	838	154
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	176	935	418	176	935	418	146	1051	470	117	993	444
Arrive On Green	0.10	0.27	0.27	0.10	0.27	0.27	0.08	0.30	0.30	0.07	0.28	0.28
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	105	267	131	112	333	47	121	374	96	52	838	154
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1568	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	3.4	3.6	4.0	3.7	4.6	1.4	4.1	5.0	2.7	1.7	13.5	4.7
Cycle Q Clear(g_c), s	3.4	3.6	4.0	3.7	4.6	1.4	4.1	5.0	2.7	1.7	13.5	4.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	176	935	418	176	935	418	146	1051	470	117	993	444
V/C Ratio(X)	0.60	0.29	0.31	0.64	0.36	0.11	0.83	0.36	0.20	0.44	0.84	0.35
Avail Cap(c_a), veh/h	176	935	418	176	935	418	146	1051	470	117	993	444
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.8	17.5	17.6	26.0	17.8	16.6	27.1	16.5	15.7	26.9	20.3	17.1
Incr Delay (d2), s/veh	14.1	0.8	2.0	16.4	1.1	0.5	39.0	0.9	1.0	11.7	8.7	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	1.8	1.9	2.6	2.4	0.7	3.5	2.5	1.3	1.2	7.7	2.3
LnGrp Delay(d),s/veh	40.0	18.2	19.6	42.3	18.9	17.2	66.1	17.4	16.6	38.7	29.0	19.2
LnGrp LOS	D	B	B	D	B	B	E	B	B	D	C	B
Approach Vol, veh/h		503			492			591			1044	
Approach Delay, s/veh		23.1			24.1			27.2			28.0	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	22.0	10.0	20.0	9.0	21.0	10.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	18.0	6.0	16.0	5.0	17.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	3.7	7.0	5.7	6.0	6.1	15.5	5.4	6.6
Green Ext Time (p_c), s	0.0	5.4	0.0	2.6	0.0	1.0	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	26.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	461	410	107	219	391	765	80	1528	133	495	1684	401
Future Volume (veh/h)	461	410	107	219	391	765	80	1528	133	495	1684	401
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	461	410	107	219	391	765	80	1528	133	495	1684	401
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	430	865	387	348	781	731	168	1436	447	822	2402	748
Arrive On Green	0.13	0.25	0.25	0.10	0.22	0.22	0.05	0.29	0.29	0.24	0.48	0.48
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	461	410	107	219	391	765	80	1528	133	495	1684	401
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	21.5	17.0	9.4	10.5	16.6	38.0	3.9	49.1	11.4	22.2	45.1	30.8
Cycle Q Clear(g_c), s	21.5	17.0	9.4	10.5	16.6	38.0	3.9	49.1	11.4	22.2	45.1	30.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	430	865	387	348	781	731	168	1436	447	822	2402	748
V/C Ratio(X)	1.07	0.47	0.28	0.63	0.50	1.05	0.48	1.06	0.30	0.60	0.70	0.54
Avail Cap(c_a), veh/h	430	865	387	348	781	731	168	1436	447	822	2402	748
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	74.5	54.8	51.9	73.5	57.9	45.5	78.8	60.7	47.3	57.2	34.6	30.9
Incr Delay (d2), s/veh	64.2	1.9	1.8	8.4	2.3	46.0	9.3	42.8	1.7	3.3	1.7	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.9	8.5	4.3	5.4	8.3	43.7	2.1	28.2	5.1	10.7	21.1	13.8
LnGrp Delay(d),s/veh	138.7	56.6	53.7	81.8	60.2	91.5	88.2	103.5	49.0	60.4	36.3	33.6
LnGrp LOS	F	E	D	F	E	F	F	F	D	E	D	C
Approach Vol, veh/h		978			1375			1741			2580	
Approach Delay, s/veh		95.0			81.1			98.6			40.5	
Approach LOS		F			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	86.9	27.0	42.6	47.0	53.9	22.9	46.7
Change Period (Y+Rc), s	5.5	4.8	5.5	* 4.6	5.5	* 4.8	5.5	4.6
Max Green Setting (Gmax), s	8.5	81.9	21.5	* 38	41.5	* 49	17.4	41.8
Max Q Clear Time (g_c+I1), s	5.9	47.1	23.5	40.0	24.2	51.1	12.5	19.0
Green Ext Time (p_c), s	0.0	8.3	0.0	0.0	1.4	0.0	0.1	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	72.0
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	0	1	51	0	102	0	1476	30	149	1737	4
Future Volume (veh/h)	1	0	1	51	0	102	0	1476	30	149	1737	4
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	1	0	1	51	0	102	0	1476	30	149	1737	4
Adj No. of Lanes	0	1	0	1	0	2	1	3	1	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	143	0	143	304	0	543	2	1326	413	166	2220	5
Arrive On Green	0.17	0.00	0.17	0.17	0.00	0.17	0.00	0.27	0.27	0.10	0.43	0.43
Sat Flow, veh/h	828	0	828	1757	0	3136	1740	4988	1553	1740	5138	12
Grp Volume(v), veh/h	2	0	0	51	0	102	0	1476	30	149	1124	617
Grp Sat Flow(s),veh/h/ln	1657	0	0	1757	0	1568	1740	1663	1553	1740	1663	1825
Q Serve(g_s), s	0.1	0.0	0.0	1.8	0.0	2.0	0.0	19.2	1.0	6.1	20.9	20.9
Cycle Q Clear(g_c), s	0.1	0.0	0.0	1.8	0.0	2.0	0.0	19.2	1.0	6.1	20.9	20.9
Prop In Lane	0.50		0.50	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	287	0	0	304	0	543	2	1326	413	166	1437	789
V/C Ratio(X)	0.01	0.00	0.00	0.17	0.00	0.19	0.00	1.11	0.07	0.90	0.78	0.78
Avail Cap(c_a), veh/h	287	0	0	304	0	543	178	1326	413	166	1437	789
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.7	0.0	0.0	25.4	0.0	25.5	0.0	26.5	19.8	32.3	17.6	17.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.2	0.0	0.8	0.0	61.8	0.3	46.7	4.3	7.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	1.0	0.0	0.9	0.0	16.3	0.5	5.1	10.4	12.1
LnGrp Delay(d),s/veh	24.8	0.0	0.0	26.6	0.0	26.3	0.0	88.3	20.2	79.0	21.9	25.2
LnGrp LOS	C			C		C		F	C	E	C	C
Approach Vol, veh/h		2			153			1506			1890	
Approach Delay, s/veh		24.8			26.4			86.9			27.5	
Approach LOS		C			C			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	36.2		18.0	12.0	24.2		18.0
Change Period (Y+Rc), s	* 4.6	5.0		5.5	* 5.1	* 5		5.5
Max Green Setting (Gmax), s	* 7.4	19.0		12.5	* 6.9	* 19		12.5
Max Q Clear Time (g_c+I1), s	0.0	22.9		2.1	8.1	21.2		4.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	52.6
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	229	23	160	130	355	9	1086	156	514	1237	38
Future Volume (veh/h)	101	229	23	160	130	355	9	1086	156	514	1237	38
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1845	1845	1845	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	101	229	23	160	130	355	9	1086	156	514	1237	38
Adj No. of Lanes	2	2	1	2	2	1	2	3	0	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	97	959	429	326	1203	538	105	1720	247	367	2325	71
Arrive On Green	0.03	0.28	0.28	0.10	0.34	0.34	0.03	0.39	0.39	0.11	0.47	0.47
Sat Flow, veh/h	3375	3471	1553	3408	3505	1568	3375	4408	633	3375	4972	153
Grp Volume(v), veh/h	101	229	23	160	130	355	9	819	423	514	827	448
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1704	1752	1568	1688	1663	1715	1688	1663	1800
Q Serve(g_s), s	4.9	8.7	1.9	7.6	4.3	32.7	0.4	33.9	34.0	18.5	30.0	30.0
Cycle Q Clear(g_c), s	4.9	8.7	1.9	7.6	4.3	32.7	0.4	33.9	34.0	18.5	30.0	30.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.37	1.00		0.08
Lane Grp Cap(c), veh/h	97	959	429	326	1203	538	105	1297	669	367	1555	842
V/C Ratio(X)	1.04	0.24	0.05	0.49	0.11	0.66	0.09	0.63	0.63	1.40	0.53	0.53
Avail Cap(c_a), veh/h	97	959	429	326	1203	538	105	1297	669	367	1555	842
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	82.7	47.7	45.3	73.0	38.1	47.5	80.1	42.0	42.0	75.8	32.1	32.1
Incr Delay (d2), s/veh	102.3	0.6	0.2	5.2	0.2	6.2	1.6	2.3	4.5	196.2	1.3	2.4
Initial Q Delay(d3),s/veh	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	4.2	0.8	3.8	2.1	15.1	0.2	16.0	16.9	18.6	14.1	15.5
LnGrp Delay(d),s/veh	185.7	48.3	45.5	78.2	38.3	53.7	81.7	44.3	46.5	272.0	33.4	34.5
LnGrp LOS	F	D	D	E	D	D	F	D	D	F	C	C
Approach Vol, veh/h		353			645			1251			1789	
Approach Delay, s/veh		87.4			56.7			45.3			102.2	
Approach LOS		F			E			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	84.9	10.4	64.1	24.0	71.7	21.8	52.7
Change Period (Y+Rc), s	5.5	5.3	5.5	* 5.7	5.5	* 5.3	5.5	* 5.7
Max Green Setting (Gmax), s	5.3	79.5	4.9	* 58	18.5	* 66	16.3	* 47
Max Q Clear Time (g_c+I1), s	2.4	32.0	6.9	34.7	20.5	36.0	9.6	10.7
Green Ext Time (p_c), s	0.0	3.8	0.0	0.7	0.0	3.8	0.1	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	76.0
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	13	34	1200	23	79	1340
Future Volume (veh/h)	13	34	1200	23	79	1340
Number	3	18	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1827	1900	1827	1827
Adj Flow Rate, veh/h	13	34	1200	23	79	1340
Adj No. of Lanes	1	1	3	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	4	4	4	4
Cap, veh/h	244	218	2258	43	235	2327
Arrive On Green	0.14	0.14	0.45	0.45	0.14	0.67
Sat Flow, veh/h	1757	1568	5203	97	1740	3563
Grp Volume(v), veh/h	13	34	792	431	79	1340
Grp Sat Flow(s),veh/h/ln	1757	1568	1663	1810	1740	1736
Q Serve(g_s), s	0.3	1.0	9.3	9.3	2.2	11.2
Cycle Q Clear(g_c), s	0.3	1.0	9.3	9.3	2.2	11.2
Prop In Lane	1.00	1.00		0.05	1.00	
Lane Grp Cap(c), veh/h	244	218	1490	811	235	2327
V/C Ratio(X)	0.05	0.16	0.53	0.53	0.34	0.58
Avail Cap(c_a), veh/h	244	218	1490	811	235	2327
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.2	20.5	10.8	10.8	21.2	4.8
Incr Delay (d2), s/veh	0.4	1.5	1.4	2.5	3.8	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.5	4.5	5.1	1.3	5.5
LnGrp Delay(d),s/veh	20.6	22.0	12.2	13.3	25.0	5.8
LnGrp LOS	C	C	B	B	C	A
Approach Vol, veh/h	47		1223			1419
Approach Delay, s/veh	21.6		12.6			6.9
Approach LOS	C		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		41.0			12.0	29.0		13.0
Change Period (Y+Rc), s		4.8			* 4.7	4.8		5.5
Max Green Setting (Gmax), s		36.2			* 7.3	24.2		7.5
Max Q Clear Time (g_c+I1), s		13.2			4.2	11.3		3.0
Green Ext Time (p_c), s		4.3			0.0	3.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	9.7
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	519	56	43	194	270	39	922	85	343	863	97
Future Volume (veh/h)	130	519	56	43	194	270	39	922	85	343	863	97
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1792	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	130	519	56	43	194	270	39	922	85	343	863	97
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	4	4	4	4	4	4
Cap, veh/h	211	568	61	56	483	411	96	962	430	373	1510	676
Arrive On Green	0.12	0.36	0.36	0.03	0.27	0.27	0.06	0.28	0.28	0.21	0.44	0.44
Sat Flow, veh/h	1707	1591	172	1707	1792	1524	1740	3471	1553	1740	3471	1553
Grp Volume(v), veh/h	130	0	575	43	194	270	39	922	85	343	863	97
Grp Sat Flow(s),veh/h/ln	1707	0	1762	1707	1792	1524	1740	1736	1553	1740	1736	1553
Q Serve(g_s), s	12.3	0.0	53.0	4.3	15.1	26.8	3.7	44.5	7.1	32.9	31.8	6.4
Cycle Q Clear(g_c), s	12.3	0.0	53.0	4.3	15.1	26.8	3.7	44.5	7.1	32.9	31.8	6.4
Prop In Lane	1.00		0.10	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	211	0	629	56	483	411	96	962	430	373	1510	676
V/C Ratio(X)	0.62	0.00	0.91	0.77	0.40	0.66	0.41	0.96	0.20	0.92	0.57	0.14
Avail Cap(c_a), veh/h	211	0	629	56	483	411	96	962	430	373	1510	676
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.8	0.0	52.3	81.7	50.9	55.2	77.8	60.6	47.1	65.5	36.2	29.0
Incr Delay (d2), s/veh	12.8	0.0	20.0	64.9	2.5	8.0	12.3	20.5	1.0	30.2	1.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	0.0	29.4	3.0	7.8	12.2	2.1	24.1	3.2	18.9	15.6	2.8
LnGrp Delay(d),s/veh	83.7	0.0	72.3	146.6	53.4	63.2	90.0	81.1	48.1	95.6	37.7	29.4
LnGrp LOS	F		E	F	D	E	F	F	D	F	D	C
Approach Vol, veh/h		705			507			1046			1303	
Approach Delay, s/veh		74.4			66.5			78.8			52.4	
Approach LOS		E			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	51.3	14.1	78.9	11.1	66.2	41.0	52.0
Change Period (Y+Rc), s	5.0	* 5.4	* 4.7	4.8	5.5	* 5.4	4.5	4.8
Max Green Setting (Gmax), s	21.0	* 46	* 9.4	74.1	5.6	* 61	36.5	47.2
Max Q Clear Time (g_c+I1), s	14.3	28.8	5.7	33.8	6.3	55.0	34.9	46.5
Green Ext Time (p_c), s	0.1	1.0	0.0	2.9	0.0	0.7	0.2	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	66.5
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	325	168	68	8	93	18	77	663	13	25	770	213
Future Volume (veh/h)	325	168	68	8	93	18	77	663	13	25	770	213
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	325	168	68	8	93	18	77	663	13	25	770	213
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	277	575	489	79	293	57	89	1002	20	81	1020	456
Arrive On Green	0.16	0.31	0.31	0.04	0.19	0.19	0.05	0.29	0.29	0.05	0.29	0.29
Sat Flow, veh/h	1757	1845	1568	1757	1503	291	1740	3482	68	1740	3471	1553
Grp Volume(v), veh/h	325	168	68	8	0	111	77	330	346	25	770	213
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1793	1740	1736	1815	1740	1736	1553
Q Serve(g_s), s	10.5	4.6	2.1	0.3	0.0	3.5	2.9	11.2	11.2	0.9	13.4	7.5
Cycle Q Clear(g_c), s	10.5	4.6	2.1	0.3	0.0	3.5	2.9	11.2	11.2	0.9	13.4	7.5
Prop In Lane	1.00		1.00	1.00		0.16	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	277	575	489	79	0	350	89	500	522	81	1020	456
V/C Ratio(X)	1.18	0.29	0.14	0.10	0.00	0.32	0.87	0.66	0.66	0.31	0.75	0.47
Avail Cap(c_a), veh/h	277	575	489	79	0	350	89	500	522	81	1020	456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.1	17.4	16.5	30.6	0.0	23.0	31.4	20.9	20.9	30.8	21.4	19.3
Incr Delay (d2), s/veh	110.1	1.3	0.6	2.6	0.0	2.4	64.2	6.7	6.5	9.7	5.2	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.5	2.5	1.0	0.2	0.0	2.0	3.0	6.3	6.5	0.7	7.2	3.6
LnGrp Delay(d),s/veh	138.2	18.7	17.1	33.1	0.0	25.4	95.6	27.6	27.4	40.4	26.6	22.7
LnGrp LOS	F	B	B	C		C	F	C	C	D	C	C
Approach Vol, veh/h		561			119			753			1008	
Approach Delay, s/veh		87.7			25.9			34.5			26.1	
Approach LOS		F			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	24.4	16.0	18.3	8.4	24.0	8.2	26.1
Change Period (Y+Rc), s	* 4.6	4.8	5.5	* 5.3	* 5.3	4.8	* 5.2	* 5.3
Max Green Setting (Gmax), s	* 3.4	19.6	10.5	* 13	* 3.1	19.2	* 3	* 20
Max Q Clear Time (g_c+I1), s	4.9	15.4	12.5	5.5	2.9	13.2	2.3	6.6
Green Ext Time (p_c), s	0.0	1.2	0.0	0.2	0.0	1.5	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	42.8
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	183	156	54	189	53	60	450	12	31	769	101
Future Volume (veh/h)	180	183	156	54	189	53	60	450	12	31	769	101
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	180	183	156	54	189	53	60	450	12	31	769	101
Adj No. of Lanes	0	1	1	1	1	1	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	188	191	331	291	306	260	73	793	674	87	815	693
Arrive On Green	0.21	0.21	0.21	0.17	0.17	0.17	0.04	0.43	0.43	0.05	0.45	0.45
Sat Flow, veh/h	893	907	1568	1757	1845	1568	1740	1827	1553	1740	1827	1553
Grp Volume(v), veh/h	363	0	156	54	189	53	60	450	12	31	769	101
Grp Sat Flow(s),veh/h/ln	1800	0	1568	1757	1845	1568	1740	1827	1553	1740	1827	1553
Q Serve(g_s), s	34.9	0.0	15.3	4.6	16.7	5.1	6.0	32.4	0.8	3.0	70.4	6.7
Cycle Q Clear(g_c), s	34.9	0.0	15.3	4.6	16.7	5.1	6.0	32.4	0.8	3.0	70.4	6.7
Prop In Lane	0.50		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	380	0	331	291	306	260	73	793	674	87	815	693
V/C Ratio(X)	0.96	0.00	0.47	0.19	0.62	0.20	0.83	0.57	0.02	0.35	0.94	0.15
Avail Cap(c_a), veh/h	380	0	331	291	306	260	73	793	674	87	815	693
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.3	0.0	60.5	62.8	67.9	63.0	83.2	37.2	28.2	80.4	46.3	28.7
Incr Delay (d2), s/veh	36.4	0.0	4.8	1.4	9.1	1.8	64.7	2.9	0.0	10.9	20.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.2	0.0	7.1	2.4	9.3	2.4	4.2	17.0	0.3	1.7	40.1	3.0
LnGrp Delay(d),s/veh	104.7	0.0	65.3	64.2	76.9	64.8	147.9	40.1	28.3	91.2	66.7	29.1
LnGrp LOS	F		E	E	E	E	F	D	C	F	E	C
Approach Vol, veh/h		519			296			522			901	
Approach Delay, s/veh		92.8			72.4			52.2			63.3	
Approach LOS		F			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	83.2		35.8	14.1	81.1		44.0
Change Period (Y+Rc), s	* 4.7	5.1		6.8	* 5.3	5.1		7.1
Max Green Setting (Gmax), s	* 7.3	78.1		29.0	* 8.8	76.0		36.9
Max Q Clear Time (g_c+I1), s	8.0	72.4		18.7	5.0	34.4		36.9
Green Ext Time (p_c), s	0.0	1.0		0.2	0.0	1.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	68.8
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	213	284	135	299	10	141	412	36	19	842	117
Future Volume (veh/h)	103	213	284	135	299	10	141	412	36	19	842	117
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1827	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	103	213	284	135	299	10	141	412	36	19	842	117
Adj No. of Lanes	1	2	0	1	2	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	212	305	273	240	663	297	258	1553	135	79	1170	163
Arrive On Green	0.12	0.18	0.18	0.14	0.19	0.19	0.15	0.48	0.48	0.05	0.38	0.38
Sat Flow, veh/h	1740	1736	1553	1740	3471	1553	1740	3232	281	1740	3062	425
Grp Volume(v), veh/h	103	213	284	135	299	10	141	220	228	19	477	482
Grp Sat Flow(s),veh/h/ln	1740	1736	1553	1740	1736	1553	1740	1736	1777	1740	1736	1752
Q Serve(g_s), s	7.2	15.0	22.9	9.4	9.9	0.7	9.8	9.9	9.9	1.4	30.5	30.5
Cycle Q Clear(g_c), s	7.2	15.0	22.9	9.4	9.9	0.7	9.8	9.9	9.9	1.4	30.5	30.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		0.24
Lane Grp Cap(c), veh/h	212	305	273	240	663	297	258	834	854	79	663	670
V/C Ratio(X)	0.49	0.70	1.04	0.56	0.45	0.03	0.55	0.26	0.27	0.24	0.72	0.72
Avail Cap(c_a), veh/h	212	305	273	240	663	297	258	834	854	79	663	670
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.4	50.5	53.7	52.5	46.6	42.9	51.4	20.1	20.2	60.0	34.3	34.3
Incr Delay (d2), s/veh	7.7	12.5	65.5	9.2	2.2	0.2	8.1	0.8	0.8	7.1	6.6	6.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	8.3	14.7	5.1	5.0	0.3	5.3	4.9	5.0	0.8	15.8	15.9
LnGrp Delay(d),s/veh	61.1	63.0	119.2	61.6	48.9	43.1	59.6	20.9	20.9	67.2	40.9	40.9
LnGrp LOS	E	E	F	E	D	D	E	C	C	E	D	D
Approach Vol, veh/h		600			444			589			978	
Approach Delay, s/veh		89.2			52.6			30.2			41.4	
Approach LOS		F			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.2	55.0	21.0	30.1	11.4	67.8	23.0	28.1
Change Period (Y+Rc), s	* 4.9	* 5.2	* 5.1	* 5.2	5.5	* 5.2	5.0	* 5.2
Max Green Setting (Gmax), s	* 19	* 50	* 16	* 25	5.9	* 63	18.0	* 23
Max Q Clear Time (g_c+I1), s	11.8	32.5	9.2	11.9	3.4	11.9	11.4	24.9
Green Ext Time (p_c), s	0.1	14.7	0.0	7.7	0.0	36.2	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	51.8
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	206	609	118	261	39	202	472	57	48	1089	101
Future Volume (veh/h)	64	206	609	118	261	39	202	472	57	48	1089	101
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	64	206	609	118	261	39	202	472	57	48	1089	101
Adj No. of Lanes	2	2	1	2	2	1	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	138	1334	597	172	1369	612	271	1288	155	114	1271	568
Arrive On Green	0.04	0.38	0.38	0.05	0.39	0.39	0.08	0.41	0.41	0.03	0.37	0.37
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	3121	375	3375	3471	1553
Grp Volume(v), veh/h	64	206	609	118	261	39	202	262	267	48	1089	101
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1736	1761	1688	1736	1553
Q Serve(g_s), s	3.3	7.0	68.6	6.1	8.8	2.8	10.6	18.8	19.0	2.5	52.3	8.0
Cycle Q Clear(g_c), s	3.3	7.0	68.6	6.1	8.8	2.8	10.6	18.8	19.0	2.5	52.3	8.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	138	1334	597	172	1369	612	271	716	727	114	1271	568
V/C Ratio(X)	0.46	0.15	1.02	0.69	0.19	0.06	0.74	0.37	0.37	0.42	0.86	0.18
Avail Cap(c_a), veh/h	138	1334	597	172	1369	612	271	716	727	114	1271	568
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	84.6	36.8	55.8	84.2	36.2	34.3	81.1	36.6	36.7	85.4	52.8	38.8
Incr Delay (d2), s/veh	10.8	0.2	42.2	20.0	0.3	0.2	16.8	1.4	1.4	11.0	7.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	3.4	36.6	3.4	4.3	1.2	5.6	9.3	9.5	1.3	26.4	3.5
LnGrp Delay(d),s/veh	95.4	37.0	98.1	104.2	36.5	34.5	97.9	38.1	38.1	96.3	60.4	39.4
LnGrp LOS	F	D	F	F	D	C	F	D	D	F	E	D
Approach Vol, veh/h		879			418			731			1238	
Approach Delay, s/veh		83.6			55.4			54.6			60.1	
Approach LOS		F			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	71.5	12.8	76.0	11.6	79.9	14.6	74.2
Change Period (Y+Rc), s	5.5	* 5.5	5.5	5.6	5.5	* 5.5	5.5	* 5.6
Max Green Setting (Gmax), s	14.5	* 66	7.3	70.2	6.1	* 74	9.1	* 69
Max Q Clear Time (g_c+I1), s	12.6	54.3	5.3	10.8	4.5	21.0	8.1	70.6
Green Ext Time (p_c), s	0.1	10.3	0.0	25.0	0.0	35.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	64.6
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	630	128	77	441	5	37	30	37	4	32	23
Future Volume (veh/h)	14	630	128	77	441	5	37	30	37	4	32	23
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	14	630	128	77	441	5	37	30	37	4	32	23
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	54	803	683	85	836	710	328	247	305	56	167	120
Arrive On Green	0.03	0.45	0.45	0.05	0.47	0.47	0.19	0.33	0.33	0.03	0.17	0.17
Sat Flow, veh/h	1707	1792	1524	1707	1792	1524	1757	753	928	1757	999	718
Grp Volume(v), veh/h	14	630	128	77	441	5	37	0	67	4	0	55
Grp Sat Flow(s),veh/h/ln	1707	1792	1524	1707	1792	1524	1757	0	1681	1757	0	1718
Q Serve(g_s), s	1.0	37.7	6.4	5.6	21.9	0.2	2.2	0.0	3.5	0.3	0.0	3.5
Cycle Q Clear(g_c), s	1.0	37.7	6.4	5.6	21.9	0.2	2.2	0.0	3.5	0.3	0.0	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.55	1.00		0.42
Lane Grp Cap(c), veh/h	54	803	683	85	836	710	328	0	553	56	0	287
V/C Ratio(X)	0.26	0.78	0.19	0.90	0.53	0.01	0.11	0.00	0.12	0.07	0.00	0.19
Avail Cap(c_a), veh/h	54	803	683	85	836	710	328	0	553	56	0	287
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.5	29.6	20.9	59.5	23.8	18.0	42.5	0.0	29.5	59.1	0.0	45.1
Incr Delay (d2), s/veh	11.2	7.6	0.6	72.9	2.4	0.0	0.7	0.0	0.4	2.5	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	20.2	2.8	4.4	11.3	0.1	1.1	0.0	1.7	0.2	0.0	1.8
LnGrp Delay(d),s/veh	70.7	37.2	21.6	132.4	26.2	18.0	43.2	0.0	30.0	61.6	0.0	46.6
LnGrp LOS	E	D	C	F	C	B	D		C	E		D
Approach Vol, veh/h		772			523			104			59	
Approach Delay, s/veh		35.2			41.7			34.7			47.6	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	62.8	27.9	25.4	7.5	65.1	7.5	45.8
Change Period (Y+Rc), s	3.5	6.4	4.4	* 4.4	3.5	6.4	3.5	4.4
Max Green Setting (Gmax), s	6.3	56.4	23.5	* 21	4.0	58.7	4.0	40.5
Max Q Clear Time (g_c+I1), s	7.6	39.7	4.2	5.5	3.0	23.9	2.3	5.5
Green Ext Time (p_c), s	0.0	8.8	0.1	0.3	0.0	12.6	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	38.0
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	144	59	161	77	68	95	131	254	44	64	342	58
Future Volume (veh/h)	144	59	161	77	68	95	131	254	44	64	342	58
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	144	59	161	77	68	95	131	254	44	64	342	58
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	305	398	356	263	354	317	269	779	662	137	641	545
Arrive On Green	0.17	0.23	0.23	0.15	0.20	0.20	0.15	0.42	0.42	0.08	0.35	0.35
Sat Flow, veh/h	1757	1752	1568	1757	1752	1568	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	144	59	161	77	68	95	131	254	44	64	342	58
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	11.8	4.3	14.2	6.2	5.2	8.2	10.9	14.8	2.7	5.6	23.8	4.0
Cycle Q Clear(g_c), s	11.8	4.3	14.2	6.2	5.2	8.2	10.9	14.8	2.7	5.6	23.8	4.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	305	398	356	263	354	317	269	779	662	137	641	545
V/C Ratio(X)	0.47	0.15	0.45	0.29	0.19	0.30	0.49	0.33	0.07	0.47	0.53	0.11
Avail Cap(c_a), veh/h	305	398	356	263	354	317	269	779	662	137	641	545
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.6	49.6	53.4	60.6	53.1	54.3	62.2	31.0	27.5	70.7	41.9	35.4
Incr Delay (d2), s/veh	5.2	0.8	4.1	2.8	1.2	2.4	6.2	1.1	0.2	11.0	3.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	2.2	6.6	3.2	2.6	3.8	5.8	7.8	1.2	3.1	12.7	1.8
LnGrp Delay(d),s/veh	64.8	50.3	57.5	63.4	54.3	56.7	68.4	32.1	27.7	81.7	45.1	35.8
LnGrp LOS	E	D	E	E	D	E	E	C	C	F	D	D
Approach Vol, veh/h		364			240			429			464	
Approach Delay, s/veh		59.2			58.2			42.7			49.0	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	33.0	37.2	30.0	60.1	29.0	41.2	18.0	72.1
Change Period (Y+Rc), s	* 5.2	4.8	5.5	* 4.4	5.0	* 4.8	5.5	* 4.4
Max Green Setting (Gmax), s	* 28	32.2	24.5	* 56	24.0	* 36	12.5	* 68
Max Q Clear Time (g_c+I1), s	13.8	10.2	12.9	25.8	8.2	16.2	7.6	16.8
Green Ext Time (p_c), s	0.1	0.4	0.1	0.6	0.0	0.4	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	51.2
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	31	17	451	44	391	48	1096	164	382	1223	59
Future Volume (veh/h)	73	31	17	451	44	391	48	1096	164	382	1223	59
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	73	31	17	451	44	391	48	1096	164	382	1223	59
Adj No. of Lanes	1	1	0	2	1	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	170	109	60	862	467	397	118	1648	513	622	2189	106
Arrive On Green	0.10	0.10	0.10	0.25	0.25	0.25	0.07	0.33	0.33	0.18	0.45	0.45
Sat Flow, veh/h	1757	1121	615	3408	1845	1568	1740	4988	1553	3375	4875	235
Grp Volume(v), veh/h	73	0	48	451	44	391	48	1096	164	382	834	448
Grp Sat Flow(s),veh/h/ln	1757	0	1736	1704	1845	1568	1740	1663	1553	1688	1663	1785
Q Serve(g_s), s	6.3	0.0	4.1	18.2	2.9	39.7	4.2	30.2	12.7	16.7	29.5	29.5
Cycle Q Clear(g_c), s	6.3	0.0	4.1	18.2	2.9	39.7	4.2	30.2	12.7	16.7	29.5	29.5
Prop In Lane	1.00		0.35	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	170	0	168	862	467	397	118	1648	513	622	1493	802
V/C Ratio(X)	0.43	0.00	0.29	0.52	0.09	0.99	0.41	0.67	0.32	0.61	0.56	0.56
Avail Cap(c_a), veh/h	170	0	168	862	467	397	118	1648	513	622	1493	802
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.1	0.0	67.2	51.5	45.8	59.5	71.5	46.0	40.1	60.1	32.4	32.4
Incr Delay (d2), s/veh	7.7	0.0	4.2	2.3	0.4	41.8	10.0	2.1	1.6	4.5	1.5	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	2.2	8.9	1.5	21.8	2.4	14.2	5.7	8.2	13.9	15.2
LnGrp Delay(d),s/veh	75.9	0.0	71.4	53.8	46.2	101.3	81.5	48.1	41.8	64.6	33.9	35.2
LnGrp LOS	E		E	D	D	F	F	D	D	E	C	D
Approach Vol, veh/h		121			886			1308			1664	
Approach Delay, s/veh		74.1			74.4			48.6			41.3	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.0	77.1		21.0	35.0	58.1		46.0
Change Period (Y+Rc), s	* 5.1	* 5.2		5.5	5.5	* 5.2		5.5
Max Green Setting (Gmax), s	* 11	* 72		15.5	29.5	* 53		40.5
Max Q Clear Time (g_c+I1), s	6.2	31.5		8.3	18.7	32.2		41.7
Green Ext Time (p_c), s	0.0	4.1		0.1	0.5	4.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	52.1
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	171	81	197	264	101	15	89	717	94	3	1479	194
Future Volume (veh/h)	171	81	197	264	101	15	89	717	94	3	1479	194
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	171	81	197	264	101	15	89	717	94	3	1479	194
Adj No. of Lanes	2	2	0	2	2	0	2	3	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	414	379	339	414	663	97	410	2006	625	410	1396	625
Arrive On Green	0.12	0.22	0.22	0.12	0.22	0.22	0.12	0.40	0.40	0.12	0.40	0.40
Sat Flow, veh/h	3408	1752	1568	3408	3071	447	3375	4988	1553	3375	3471	1553
Grp Volume(v), veh/h	171	81	197	264	57	59	89	717	94	3	1479	194
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1766	1688	1663	1553	1688	1736	1553
Q Serve(g_s), s	7.5	6.1	18.1	11.8	4.2	4.4	3.8	16.1	6.2	0.1	64.6	13.7
Cycle Q Clear(g_c), s	7.5	6.1	18.1	11.8	4.2	4.4	3.8	16.1	6.2	0.1	64.6	13.7
Prop In Lane	1.00		1.00	1.00		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	414	379	339	414	379	382	410	2006	625	410	1396	625
V/C Ratio(X)	0.41	0.21	0.58	0.64	0.15	0.16	0.22	0.36	0.15	0.01	1.06	0.31
Avail Cap(c_a), veh/h	414	379	339	414	379	382	410	2006	625	410	1396	625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.3	51.7	56.4	67.2	51.0	51.1	63.7	33.5	30.5	62.0	48.0	32.8
Incr Delay (d2), s/veh	3.0	1.3	7.1	7.3	0.8	0.9	1.2	0.5	0.5	0.0	41.5	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	3.1	8.5	6.0	2.1	2.2	1.8	7.5	2.8	0.1	38.9	6.1
LnGrp Delay(d),s/veh	68.3	53.0	63.6	74.5	51.8	51.9	64.9	34.0	31.1	62.1	89.5	34.1
LnGrp LOS	E	D	E	E	D	D	E	C	C	E	F	C
Approach Vol, veh/h		449			380			900			1676	
Approach Delay, s/veh		63.5			67.6			36.8			83.0	
Approach LOS		E			E			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	70.2	25.0	40.4	25.0	70.2	25.0	40.4
Change Period (Y+Rc), s	5.5	* 5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	19.5	* 65	19.5	* 35	19.5	* 64	19.5	* 34
Max Q Clear Time (g_c+I1), s	5.8	66.6	9.5	6.4	2.1	18.1	13.8	20.1
Green Ext Time (p_c), s	0.1	0.0	0.2	0.4	0.0	4.3	0.2	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	66.5
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	481	141	36	244	101	76	614	42	165	1532	215
Future Volume (veh/h)	147	481	141	36	244	101	76	614	42	165	1532	215
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	147	481	141	36	244	101	76	614	42	165	1532	0
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	4	4	4	4	4	4
Cap, veh/h	189	540	459	60	411	349	105	1313	90	258	1679	751
Arrive On Green	0.11	0.30	0.30	0.04	0.23	0.23	0.06	0.40	0.40	0.15	0.48	0.00
Sat Flow, veh/h	1707	1792	1524	1707	1792	1524	1740	3297	225	1740	3471	1553
Grp Volume(v), veh/h	147	481	141	36	244	101	76	323	333	165	1532	0
Grp Sat Flow(s),veh/h/ln	1707	1792	1524	1707	1792	1524	1740	1736	1787	1740	1736	1553
Q Serve(g_s), s	14.7	45.0	12.5	3.6	21.3	9.6	7.5	24.1	24.2	15.7	71.6	0.0
Cycle Q Clear(g_c), s	14.7	45.0	12.5	3.6	21.3	9.6	7.5	24.1	24.2	15.7	71.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	189	540	459	60	411	349	105	691	712	258	1679	751
V/C Ratio(X)	0.78	0.89	0.31	0.60	0.59	0.29	0.72	0.47	0.47	0.64	0.91	0.00
Avail Cap(c_a), veh/h	189	540	459	60	411	349	105	691	712	258	1679	751
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	76.0	58.5	47.2	83.4	60.4	55.9	81.0	39.0	39.1	70.3	41.9	0.0
Incr Delay (d2), s/veh	26.5	19.4	1.7	36.8	6.2	2.1	34.9	2.3	2.2	11.6	9.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	25.2	5.5	2.3	11.3	4.3	4.7	12.0	12.4	8.4	36.4	0.0
LnGrp Delay(d),s/veh	102.5	77.9	48.9	120.2	66.6	57.9	116.0	41.3	41.3	81.9	50.9	0.0
LnGrp LOS	F	E	D	F	E	E	F	D	D	F	D	
Approach Vol, veh/h		769			381			732			1697	
Approach Delay, s/veh		77.3			69.4			49.0			53.9	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	90.0	23.7	45.8	31.0	75.0	11.0	58.5
Change Period (Y+Rc), s	* 5.4	5.1	* 4.3	5.6	5.0	5.1	* 4.8	* 5.6
Max Green Setting (Gmax), s	* 11	84.9	* 19	39.7	26.0	69.9	* 6.2	* 53
Max Q Clear Time (g_c+I1), s	9.5	73.6	16.7	23.3	17.7	26.2	5.6	47.0
Green Ext Time (p_c), s	0.0	3.1	0.0	0.8	0.1	3.5	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	59.6
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	88	81	13	46	11	40	640	9	7	1607	96
Future Volume (veh/h)	83	88	81	13	46	11	40	640	9	7	1607	96
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	83	88	81	13	46	11	40	640	9	7	1607	96
Adj No. of Lanes	2	1	0	2	1	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	160	194	179	75	280	67	92	2118	30	38	1908	113
Arrive On Green	0.05	0.22	0.22	0.02	0.19	0.19	0.05	0.60	0.60	0.02	0.57	0.57
Sat Flow, veh/h	3408	886	815	3408	1440	344	1740	3505	49	1740	3330	198
Grp Volume(v), veh/h	83	0	169	13	0	57	40	317	332	7	833	870
Grp Sat Flow(s),veh/h/ln	1704	0	1701	1704	0	1784	1740	1736	1818	1740	1736	1792
Q Serve(g_s), s	3.8	0.0	13.8	0.6	0.0	4.3	3.6	14.1	14.1	0.6	63.1	64.4
Cycle Q Clear(g_c), s	3.8	0.0	13.8	0.6	0.0	4.3	3.6	14.1	14.1	0.6	63.1	64.4
Prop In Lane	1.00		0.48	1.00		0.19	1.00		0.03	1.00		0.11
Lane Grp Cap(c), veh/h	160	0	373	75	0	347	92	1049	1099	38	995	1027
V/C Ratio(X)	0.52	0.00	0.45	0.17	0.00	0.16	0.43	0.30	0.30	0.18	0.84	0.85
Avail Cap(c_a), veh/h	160	0	373	75	0	347	92	1049	1099	38	995	1027
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	74.5	0.0	54.1	76.8	0.0	53.6	73.4	15.3	15.3	76.8	28.0	28.3
Incr Delay (d2), s/veh	11.6	0.0	3.9	5.0	0.0	1.0	14.1	0.7	0.7	10.4	8.4	8.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	6.9	0.3	0.0	2.2	2.1	7.0	7.3	0.4	32.4	34.1
LnGrp Delay(d),s/veh	86.1	0.0	58.1	81.9	0.0	54.7	87.5	16.1	16.0	87.2	36.4	36.9
LnGrp LOS	F		E	F		D	F	B	B	F	D	D
Approach Vol, veh/h		252			70			689			1710	
Approach Delay, s/veh		67.3			59.7			20.2			36.9	
Approach LOS		E			E			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	96.7	13.0	36.3	9.0	101.7	9.0	40.3
Change Period (Y+Rc), s	5.5	5.0	5.5	* 5.2	5.5	5.0	5.5	* 5.2
Max Green Setting (Gmax), s	8.5	91.7	7.5	* 31	3.5	96.7	3.5	* 35
Max Q Clear Time (g_c+I1), s	5.6	66.4	5.8	6.3	2.6	16.1	2.6	15.8
Green Ext Time (p_c), s	0.0	2.9	0.0	0.2	0.0	2.9	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	36.1
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	102	126	50	133	31	34	512	21	6	1564	129
Future Volume (veh/h)	77	102	126	50	133	31	34	512	21	6	1564	129
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1792	1792	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	77	102	126	50	133	31	34	512	21	6	1564	129
Adj No. of Lanes	2	1	0	2	1	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	6	6	6	4	4	4	4	4	4
Cap, veh/h	116	151	186	85	273	64	236	2105	86	36	1639	134
Arrive On Green	0.03	0.20	0.20	0.03	0.19	0.19	0.14	0.62	0.62	0.02	0.50	0.50
Sat Flow, veh/h	3375	745	920	3312	1407	328	1740	3399	139	1740	3250	266
Grp Volume(v), veh/h	77	0	228	50	0	164	34	261	272	6	830	863
Grp Sat Flow(s),veh/h/ln	1688	0	1665	1656	0	1735	1740	1736	1802	1740	1736	1780
Q Serve(g_s), s	3.6	0.0	20.3	2.4	0.0	13.5	2.8	10.8	10.8	0.5	72.7	74.7
Cycle Q Clear(g_c), s	3.6	0.0	20.3	2.4	0.0	13.5	2.8	10.8	10.8	0.5	72.7	74.7
Prop In Lane	1.00		0.55	1.00		0.19	1.00		0.08	1.00		0.15
Lane Grp Cap(c), veh/h	116	0	337	85	0	336	236	1075	1116	36	875	898
V/C Ratio(X)	0.66	0.00	0.68	0.59	0.00	0.49	0.14	0.24	0.24	0.17	0.95	0.96
Avail Cap(c_a), veh/h	116	0	337	85	0	336	236	1075	1116	36	875	898
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	76.3	0.0	59.0	77.1	0.0	57.4	61.0	13.6	13.6	77.0	37.7	38.2
Incr Delay (d2), s/veh	26.1	0.0	10.4	26.6	0.0	5.0	1.3	0.5	0.5	9.8	20.1	22.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	10.3	1.4	0.0	6.9	1.4	5.3	5.5	0.4	39.7	42.2
LnGrp Delay(d),s/veh	102.4	0.0	69.4	103.7	0.0	62.4	62.2	14.2	14.2	86.8	57.8	60.2
LnGrp LOS	F		E	F		E	E	B	B	F	E	E
Approach Vol, veh/h		305			214			567			1699	
Approach Delay, s/veh		77.7			72.1			17.1			59.1	
Approach LOS		E			E			B			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.2	85.8	11.0	36.0	8.8	104.2	9.6	37.4
Change Period (Y+Rc), s	5.5	* 5.1	5.5	* 5	5.5	* 5.1	5.5	* 5
Max Green Setting (Gmax), s	21.7	* 81	5.5	* 31	3.3	* 99	4.1	* 32
Max Q Clear Time (g_c+I1), s	4.8	76.7	5.6	15.5	2.5	12.8	4.4	22.3
Green Ext Time (p_c), s	0.0	1.6	0.0	0.4	0.0	2.7	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	53.6
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	97	82	38	116	79	48	382	16	206	1245	222
Future Volume (veh/h)	101	97	82	38	116	79	48	382	16	206	1245	222
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	101	97	82	38	116	79	48	382	16	206	1245	222
Adj No. of Lanes	2	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	213	175	148	101	189	128	121	1507	63	354	1706	302
Arrive On Green	0.06	0.19	0.19	0.06	0.18	0.18	0.07	0.44	0.44	0.20	0.58	0.58
Sat Flow, veh/h	3408	925	782	1757	1024	697	1740	3396	142	1740	2949	522
Grp Volume(v), veh/h	101	0	179	38	0	195	48	195	203	206	729	738
Grp Sat Flow(s),veh/h/ln	1704	0	1707	1757	0	1722	1740	1736	1802	1740	1736	1735
Q Serve(g_s), s	5.7	0.0	19.0	4.2	0.0	20.9	5.3	14.1	14.2	21.4	61.1	62.5
Cycle Q Clear(g_c), s	5.7	0.0	19.0	4.2	0.0	20.9	5.3	14.1	14.2	21.4	61.1	62.5
Prop In Lane	1.00		0.46	1.00		0.41	1.00		0.08	1.00		0.30
Lane Grp Cap(c), veh/h	213	0	323	101	0	317	121	770	800	354	1004	1004
V/C Ratio(X)	0.47	0.00	0.55	0.38	0.00	0.61	0.40	0.25	0.25	0.58	0.73	0.74
Avail Cap(c_a), veh/h	213	0	323	101	0	317	121	770	800	354	1004	1004
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	90.7	0.0	73.5	90.9	0.0	75.2	89.2	34.9	34.9	72.1	30.7	31.0
Incr Delay (d2), s/veh	7.4	0.0	6.7	10.4	0.0	8.6	9.5	0.8	0.8	6.9	4.6	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	9.6	2.3	0.0	10.7	2.9	6.9	7.2	11.0	30.4	31.3
LnGrp Delay(d),s/veh	98.1	0.0	80.3	101.3	0.0	83.8	98.7	35.7	35.7	79.0	35.2	35.7
LnGrp LOS	F		F	F		F	F	D	D	E	D	D
Approach Vol, veh/h		280			233			446			1673	
Approach Delay, s/veh		86.7			86.7			42.5			40.8	
Approach LOS		F			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	121.0	18.0	42.3	46.0	94.0	17.0	43.3
Change Period (Y+Rc), s	* 5.1	5.1	5.5	* 5.4	* 5.3	5.1	5.5	* 5.4
Max Green Setting (Gmax), s	* 14	115.9	12.5	* 37	* 41	88.9	11.5	* 38
Max Q Clear Time (g_c+I1), s	7.3	64.5	7.7	22.9	23.4	16.2	6.2	21.0
Green Ext Time (p_c), s	0.0	2.2	0.0	0.4	0.2	2.2	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	50.1
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	511	76	59	247	5	30	61	58	4	262	57
Future Volume (veh/h)	62	511	76	59	247	5	30	61	58	4	262	57
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	62	511	76	59	247	5	30	61	58	4	262	57
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	116	766	113	172	992	20	223	379	360	46	485	106
Arrive On Green	0.07	0.26	0.26	0.10	0.29	0.29	0.13	0.43	0.43	0.03	0.33	0.33
Sat Flow, veh/h	1707	2977	441	1707	3414	69	1757	871	828	1757	1469	320
Grp Volume(v), veh/h	62	291	296	59	123	129	30	0	119	4	0	319
Grp Sat Flow(s),veh/h/ln	1707	1703	1715	1707	1703	1780	1757	0	1699	1757	0	1788
Q Serve(g_s), s	4.0	17.6	17.8	3.7	6.4	6.4	1.7	0.0	4.9	0.3	0.0	16.7
Cycle Q Clear(g_c), s	4.0	17.6	17.8	3.7	6.4	6.4	1.7	0.0	4.9	0.3	0.0	16.7
Prop In Lane	1.00		0.26	1.00		0.04	1.00		0.49	1.00		0.18
Lane Grp Cap(c), veh/h	116	438	441	172	495	517	223	0	739	46	0	591
V/C Ratio(X)	0.54	0.67	0.67	0.34	0.25	0.25	0.13	0.00	0.16	0.09	0.00	0.54
Avail Cap(c_a), veh/h	116	438	441	172	495	517	223	0	739	46	0	591
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.8	38.3	38.3	48.1	31.2	31.2	44.6	0.0	19.8	54.7	0.0	31.4
Incr Delay (d2), s/veh	16.6	7.8	7.9	5.4	1.2	1.2	1.3	0.0	0.5	3.7	0.0	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	9.2	9.3	2.0	3.1	3.3	0.9	0.0	2.4	0.2	0.0	8.8
LnGrp Delay(d),s/veh	68.4	46.0	46.2	53.5	32.4	32.4	45.8	0.0	20.2	58.4	0.0	34.9
LnGrp LOS	E	D	D	D	C	C	D		C	E		C
Approach Vol, veh/h		649			311			149			323	
Approach Delay, s/veh		48.2			36.4			25.4			35.2	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	36.0	19.0	44.0	12.2	39.8	7.0	56.0
Change Period (Y+Rc), s	4.4	6.4	4.4	6.0	4.4	6.4	* 4	6.0
Max Green Setting (Gmax), s	11.6	29.6	14.6	38.0	7.8	33.4	* 3	50.0
Max Q Clear Time (g_c+I1), s	5.7	19.8	3.7	18.7	6.0	8.4	2.3	6.9
Green Ext Time (p_c), s	0.0	3.7	0.0	7.0	0.0	5.8	0.0	10.1

Intersection Summary	
HCM 2010 Ctrl Delay	40.3
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	784	44	201	27	77	110	284	1365	17	146	560	333
Future Volume (veh/h)	784	44	201	27	77	110	284	1365	17	146	560	333
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1900	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	815	0	201	27	77	110	284	1365	17	146	560	0
Adj No. of Lanes	2	0	1	0	1	1	1	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	1119	0	499	41	116	135	387	1693	21	211	1147	357
Arrive On Green	0.32	0.00	0.32	0.09	0.09	0.09	0.22	0.33	0.33	0.12	0.23	0.00
Sat Flow, veh/h	3480	0	1553	473	1348	1568	1740	5078	63	1740	4988	1553
Grp Volume(v), veh/h	815	0	201	104	0	110	284	894	488	146	560	0
Grp Sat Flow(s),veh/h/ln	1740	0	1553	1821	0	1568	1740	1663	1816	1740	1663	1553
Q Serve(g_s), s	30.1	0.0	14.6	8.0	0.0	10.0	22.0	35.6	35.6	11.7	14.1	0.0
Cycle Q Clear(g_c), s	30.1	0.0	14.6	8.0	0.0	10.0	22.0	35.6	35.6	11.7	14.1	0.0
Prop In Lane	1.00		1.00	0.26		1.00	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	1119	0	499	157	0	135	387	1108	605	211	1147	357
V/C Ratio(X)	0.73	0.00	0.40	0.66	0.00	0.81	0.73	0.81	0.81	0.69	0.49	0.00
Avail Cap(c_a), veh/h	1119	0	499	157	0	135	387	1108	605	211	1147	357
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	43.6	0.0	38.4	64.3	0.0	65.2	52.5	44.1	44.1	61.2	48.5	0.0
Incr Delay (d2), s/veh	4.2	0.0	2.4	20.0	0.0	39.7	11.7	6.3	11.0	17.1	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.1	0.0	6.6	4.9	0.0	5.8	11.8	17.4	19.7	6.6	6.6	0.0
LnGrp Delay(d),s/veh	47.8	0.0	40.8	84.3	0.0	105.0	64.1	50.4	55.1	78.3	50.0	0.0
LnGrp LOS	D		D	F		F	E	D	E	E	D	
Approach Vol, veh/h		1016			214			1666			706	
Approach Delay, s/veh		46.4			94.9			54.2			55.8	
Approach LOS		D			F			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	37.0	38.2		18.0	22.0	53.2		52.0
Change Period (Y+Rc), s	* 4.7	4.8		5.5	* 4.4	* 4.8		5.3
Max Green Setting (Gmax), s	* 32	33.2		12.5	* 18	* 48		46.7
Max Q Clear Time (g_c+I1), s	24.0	16.1		12.0	13.7	37.6		32.1
Green Ext Time (p_c), s	0.2	2.8		0.0	0.0	2.5		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	54.7
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	408	151	31	37	114	699	56	1248	15	309	795	258
Future Volume (veh/h)	408	151	31	37	114	699	56	1248	15	309	795	258
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	408	151	31	37	114	699	56	1248	15	309	795	258
Adj No. of Lanes	2	3	0	2	1	2	2	3	0	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	584	1268	248	101	290	1094	131	1730	21	654	2615	814
Arrive On Green	0.17	0.30	0.30	0.03	0.16	0.16	0.04	0.37	0.37	0.19	0.52	0.52
Sat Flow, veh/h	3408	4230	827	3514	1845	3136	3408	4729	57	3408	5036	1568
Grp Volume(v), veh/h	408	118	64	37	114	699	56	779	484	309	795	258
Grp Sat Flow(s),veh/h/ln	1704	1679	1699	1757	1845	1568	1704	1476	1835	1704	1679	1568
Q Serve(g_s), s	22.0	5.0	5.3	2.0	10.9	30.7	3.1	44.5	44.5	15.8	17.6	18.5
Cycle Q Clear(g_c), s	22.0	5.0	5.3	2.0	10.9	30.7	3.1	44.5	44.5	15.8	17.6	18.5
Prop In Lane	1.00		0.49	1.00		1.00	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	584	1006	509	101	290	1094	131	1079	671	654	2615	814
V/C Ratio(X)	0.70	0.12	0.13	0.37	0.39	0.64	0.43	0.72	0.72	0.47	0.30	0.32
Avail Cap(c_a), veh/h	584	1006	509	101	290	1094	131	1079	671	654	2615	814
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	76.2	49.7	49.8	93.2	74.0	53.3	91.9	53.4	53.4	70.2	26.8	27.0
Incr Delay (d2), s/veh	6.8	0.2	0.5	10.0	4.0	2.9	9.9	4.2	6.6	2.4	0.3	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.9	2.3	2.6	1.1	5.9	16.3	1.7	18.8	23.8	7.6	8.2	8.3
LnGrp Delay(d),s/veh	83.1	49.9	50.3	103.3	78.0	56.2	101.8	57.6	60.0	72.7	27.1	28.1
LnGrp LOS	F	D	D	F	E	E	F	E	E	E	C	C
Approach Vol, veh/h		590			850			1319			1362	
Approach Delay, s/veh		72.9			61.2			60.4			37.6	
Approach LOS		E			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	107.1	39.0	36.4	43.0	77.1	11.1	64.3
Change Period (Y+Rc), s	5.5	5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	7.5	101.2	33.5	* 31	37.5	* 72	5.6	* 58
Max Q Clear Time (g_c+I1), s	5.1	20.5	24.0	32.7	17.8	46.5	4.0	7.3
Green Ext Time (p_c), s	0.0	3.3	0.5	0.0	0.4	3.3	0.0	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	54.8
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	311	103	44	69	49	159	17	706	31	71	717	51
Future Volume (veh/h)	311	103	44	69	49	159	17	706	31	71	717	51
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	229	218	44	59	63	159	17	706	31	71	717	51
Adj No. of Lanes	1	1	0	1	1	1	1	3	0	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	346	294	59	346	364	309	203	1843	81	205	1789	127
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.12	0.37	0.37	0.12	0.37	0.37
Sat Flow, veh/h	1757	1491	301	1757	1845	1568	1757	4947	216	1757	4802	340
Grp Volume(v), veh/h	229	0	262	59	63	159	17	478	259	71	500	268
Grp Sat Flow(s),veh/h/ln	1757	0	1792	1757	1845	1568	1757	1679	1806	1757	1679	1785
Q Serve(g_s), s	21.1	0.0	24.1	4.9	5.0	15.9	1.5	18.2	18.4	6.5	19.2	19.4
Cycle Q Clear(g_c), s	21.1	0.0	24.1	4.9	5.0	15.9	1.5	18.2	18.4	6.5	19.2	19.4
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.12	1.00		0.19
Lane Grp Cap(c), veh/h	346	0	353	346	364	309	203	1251	673	205	1251	665
V/C Ratio(X)	0.66	0.00	0.74	0.17	0.17	0.51	0.08	0.38	0.38	0.35	0.40	0.40
Avail Cap(c_a), veh/h	346	0	353	346	364	309	203	1251	673	205	1251	665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.9	0.0	66.1	58.4	58.4	62.8	69.1	40.2	40.2	71.2	40.5	40.5
Incr Delay (d2), s/veh	9.5	0.0	13.2	1.1	1.0	6.0	0.8	0.9	1.7	4.6	1.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.2	0.0	13.2	2.5	2.6	7.4	0.8	8.6	9.4	3.4	9.1	9.9
LnGrp Delay(d),s/veh	74.4	0.0	79.2	59.4	59.4	68.8	69.9	41.1	41.9	75.8	41.4	42.3
LnGrp LOS	E		E	E	E	E	E	D	D	E	D	D
Approach Vol, veh/h		491			281			754			839	
Approach Delay, s/veh		77.0			64.7			42.0			44.6	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	25.0	70.0		40.0	25.0	70.0		40.0
Change Period (Y+Rc), s	* 4.8	4.8		5.5	* 4.6	4.8		5.5
Max Green Setting (Gmax), s	* 20	65.2		34.5	* 20	65.2		34.5
Max Q Clear Time (g_c+I1), s	3.5	21.4		17.9	8.5	20.4		26.1
Green Ext Time (p_c), s	0.0	1.9		0.2	0.0	1.9		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	52.9
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	285	178	135	393	142	143	314	38	150	511	150
Future Volume (veh/h)	188	285	178	135	393	142	143	314	38	150	511	150
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	188	285	178	135	393	142	143	314	38	150	511	150
Adj No. of Lanes	2	3	0	2	3	1	2	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	170	1074	502	178	1623	505	133	1712	533	133	1324	378
Arrive On Green	0.05	0.32	0.32	0.05	0.32	0.32	0.04	0.34	0.34	0.04	0.34	0.34
Sat Flow, veh/h	3408	3357	1568	3408	5036	1568	3408	5036	1568	3408	3894	1112
Grp Volume(v), veh/h	188	285	178	135	393	142	143	314	38	150	439	222
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1679	1568	1704	1679	1648
Q Serve(g_s), s	4.5	5.7	7.8	3.5	5.2	6.1	3.5	4.0	1.5	3.5	8.9	9.3
Cycle Q Clear(g_c), s	4.5	5.7	7.8	3.5	5.2	6.1	3.5	4.0	1.5	3.5	8.9	9.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.67
Lane Grp Cap(c), veh/h	170	1074	502	178	1623	505	133	1712	533	133	1141	560
V/C Ratio(X)	1.10	0.27	0.35	0.76	0.24	0.28	1.08	0.18	0.07	1.13	0.38	0.40
Avail Cap(c_a), veh/h	170	1074	502	178	1623	505	133	1712	533	133	1141	560
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.7	22.7	23.5	42.1	22.4	22.7	43.3	20.9	20.1	43.3	22.5	22.7
Incr Delay (d2), s/veh	99.3	0.6	2.0	25.7	0.4	1.4	100.9	0.2	0.3	117.9	1.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	2.7	3.6	2.3	2.5	2.8	3.5	1.9	0.7	3.8	4.3	4.5
LnGrp Delay(d),s/veh	142.0	23.3	25.4	67.8	22.8	24.1	144.1	21.1	20.3	161.2	23.5	24.8
LnGrp LOS	F	C	C	E	C	C	F	C	C	F	C	C
Approach Vol, veh/h		651			670			495			811	
Approach Delay, s/veh		58.2			32.1			56.6			49.3	
Approach LOS		E			C			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	36.2	10.0	34.8	9.0	36.2	10.2	34.6
Change Period (Y+Rc), s	5.5	* 5.6	5.5	5.8	5.5	* 5.6	5.5	5.8
Max Green Setting (Gmax), s	3.5	* 31	4.5	29.0	3.5	* 31	4.7	28.8
Max Q Clear Time (g_c+I1), s	5.5	11.3	6.5	8.1	5.5	6.0	5.5	9.8
Green Ext Time (p_c), s	0.0	1.3	0.0	1.3	0.0	1.3	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	48.5
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	191	17	55	199	100	4	37	40	246	101	266
Future Volume (veh/h)	67	191	17	55	199	100	4	37	40	246	101	266
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	67	191	17	55	199	100	4	37	40	246	101	266
Adj No. of Lanes	1	2	0	1	1	1	1	1	0	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	263	1065	94	230	564	479	88	188	204	689	709	603
Arrive On Green	0.15	0.33	0.33	0.13	0.31	0.31	0.05	0.23	0.23	0.20	0.38	0.38
Sat Flow, veh/h	1757	3259	287	1757	1845	1568	1757	812	878	3408	1845	1568
Grp Volume(v), veh/h	67	102	106	55	199	100	4	0	77	246	101	266
Grp Sat Flow(s),veh/h/ln	1757	1752	1794	1757	1845	1568	1757	0	1690	1704	1845	1568
Q Serve(g_s), s	6.4	7.9	8.1	5.3	16.0	9.0	0.4	0.0	7.0	11.8	6.8	23.9
Cycle Q Clear(g_c), s	6.4	7.9	8.1	5.3	16.0	9.0	0.4	0.0	7.0	11.8	6.8	23.9
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	263	572	586	230	564	479	88	0	392	689	709	603
V/C Ratio(X)	0.25	0.18	0.18	0.24	0.35	0.21	0.05	0.00	0.20	0.36	0.14	0.44
Avail Cap(c_a), veh/h	263	572	586	230	564	479	88	0	392	689	709	603
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.6	45.8	45.9	74.3	51.4	49.0	86.1	0.0	58.8	65.3	38.2	43.4
Incr Delay (d2), s/veh	2.3	0.7	0.7	2.4	1.7	1.0	1.0	0.0	1.1	1.4	0.4	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	4.0	4.1	2.8	8.5	4.0	0.2	0.0	3.4	5.7	3.6	10.8
LnGrp Delay(d),s/veh	73.9	46.5	46.6	76.7	53.2	50.0	87.1	0.0	59.9	66.7	38.6	45.8
LnGrp LOS	E	D	D	E	D	D	F		E	E	D	D
Approach Vol, veh/h		275			354			81			613	
Approach Delay, s/veh		53.2			55.9			61.3			53.0	
Approach LOS		D			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	34.0	63.1	15.0	78.3	30.0	67.1	44.0	49.3
Change Period (Y+Rc), s	5.5	* 4.9	5.5	* 5.1	* 5.1	* 4.9	5.5	* 5.1
Max Green Setting (Gmax), s	28.5	* 58	9.5	* 73	* 25	* 62	38.5	* 44
Max Q Clear Time (g_c+I1), s	8.4	18.0	2.4	25.9	7.3	10.1	13.8	9.0
Green Ext Time (p_c), s	0.0	0.4	0.0	0.3	0.0	0.4	0.3	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	54.3
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	309	510	97	171	210	366	46	1897	235	282	916	200
Future Volume (veh/h)	309	510	97	171	210	366	46	1897	235	282	916	200
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	309	510	97	171	210	366	46	1897	235	282	916	200
Adj No. of Lanes	2	2	1	2	1	2	2	4	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	415	751	336	428	395	1054	411	2536	627	411	2012	627
Arrive On Green	0.12	0.21	0.21	0.12	0.21	0.21	0.12	0.40	0.40	0.12	0.40	0.40
Sat Flow, veh/h	3408	3505	1568	3514	1845	3136	3375	6285	1553	3375	4988	1553
Grp Volume(v), veh/h	309	510	97	171	210	366	46	1897	235	282	916	200
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1757	1845	1568	1688	1571	1553	1688	1663	1553
Q Serve(g_s), s	14.0	21.4	8.3	7.2	16.2	14.0	1.9	41.3	17.0	12.8	21.5	14.1
Cycle Q Clear(g_c), s	14.0	21.4	8.3	7.2	16.2	14.0	1.9	41.3	17.0	12.8	21.5	14.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	415	751	336	428	395	1054	411	2536	627	411	2012	627
V/C Ratio(X)	0.74	0.68	0.29	0.40	0.53	0.35	0.11	0.75	0.38	0.69	0.46	0.32
Avail Cap(c_a), veh/h	415	751	336	428	395	1054	411	2536	627	411	2012	627
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.9	57.8	52.7	64.9	55.8	40.0	62.6	40.8	33.6	67.4	34.9	32.7
Incr Delay (d2), s/veh	11.5	4.9	2.2	2.8	5.0	0.9	0.6	2.1	1.7	9.0	0.7	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	10.9	3.8	3.7	8.8	6.2	0.9	18.3	7.6	6.5	10.0	6.3
LnGrp Delay(d),s/veh	79.4	62.7	54.8	67.7	60.8	40.9	63.1	42.9	35.3	76.4	35.6	34.0
LnGrp LOS	E	E	D	E	E	D	E	D	D	E	D	C
Approach Vol, veh/h		916			747			2178			1398	
Approach Delay, s/veh		67.5			52.6			42.5			43.6	
Approach LOS		E			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	70.0	25.0	40.1	25.0	70.0	25.0	40.1
Change Period (Y+Rc), s	5.5	* 5.4	5.5	5.8	5.5	* 5.4	5.5	* 5.8
Max Green Setting (Gmax), s	19.5	* 65	19.5	34.2	19.5	* 65	19.5	* 34
Max Q Clear Time (g_c+I1), s	3.9	23.5	16.0	18.2	14.8	43.3	9.2	23.4
Green Ext Time (p_c), s	0.1	25.2	0.2	8.6	0.2	16.1	0.2	6.6

Intersection Summary	
HCM 2010 Ctrl Delay	48.6
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	347	415	244	179	288	224	193	945	99	184	1088	120
Future Volume (veh/h)	347	415	244	179	288	224	193	945	99	184	1088	120
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1827	1827	1827	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	347	415	244	179	288	224	193	945	99	184	1088	120
Adj No. of Lanes	2	2	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	4	4	4	4	4	4
Cap, veh/h	414	747	334	410	1063	331	410	2002	623	410	2002	623
Arrive On Green	0.12	0.21	0.21	0.12	0.21	0.21	0.12	0.40	0.40	0.12	0.40	0.40
Sat Flow, veh/h	3408	3505	1568	3375	4988	1553	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	347	415	244	179	288	224	193	945	99	184	1088	120
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1688	1663	1553	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	16.0	16.9	23.3	7.9	7.7	21.3	8.5	22.4	6.5	8.1	26.8	8.0
Cycle Q Clear(g_c), s	16.0	16.9	23.3	7.9	7.7	21.3	8.5	22.4	6.5	8.1	26.8	8.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	414	747	334	410	1063	331	410	2002	623	410	2002	623
V/C Ratio(X)	0.84	0.56	0.73	0.44	0.27	0.68	0.47	0.47	0.16	0.45	0.54	0.19
Avail Cap(c_a), veh/h	414	747	334	410	1063	331	410	2002	623	410	2002	623
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.9	56.3	58.8	65.4	52.7	58.0	65.6	35.4	30.7	65.5	36.7	31.1
Incr Delay (d2), s/veh	18.0	3.0	13.1	3.3	0.6	10.6	3.8	0.8	0.5	3.5	1.1	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	8.6	11.3	3.9	3.6	10.1	4.2	10.5	2.9	4.0	12.5	3.6
LnGrp Delay(d),s/veh	86.9	59.3	71.9	68.7	53.3	68.6	69.5	36.2	31.2	69.0	37.8	31.8
LnGrp LOS	F	E	E	E	D	E	E	D	C	E	D	C
Approach Vol, veh/h		1006			691			1237			1392	
Approach Delay, s/veh		71.9			62.3			41.0			41.4	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	70.2	25.0	40.2	25.0	70.2	25.0	40.2
Change Period (Y+Rc), s	5.5	* 5.8	5.5	* 6	5.5	* 5.8	5.5	6.0
Max Green Setting (Gmax), s	19.5	* 64	19.5	* 34	19.5	* 64	19.5	34.0
Max Q Clear Time (g_c+I1), s	10.5	28.8	18.0	23.3	10.1	24.4	9.9	25.3
Green Ext Time (p_c), s	0.2	27.9	0.1	7.1	0.2	30.7	0.2	6.0

Intersection Summary	
HCM 2010 Ctrl Delay	51.7
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	233	15	379	13	24	66	161	981	11	20	1261	132
Future Volume (veh/h)	233	15	379	13	24	66	161	981	11	20	1261	132
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	233	15	379	13	24	66	161	981	11	20	1261	132
Adj No. of Lanes	2	1	2	1	1	0	2	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	413	394	589	213	93	256	409	2039	23	211	2000	623
Arrive On Green	0.12	0.21	0.21	0.12	0.21	0.21	0.12	0.40	0.40	0.12	0.40	0.40
Sat Flow, veh/h	3408	1845	2760	1757	436	1198	3375	5085	57	1740	4988	1553
Grp Volume(v), veh/h	233	15	379	13	0	90	161	641	351	20	1261	132
Grp Sat Flow(s),veh/h/ln	1704	1845	1380	1757	0	1633	1688	1663	1817	1740	1663	1553
Q Serve(g_s), s	10.4	1.0	20.2	1.1	0.0	7.4	7.1	23.1	23.1	1.6	32.7	9.0
Cycle Q Clear(g_c), s	10.4	1.0	20.2	1.1	0.0	7.4	7.1	23.1	23.1	1.6	32.7	9.0
Prop In Lane	1.00		1.00	1.00		0.73	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	413	394	589	213	0	349	409	1333	729	211	2000	623
V/C Ratio(X)	0.56	0.04	0.64	0.06	0.00	0.26	0.39	0.48	0.48	0.09	0.63	0.21
Avail Cap(c_a), veh/h	413	394	589	213	0	349	409	1333	729	211	2000	623
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.8	50.2	57.8	62.7	0.0	52.7	65.3	35.8	35.8	63.0	38.7	31.6
Incr Delay (d2), s/veh	5.5	0.2	5.3	0.6	0.0	1.8	2.8	1.2	2.3	0.9	1.5	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.5	8.2	0.5	0.0	3.5	3.5	10.8	12.1	0.8	15.2	4.0
LnGrp Delay(d),s/veh	72.3	50.4	63.1	63.2	0.0	54.5	68.2	37.1	38.1	63.8	40.2	32.4
LnGrp LOS	E	D	E	E		D	E	D	D	E	D	C
Approach Vol, veh/h		627			103			1153			1413	
Approach Delay, s/veh		66.2			55.6			41.7			39.8	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	70.6	25.0	40.5	25.0	70.6	25.0	40.5
Change Period (Y+Rc), s	5.5	6.0	5.5	* 6.1	5.5	* 6	5.5	* 6.1
Max Green Setting (Gmax), s	19.5	64.0	19.5	* 34	19.5	* 65	19.5	* 34
Max Q Clear Time (g_c+I1), s	9.1	34.7	12.4	9.4	3.6	25.1	3.1	22.2
Green Ext Time (p_c), s	0.1	3.8	0.2	0.5	0.0	3.8	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	46.0
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	140	261	39	46	100	109	611	47	133	1479	121
Future Volume (veh/h)	68	140	261	39	46	100	109	611	47	133	1479	121
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1759	1759	1759	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	68	140	261	39	46	100	109	611	47	133	1479	121
Adj No. of Lanes	2	2	0	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	8	8	8	4	4	4	4	4	4
Cap, veh/h	415	378	338	396	721	322	411	2011	626	411	2011	626
Arrive On Green	0.12	0.22	0.22	0.12	0.22	0.22	0.12	0.40	0.40	0.12	0.40	0.40
Sat Flow, veh/h	3408	1752	1568	3250	3343	1495	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	68	140	261	39	46	100	109	611	47	133	1479	121
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1625	1671	1495	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	2.9	10.9	25.1	1.7	1.8	9.0	4.7	13.3	3.0	5.8	40.3	8.1
Cycle Q Clear(g_c), s	2.9	10.9	25.1	1.7	1.8	9.0	4.7	13.3	3.0	5.8	40.3	8.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	415	378	338	396	721	322	411	2011	626	411	2011	626
V/C Ratio(X)	0.16	0.37	0.77	0.10	0.06	0.31	0.26	0.30	0.08	0.32	0.74	0.19
Avail Cap(c_a), veh/h	415	378	338	396	721	322	411	2011	626	411	2011	626
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.9	53.5	59.0	62.4	49.9	52.7	63.7	32.5	29.4	64.2	40.5	30.9
Incr Delay (d2), s/veh	0.8	2.8	15.6	0.5	0.2	2.5	1.6	0.4	0.2	2.1	2.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	5.6	12.3	0.8	0.8	3.9	2.3	6.2	1.3	2.8	18.9	3.6
LnGrp Delay(d),s/veh	63.8	56.3	74.7	62.9	50.1	55.2	65.3	32.9	29.6	66.3	43.0	31.6
LnGrp LOS	E	E	E	E	D	E	E	C	C	E	D	C
Approach Vol, veh/h		469			185			767			1733	
Approach Delay, s/veh		67.6			55.6			37.3			44.0	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	70.0	25.0	40.0	25.0	70.0	25.0	40.0
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	19.5	64.5	19.5	34.5	19.5	64.5	19.5	34.5
Max Q Clear Time (g_c+I1), s	6.7	42.3	4.9	11.0	7.8	15.3	3.7	27.1
Green Ext Time (p_c), s	0.1	3.9	0.1	0.6	0.1	4.0	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	46.5
HCM 2010 LOS	D



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	27	115	528	28	221	1365
Future Volume (veh/h)	27	115	528	28	221	1365
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1827	1827	1827	1827
Adj Flow Rate, veh/h	27	115	528	28	221	1365
Adj No. of Lanes	2	1	3	1	2	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	4	4	4	4
Cap, veh/h	871	401	2364	736	513	2314
Arrive On Green	0.26	0.26	0.47	0.47	0.15	0.67
Sat Flow, veh/h	3408	1568	5152	1553	3375	3563
Grp Volume(v), veh/h	27	115	528	28	221	1365
Grp Sat Flow(s),veh/h/ln	1704	1568	1663	1553	1688	1736
Q Serve(g_s), s	0.8	8.0	8.4	1.3	8.0	29.2
Cycle Q Clear(g_c), s	0.8	8.0	8.4	1.3	8.0	29.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	871	401	2364	736	513	2314
V/C Ratio(X)	0.03	0.29	0.22	0.04	0.43	0.59
Avail Cap(c_a), veh/h	871	401	2364	736	513	2314
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.7	40.4	20.9	19.0	52.0	12.4
Incr Delay (d2), s/veh	0.1	1.8	0.2	0.1	2.6	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	7.7	3.9	0.6	3.9	14.2
LnGrp Delay(d),s/veh	37.8	42.2	21.1	19.1	54.6	13.5
LnGrp LOS	D	D	C	B	D	B
Approach Vol, veh/h	142		556			1586
Approach Delay, s/veh	41.3		21.0			19.2
Approach LOS	D		C			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		95.0		40.0	26.0	69.0		
Change Period (Y+Rc), s		5.0		5.5	5.5	5.0		
Max Green Setting (Gmax), s		90.0		34.5	20.5	64.0		
Max Q Clear Time (g_c+I1), s		31.2		10.0	10.0	10.4		
Green Ext Time (p_c), s		3.3		0.1	0.2	3.3		

Intersection Summary	
HCM 2010 Ctrl Delay	21.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	2	1	8	5	56	2	459	42	99	1108	75
Future Volume (veh/h)	7	2	1	8	5	56	2	459	42	99	1108	75
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1759	1900	1900	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	7	2	1	8	5	56	2	459	42	99	1108	75
Adj No. of Lanes	0	1	0	0	1	1	1	2	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	8	8	8	3	3	3	4	4	4	4	4	4
Cap, veh/h	130	37	19	142	89	202	64	1924	861	291	1999	135
Arrive On Green	0.11	0.11	0.11	0.13	0.13	0.13	0.04	0.55	0.55	0.09	0.61	0.61
Sat Flow, veh/h	1170	334	167	1101	688	1568	1740	3471	1553	3375	3300	223
Grp Volume(v), veh/h	10	0	0	13	0	56	2	459	42	99	582	601
Grp Sat Flow(s),veh/h/ln	1671	0	0	1790	0	1568	1740	1736	1553	1688	1736	1788
Q Serve(g_s), s	0.9	0.0	0.0	1.1	0.0	5.6	0.2	11.9	2.2	4.8	34.9	34.9
Cycle Q Clear(g_c), s	0.9	0.0	0.0	1.1	0.0	5.6	0.2	11.9	2.2	4.8	34.9	34.9
Prop In Lane	0.70		0.10	0.62		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	186	0	0	231	0	202	64	1924	861	291	1051	1083
V/C Ratio(X)	0.05	0.00	0.00	0.06	0.00	0.28	0.03	0.24	0.05	0.34	0.55	0.55
Avail Cap(c_a), veh/h	186	0	0	231	0	202	64	1924	861	291	1051	1083
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.5	0.0	0.0	66.8	0.0	68.8	81.3	20.0	17.9	75.3	20.5	20.5
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.5	0.0	3.4	0.9	0.3	0.1	3.1	2.1	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	0.6	0.0	2.6	0.1	5.8	1.0	2.4	17.3	17.8
LnGrp Delay(d),s/veh	70.1	0.0	0.0	67.3	0.0	72.2	82.2	20.3	18.0	78.4	22.6	22.5
LnGrp LOS	E			E		E	F	C	B	E	C	C
Approach Vol, veh/h		10			69			503			1282	
Approach Delay, s/veh		70.1			71.3			20.4			26.9	
Approach LOS		E			E			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.0	111.0		28.0	20.0	102.0		25.0
Change Period (Y+Rc), s	* 4.6	5.0		* 5.4	* 4.9	5.0		5.5
Max Green Setting (Gmax), s	* 6.4	106.0		* 23	* 15	97.0		19.5
Max Q Clear Time (g_c+I1), s	2.2	36.9		7.6	6.8	13.9		2.9
Green Ext Time (p_c), s	0.0	11.2		0.1	0.2	11.3		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		27.0
HCM 2010 LOS		C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	480	21	23	210	131	7	275	51	267	751	84
Future Volume (veh/h)	99	480	21	23	210	131	7	275	51	267	751	84
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	99	480	21	23	210	131	7	275	51	267	751	84
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	4	4	4	4	4	4
Cap, veh/h	197	579	492	53	427	668	40	438	81	348	857	908
Arrive On Green	0.12	0.32	0.32	0.03	0.24	0.24	0.02	0.29	0.29	0.20	0.47	0.47
Sat Flow, veh/h	1707	1792	1524	1707	1792	1524	1740	1500	278	1740	1827	1553
Grp Volume(v), veh/h	99	480	21	23	210	131	7	0	326	267	751	84
Grp Sat Flow(s),veh/h/ln	1707	1792	1524	1707	1792	1524	1740	0	1778	1740	1827	1553
Q Serve(g_s), s	7.1	32.2	1.2	1.7	13.1	6.9	0.5	0.0	20.7	18.9	48.2	3.1
Cycle Q Clear(g_c), s	7.1	32.2	1.2	1.7	13.1	6.9	0.5	0.0	20.7	18.9	48.2	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	197	579	492	53	427	668	40	0	520	348	857	908
V/C Ratio(X)	0.50	0.83	0.04	0.44	0.49	0.20	0.17	0.00	0.63	0.77	0.88	0.09
Avail Cap(c_a), veh/h	197	579	492	53	427	668	40	0	520	348	857	908
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.0	40.7	30.2	61.9	42.7	22.4	62.3	0.0	39.9	49.1	31.1	11.9
Incr Delay (d2), s/veh	8.9	12.9	0.2	24.4	4.0	0.7	9.2	0.0	5.6	14.9	12.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	17.9	0.5	1.2	7.0	3.0	0.3	0.0	11.0	10.5	27.1	1.4
LnGrp Delay(d),s/veh	62.9	53.6	30.4	86.2	46.7	23.1	71.5	0.0	45.5	64.1	43.3	12.1
LnGrp LOS	E	D	C	F	D	C	E		D	E	D	B
Approach Vol, veh/h		600			364			333			1102	
Approach Delay, s/veh		54.3			40.7			46.1			45.9	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	48.0	7.0	67.0	19.0	37.0	30.0	44.0
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	4.0	42.0	3.0	61.0	15.0	31.0	26.0	38.0
Max Q Clear Time (g_c+I1), s	3.7	34.2	2.5	50.2	9.1	15.1	20.9	22.7
Green Ext Time (p_c), s	0.0	1.5	0.0	2.6	0.1	1.9	0.3	2.9

Intersection Summary	
HCM 2010 Ctrl Delay	47.2
HCM 2010 LOS	D

Notes

User approved changes to right turn type.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	118	15	11	207	611	188
Future Volume (veh/h)	118	15	11	207	611	188
Number	7	14	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1900	1827	1827	1827	1900
Adj Flow Rate, veh/h	118	15	11	207	611	188
Adj No. of Lanes	0	0	1	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	4	4	4	4
Cap, veh/h	237	30	208	1199	584	180
Arrive On Green	0.17	0.17	0.12	0.66	0.44	0.44
Sat Flow, veh/h	1430	182	1740	1827	1341	413
Grp Volume(v), veh/h	134	0	11	207	0	799
Grp Sat Flow(s),veh/h/ln	1624	0	1740	1827	0	1754
Q Serve(g_s), s	4.1	0.0	0.3	2.4	0.0	23.7
Cycle Q Clear(g_c), s	4.1	0.0	0.3	2.4	0.0	23.7
Prop In Lane	0.88	0.11	1.00			0.24
Lane Grp Cap(c), veh/h	269	0	208	1199	0	764
V/C Ratio(X)	0.50	0.00	0.05	0.17	0.00	1.05
Avail Cap(c_a), veh/h	269	0	208	1199	0	764
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.6	0.0	21.2	3.6	0.0	15.4
Incr Delay (d2), s/veh	6.5	0.0	0.5	0.3	0.0	45.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	0.2	1.3	0.0	20.8
LnGrp Delay(d),s/veh	27.1	0.0	21.7	3.9	0.0	60.4
LnGrp LOS	C		C	A		F
Approach Vol, veh/h	134			218	799	
Approach Delay, s/veh	27.1			4.8	60.4	
Approach LOS	C			A	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	12.0	29.4		13.0		41.4		
Change Period (Y+Rc), s	5.5	* 5.7		4.0		* 5.7		
Max Green Setting (Gmax), s	6.5	* 23		9.0		* 36		
Max Q Clear Time (g_c+I1), s	2.3	25.7		6.1		4.4		
Green Ext Time (p_c), s	0.0	0.0		0.1		1.2		

Intersection Summary	
HCM 2010 Ctrl Delay	46.0
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Pedestrian Green has to be less than Phase Max Green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	702	4	58	300	13	4	205	69	42	286	25
Future Volume (veh/h)	40	702	4	58	300	13	4	205	69	42	286	25
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1900	1900	1810	1900	1900	1810	1900
Adj Flow Rate, veh/h	40	702	4	58	300	13	4	205	69	42	286	25
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	5	5	5	5	5	5
Cap, veh/h	91	813	5	82	770	33	4	216	73	44	303	26
Arrive On Green	0.05	0.46	0.46	0.05	0.45	0.45	0.17	0.17	0.17	0.21	0.21	0.21
Sat Flow, veh/h	1707	1781	10	1707	1706	74	25	1277	430	211	1440	126
Grp Volume(v), veh/h	40	0	706	58	0	313	278	0	0	353	0	0
Grp Sat Flow(s),veh/h/ln	1707	0	1791	1707	0	1779	1732	0	0	1777	0	0
Q Serve(g_s), s	4.4	0.0	69.0	6.5	0.0	22.8	31.0	0.0	0.0	38.2	0.0	0.0
Cycle Q Clear(g_c), s	4.4	0.0	69.0	6.5	0.0	22.8	31.0	0.0	0.0	38.2	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.04	0.01		0.25	0.12		0.07
Lane Grp Cap(c), veh/h	91	0	817	82	0	803	293	0	0	374	0	0
V/C Ratio(X)	0.44	0.00	0.86	0.70	0.00	0.39	0.95	0.00	0.00	0.94	0.00	0.00
Avail Cap(c_a), veh/h	91	0	817	82	0	803	293	0	0	374	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	89.5	0.0	47.6	91.4	0.0	35.6	80.2	0.0	0.0	75.9	0.0	0.0
Incr Delay (d2), s/veh	14.6	0.0	11.7	40.1	0.0	1.4	40.8	0.0	0.0	34.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	36.8	4.0	0.0	11.5	18.2	0.0	0.0	22.3	0.0	0.0
LnGrp Delay(d),s/veh	104.1	0.0	59.3	131.5	0.0	37.0	121.0	0.0	0.0	110.4	0.0	0.0
LnGrp LOS	F		E	F		D	F			F		
Approach Vol, veh/h		746			371			278			353	
Approach Delay, s/veh		61.7			51.8			121.0			110.4	
Approach LOS		E			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.0	94.0		47.0	14.0	95.0		39.0
Change Period (Y+Rc), s	4.6	6.0		6.0	4.6	6.0		6.0
Max Green Setting (Gmax), s	10.4	88.0		41.0	9.4	89.0		33.0
Max Q Clear Time (g_c+I1), s	6.4	24.8		40.2	8.5	71.0		33.0
Green Ext Time (p_c), s	0.0	15.1		0.1	0.0	9.2		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		78.9
HCM 2010 LOS		E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	473	105	161	651	157	82	403	97	153	836	224
Future Volume (veh/h)	131	473	105	161	651	157	82	403	97	153	836	224
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	131	473	105	161	651	157	82	403	97	153	836	224
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	189	703	155	189	863	386	216	1132	507	135	971	434
Arrive On Green	0.11	0.25	0.25	0.11	0.25	0.25	0.12	0.32	0.32	0.08	0.28	0.28
Sat Flow, veh/h	1757	2856	630	1757	3505	1568	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	131	289	289	161	651	157	82	403	97	153	836	224
Grp Sat Flow(s),veh/h/ln	1757	1752	1733	1757	1752	1568	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	4.7	9.7	9.8	5.9	11.2	5.5	2.8	5.7	2.9	5.0	14.7	7.8
Cycle Q Clear(g_c), s	4.7	9.7	9.8	5.9	11.2	5.5	2.8	5.7	2.9	5.0	14.7	7.8
Prop In Lane	1.00		0.36	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	189	431	427	189	863	386	216	1132	507	135	971	434
V/C Ratio(X)	0.69	0.67	0.68	0.85	0.75	0.41	0.38	0.36	0.19	1.13	0.86	0.52
Avail Cap(c_a), veh/h	189	431	427	189	863	386	216	1132	507	135	971	434
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.0	22.1	22.2	28.5	22.7	20.5	26.2	16.8	15.9	30.0	22.3	19.8
Incr Delay (d2), s/veh	18.8	8.0	8.4	35.5	6.1	3.2	5.0	0.9	0.8	117.3	9.9	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	5.6	5.6	4.7	6.1	2.7	1.6	2.9	1.4	6.8	8.4	3.9
LnGrp Delay(d),s/veh	46.8	30.2	30.5	64.0	28.8	23.7	31.2	17.7	16.7	147.3	32.3	24.2
LnGrp LOS	D	C	C	E	C	C	C	B	B	F	C	C
Approach Vol, veh/h		709			969			582			1213	
Approach Delay, s/veh		33.4			33.8			19.4			45.3	
Approach LOS		C			C			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	25.0	11.0	20.0	12.0	22.0	11.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	21.0	7.0	16.0	8.0	18.0	7.0	16.0
Max Q Clear Time (g_c+I1), s	7.0	7.7	7.9	11.8	4.8	16.7	6.7	13.2
Green Ext Time (p_c), s	0.0	6.3	0.0	2.5	0.1	0.9	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	35.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	291	143	115	462	73	108	530	61	113	1166	160
Future Volume (veh/h)	98	291	143	115	462	73	108	530	61	113	1166	160
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	98	291	143	115	462	73	108	530	61	113	1166	160
Adj No. of Lanes	1	2	1	1	2	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	141	748	334	141	648	102	116	1130	130	232	1309	179
Arrive On Green	0.08	0.21	0.21	0.08	0.21	0.21	0.07	0.36	0.36	0.13	0.43	0.43
Sat Flow, veh/h	1757	3505	1568	1757	3036	477	1740	3139	360	1740	3069	420
Grp Volume(v), veh/h	98	291	143	115	266	269	108	292	299	113	658	668
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1760	1740	1736	1763	1740	1736	1753
Q Serve(g_s), s	4.1	5.3	5.9	4.8	10.5	10.7	4.6	9.7	9.8	4.5	26.3	26.5
Cycle Q Clear(g_c), s	4.1	5.3	5.9	4.8	10.5	10.7	4.6	9.7	9.8	4.5	26.3	26.5
Prop In Lane	1.00		1.00	1.00		0.27	1.00		0.20	1.00		0.24
Lane Grp Cap(c), veh/h	141	748	334	141	374	376	116	625	635	232	741	748
V/C Ratio(X)	0.70	0.39	0.43	0.82	0.71	0.72	0.93	0.47	0.47	0.49	0.89	0.89
Avail Cap(c_a), veh/h	141	748	334	141	374	376	116	625	635	232	741	748
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.6	25.3	25.5	34.0	27.4	27.4	34.8	18.5	18.5	30.1	19.9	19.9
Incr Delay (d2), s/veh	24.9	1.5	4.0	39.0	10.9	11.2	66.6	2.5	2.5	7.1	14.9	15.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	2.7	2.9	3.9	6.2	6.3	4.4	5.1	5.2	2.6	15.5	15.8
LnGrp Delay(d),s/veh	58.6	26.8	29.5	73.0	38.3	38.6	101.4	21.0	21.0	37.3	34.8	35.2
LnGrp LOS	E	C	C	E	D	D	F	C	C	D	C	D
Approach Vol, veh/h		532			650			699			1439	
Approach Delay, s/veh		33.4			44.5			33.4			35.2	
Approach LOS		C			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	31.0	10.0	20.0	9.0	36.0	10.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	27.0	6.0	16.0	5.0	32.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	6.5	11.8	6.8	7.9	6.6	28.5	6.1	12.7
Green Ext Time (p_c), s	0.1	8.4	0.0	2.8	0.0	2.7	0.0	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	36.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	157	611	197	201	763	115	176	504	91	143	1196	194
Future Volume (veh/h)	157	611	197	201	763	115	176	504	91	143	1196	194
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1827	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	157	611	197	201	763	115	176	504	91	143	1196	194
Adj No. of Lanes	1	3	0	1	2	1	1	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	174	751	237	217	781	349	196	919	165	283	1258	563
Arrive On Green	0.10	0.20	0.20	0.13	0.22	0.22	0.11	0.31	0.31	0.16	0.36	0.36
Sat Flow, veh/h	1740	3756	1187	1740	3471	1553	1740	2941	529	1740	3471	1553
Grp Volume(v), veh/h	157	539	269	201	763	115	176	297	298	143	1196	194
Grp Sat Flow(s),veh/h/ln	1740	1663	1618	1740	1736	1553	1740	1736	1734	1740	1736	1553
Q Serve(g_s), s	7.1	12.4	12.7	9.1	17.5	5.0	8.0	11.3	11.4	6.0	26.8	7.3
Cycle Q Clear(g_c), s	7.1	12.4	12.7	9.1	17.5	5.0	8.0	11.3	11.4	6.0	26.8	7.3
Prop In Lane	1.00		0.73	1.00		1.00	1.00		0.30	1.00		1.00
Lane Grp Cap(c), veh/h	174	665	324	217	781	349	196	542	542	283	1258	563
V/C Ratio(X)	0.90	0.81	0.83	0.92	0.98	0.33	0.90	0.55	0.55	0.51	0.95	0.34
Avail Cap(c_a), veh/h	174	665	324	217	781	349	196	542	542	283	1258	563
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	30.6	30.7	34.6	30.8	25.9	35.1	22.8	22.8	30.6	24.8	18.6
Incr Delay (d2), s/veh	46.5	10.4	21.3	44.0	27.1	2.5	42.4	3.9	4.0	6.3	16.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	6.7	7.6	7.1	11.3	2.4	6.1	6.0	6.1	3.4	15.6	3.4
LnGrp Delay(d),s/veh	82.1	40.9	52.0	78.7	57.9	28.5	77.4	26.7	26.8	36.9	40.8	20.2
LnGrp LOS	F	D	D	E	E	C	E	C	C	D	D	C
Approach Vol, veh/h		965			1079			771			1533	
Approach Delay, s/veh		50.7			58.6			38.3			37.8	
Approach LOS		D			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	29.0	14.0	20.0	13.0	33.0	12.0	22.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	13.0	25.0	10.0	16.0	9.0	29.0	8.0	18.0
Max Q Clear Time (g_c+I1), s	8.0	13.4	11.1	14.7	10.0	28.8	9.1	19.5
Green Ext Time (p_c), s	0.2	7.4	0.0	1.0	0.0	0.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	45.9
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	473	141	87	489	64	143	198	61	155	821	291
Future Volume (veh/h)	122	473	141	87	489	64	143	198	61	155	821	291
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	122	473	141	87	489	64	143	198	61	155	821	291
Adj No. of Lanes	1	2	0	1	2	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	3	3	3	3	3	3
Cap, veh/h	145	705	209	145	824	107	146	993	444	176	1051	470
Arrive On Green	0.08	0.27	0.27	0.08	0.27	0.27	0.08	0.28	0.28	0.10	0.30	0.30
Sat Flow, veh/h	1740	2642	782	1740	3089	403	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	122	310	304	87	274	279	143	198	61	155	821	291
Grp Sat Flow(s),veh/h/ln	1740	1736	1689	1740	1736	1756	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	4.1	9.6	9.7	2.9	8.2	8.3	4.9	2.6	1.7	5.2	12.8	9.6
Cycle Q Clear(g_c), s	4.1	9.6	9.7	2.9	8.2	8.3	4.9	2.6	1.7	5.2	12.8	9.6
Prop In Lane	1.00		0.46	1.00		0.23	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	145	463	450	145	463	468	146	993	444	176	1051	470
V/C Ratio(X)	0.84	0.67	0.68	0.60	0.59	0.60	0.98	0.20	0.14	0.88	0.78	0.62
Avail Cap(c_a), veh/h	145	463	450	145	463	468	146	993	444	176	1051	470
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.1	19.6	19.7	26.5	19.2	19.2	27.4	16.3	16.0	26.7	19.2	18.0
Incr Delay (d2), s/veh	41.6	7.5	7.9	17.0	5.5	5.5	68.5	0.5	0.6	42.6	5.8	6.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	5.5	5.5	2.1	4.7	4.7	5.1	1.3	0.8	4.6	7.0	4.9
LnGrp Delay(d),s/veh	68.7	27.1	27.6	43.6	24.6	24.7	95.9	16.8	16.7	69.2	25.0	24.0
LnGrp LOS	E	C	C	D	C	C	F	B	B	E	C	C
Approach Vol, veh/h		736			640			402			1267	
Approach Delay, s/veh		34.2			27.2			44.9			30.2	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	21.0	9.0	20.0	9.0	22.0	9.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	17.0	5.0	16.0	5.0	18.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	7.2	4.6	4.9	11.7	6.9	14.8	6.1	10.3
Green Ext Time (p_c), s	0.0	5.3	0.0	2.2	0.0	1.9	0.0	2.6

Intersection Summary	
HCM 2010 Ctrl Delay	32.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	455	22	56	477	59	41	310	86	164	542	578
Future Volume (veh/h)	146	455	22	56	477	59	41	310	86	164	542	578
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1827	1900	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	146	455	22	56	477	59	41	310	86	164	542	578
Adj No. of Lanes	2	2	1	2	2	0	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	225	926	414	225	830	102	225	809	221	338	1157	518
Arrive On Green	0.07	0.27	0.27	0.07	0.27	0.27	0.07	0.30	0.30	0.10	0.33	0.33
Sat Flow, veh/h	3375	3471	1553	3375	3112	383	3375	2697	736	3375	3471	1553
Grp Volume(v), veh/h	146	455	22	56	265	271	41	198	198	164	542	578
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1688	1736	1759	1688	1736	1697	1688	1736	1553
Q Serve(g_s), s	2.5	6.6	0.6	0.9	7.9	8.0	0.7	5.4	5.6	2.8	7.4	20.0
Cycle Q Clear(g_c), s	2.5	6.6	0.6	0.9	7.9	8.0	0.7	5.4	5.6	2.8	7.4	20.0
Prop In Lane	1.00		1.00	1.00		0.22	1.00		0.43	1.00		1.00
Lane Grp Cap(c), veh/h	225	926	414	225	463	469	225	521	509	338	1157	518
V/C Ratio(X)	0.65	0.49	0.05	0.25	0.57	0.58	0.18	0.38	0.39	0.49	0.47	1.12
Avail Cap(c_a), veh/h	225	926	414	225	463	469	225	521	509	338	1157	518
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.3	18.6	16.4	26.6	19.0	19.1	26.5	16.6	16.6	25.5	15.8	20.0
Incr Delay (d2), s/veh	13.6	1.9	0.2	2.6	5.1	5.1	1.8	2.1	2.2	4.9	1.4	75.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	3.4	0.3	0.5	4.4	4.5	0.4	2.9	2.9	1.5	3.8	19.4
LnGrp Delay(d),s/veh	40.9	20.4	16.6	29.2	24.1	24.2	28.2	18.7	18.9	30.5	17.2	95.6
LnGrp LOS	D	C	B	C	C	C	C	B	B	C	B	F
Approach Vol, veh/h		623			592			437			1284	
Approach Delay, s/veh		25.1			24.6			19.7			54.2	
Approach LOS		C			C			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	22.0	8.0	20.0	8.0	24.0	8.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	18.0	4.0	16.0	4.0	20.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	4.8	7.6	2.9	8.6	2.7	22.0	4.5	10.0
Green Ext Time (p_c), s	0.1	5.1	0.0	2.9	0.0	0.0	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	36.9
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	6	12	50	9	1	12	530	55	1	1005	0
Future Volume (veh/h)	1	6	12	50	9	1	12	530	55	1	1005	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1759	1900	1845	1845	1900	1792	1792	1792	1792	1792	1900
Adj Flow Rate, veh/h	1	6	12	50	9	1	12	530	55	1	1005	0
Adj No. of Lanes	0	1	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	8	8	8	3	3	3	6	6	6	6	6	6
Cap, veh/h	12	74	149	262	243	27	19	970	824	19	970	0
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.01	0.54	0.54	0.01	0.54	0.00
Sat Flow, veh/h	83	499	997	1757	1631	181	1707	1792	1524	1707	1792	0
Grp Volume(v), veh/h	19	0	0	50	0	10	12	530	55	1	1005	0
Grp Sat Flow(s),veh/h/ln	1579	0	0	1757	0	1813	1707	1792	1524	1707	1792	0
Q Serve(g_s), s	1.1	0.0	0.0	2.7	0.0	0.5	0.8	20.7	1.8	0.1	58.0	0.0
Cycle Q Clear(g_c), s	1.1	0.0	0.0	2.7	0.0	0.5	0.8	20.7	1.8	0.1	58.0	0.0
Prop In Lane	0.05		0.63	1.00		0.10	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	236	0	0	262	0	271	19	970	824	19	970	0
V/C Ratio(X)	0.08	0.00	0.00	0.19	0.00	0.04	0.63	0.55	0.07	0.05	1.04	0.00
Avail Cap(c_a), veh/h	236	0	0	262	0	271	64	970	824	64	970	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	39.3	0.0	0.0	39.9	0.0	39.0	52.8	16.0	11.7	52.4	24.6	0.0
Incr Delay (d2), s/veh	0.7	0.0	0.0	1.6	0.0	0.3	29.1	2.2	0.2	1.1	38.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	1.4	0.0	0.3	0.5	10.8	0.8	0.0	39.0	0.0
LnGrp Delay(d),s/veh	39.9	0.0	0.0	41.5	0.0	39.3	81.9	18.2	11.9	53.6	63.3	0.0
LnGrp LOS	D			D		D	F	B	B	D	F	
Approach Vol, veh/h		19			60			597			1006	
Approach Delay, s/veh		39.9			41.2			18.9			63.3	
Approach LOS		D			D			B			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.2	62.0		20.0	5.2	62.0		20.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	58.0		16.0	4.0	58.0		16.0
Max Q Clear Time (g_c+I1), s	2.1	22.7		3.1	2.8	60.0		4.7
Green Ext Time (p_c), s	1.1	2.8		0.0	0.0	0.0		0.1

Intersection Summary		
HCM 2010 Ctrl Delay		46.5
HCM 2010 LOS		D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	11	7	179	3	149	9	453	250	424	599	1
Future Volume (veh/h)	5	11	7	179	3	149	9	453	250	424	599	1
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	5	11	7	179	3	149	9	453	250	424	599	1
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	59	141	90	176	6	308	59	438	242	425	1105	2
Arrive On Green	0.03	0.13	0.13	0.10	0.20	0.20	0.03	0.39	0.39	0.24	0.60	0.60
Sat Flow, veh/h	1757	1055	671	1757	31	1542	1757	1118	617	1757	1841	3
Grp Volume(v), veh/h	5	0	18	179	0	152	9	0	703	424	0	600
Grp Sat Flow(s),veh/h/ln	1757	0	1726	1757	0	1573	1757	0	1736	1757	0	1844
Q Serve(g_s), s	0.3	0.0	1.1	12.0	0.0	10.3	0.6	0.0	47.0	28.9	0.0	23.1
Cycle Q Clear(g_c), s	0.3	0.0	1.1	12.0	0.0	10.3	0.6	0.0	47.0	28.9	0.0	23.1
Prop In Lane	1.00		0.39	1.00		0.98	1.00		0.36	1.00		0.00
Lane Grp Cap(c), veh/h	59	0	230	176	0	315	59	0	680	425	0	1106
V/C Ratio(X)	0.09	0.00	0.08	1.02	0.00	0.48	0.15	0.00	1.03	1.00	0.00	0.54
Avail Cap(c_a), veh/h	59	0	230	176	0	315	59	0	680	425	0	1106
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.2	0.0	45.5	54.0	0.0	42.5	56.4	0.0	36.5	45.5	0.0	14.2
Incr Delay (d2), s/veh	2.8	0.0	0.7	72.9	0.0	5.2	5.5	0.0	43.6	43.4	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.6	9.4	0.0	4.9	0.4	0.0	30.7	19.1	0.0	12.3
LnGrp Delay(d),s/veh	59.1	0.0	46.2	127.1	0.0	47.7	61.9	0.0	80.1	88.8	0.0	16.1
LnGrp LOS	E		D	F		D	E		F	F		B
Approach Vol, veh/h		23			331			712			1024	
Approach Delay, s/veh		49.0			90.7			79.9			46.2	
Approach LOS		D			F			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	33.0	51.0	16.0	20.0	8.0	76.0	8.0	28.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	29.0	47.0	12.0	16.0	4.0	72.0	4.0	24.0
Max Q Clear Time (g_c+I1), s	30.9	49.0	14.0	3.1	2.6	25.1	2.3	12.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.5	0.0	8.1	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	64.8
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	266	12	14	1	6	4	10	370	0	3	563	286
Future Volume (veh/h)	266	12	14	1	6	4	10	370	0	3	563	286
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1900	1845	1900	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	266	12	14	1	6	4	10	370	0	3	563	0
Adj No. of Lanes	0	1	1	0	1	0	1	1	0	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	359	16	334	33	201	134	94	566	0	94	566	481
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.05	0.31	0.00	0.05	0.31	0.00
Sat Flow, veh/h	1684	76	1568	157	941	628	1757	1845	0	1757	1845	1568
Grp Volume(v), veh/h	278	0	14	11	0	0	10	370	0	3	563	0
Grp Sat Flow(s),veh/h/ln	1760	0	1568	1726	0	0	1757	1845	0	1757	1845	1568
Q Serve(g_s), s	11.1	0.0	0.5	0.4	0.0	0.0	0.4	13.0	0.0	0.1	22.8	0.0
Cycle Q Clear(g_c), s	11.1	0.0	0.5	0.4	0.0	0.0	0.4	13.0	0.0	0.1	22.8	0.0
Prop In Lane	0.96		1.00	0.09		0.36	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	376	0	334	368	0	0	94	566	0	94	566	481
V/C Ratio(X)	0.74	0.00	0.04	0.03	0.00	0.00	0.11	0.65	0.00	0.03	1.00	0.00
Avail Cap(c_a), veh/h	376	0	334	368	0	0	94	566	0	94	566	481
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	27.6	0.0	23.4	23.4	0.0	0.0	33.8	22.5	0.0	33.7	25.9	0.0
Incr Delay (d2), s/veh	12.4	0.0	0.2	0.2	0.0	0.0	2.3	5.8	0.0	0.6	36.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	0.0	0.3	0.2	0.0	0.0	0.3	7.5	0.0	0.1	17.3	0.0
LnGrp Delay(d),s/veh	39.9	0.0	23.7	23.5	0.0	0.0	36.1	28.3	0.0	34.3	62.6	0.0
LnGrp LOS	D		C	C			D	C		C	E	
Approach Vol, veh/h		292			11			380			566	
Approach Delay, s/veh		39.1			23.5			28.6			62.5	
Approach LOS		D			C			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	27.0		20.0	8.0	27.0		20.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	23.0		16.0	4.0	23.0		16.0
Max Q Clear Time (g_c+I1), s	2.1	15.0		13.1	2.4	24.8		2.4
Green Ext Time (p_c), s	0.0	2.8		0.3	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	46.4
HCM 2010 LOS	D

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	98	51	43	55	7	16	58	11	12	211	19
Future Vol, veh/h	32	98	51	43	55	7	16	58	11	12	211	19
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	32	98	51	43	55	7	16	58	11	12	211	19
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.3	8.9	8.6	10
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	19%	18%	41%	5%
Vol Thru, %	68%	54%	52%	87%
Vol Right, %	13%	28%	7%	8%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	85	181	105	242
LT Vol	16	32	43	12
Through Vol	58	98	55	211
RT Vol	11	51	7	19
Lane Flow Rate	85	181	105	242
Geometry Grp	1	1	1	1
Degree of Util (X)	0.116	0.238	0.146	0.317
Departure Headway (Hd)	4.906	4.74	5.009	4.713
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	726	753	712	760
Service Time	2.967	2.794	3.069	2.762
HCM Lane V/C Ratio	0.117	0.24	0.147	0.318
HCM Control Delay	8.6	9.3	8.9	10
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.9	0.5	1.4

Intersection	
Intersection Delay, s/veh	11.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	178	11	26	217	34	13	33	8	62	210	29
Future Vol, veh/h	18	178	11	26	217	34	13	33	8	62	210	29
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	18	178	11	26	217	34	13	33	8	62	210	29
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.8	11.7	9.3	12.6
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	24%	9%	9%	21%
Vol Thru, %	61%	86%	78%	70%
Vol Right, %	15%	5%	12%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	54	207	277	301
LT Vol	13	18	26	62
Through Vol	33	178	217	210
RT Vol	8	11	34	29
Lane Flow Rate	54	207	277	301
Geometry Grp	1	1	1	1
Degree of Util (X)	0.086	0.308	0.401	0.445
Departure Headway (Hd)	5.732	5.359	5.217	5.318
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	624	671	690	677
Service Time	3.776	3.393	3.25	3.348
HCM Lane V/C Ratio	0.087	0.308	0.401	0.445
HCM Control Delay	9.3	10.8	11.7	12.6
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.3	1.3	1.9	2.3

Intersection	
Intersection Delay, s/veh	11.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	37	222	9	4	283	11	10	6	1	87	4	151
Future Vol, veh/h	37	222	9	4	283	11	10	6	1	87	4	151
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	4	4	4	4	4	4	3	3	3	3	3	3
Mvmt Flow	37	222	9	4	283	11	10	6	1	87	4	151
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.1	11.5	9.1	10.7
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	59%	14%	1%	36%
Vol Thru, %	35%	83%	95%	2%
Vol Right, %	6%	3%	4%	62%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	17	268	298	242
LT Vol	10	37	4	87
Through Vol	6	222	283	4
RT Vol	1	9	11	151
Lane Flow Rate	17	268	298	242
Geometry Grp	1	1	1	1
Degree of Util (X)	0.028	0.373	0.409	0.337
Departure Headway (Hd)	5.908	5.004	4.943	5.016
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	610	710	721	709
Service Time	3.908	3.095	3.031	3.109
HCM Lane V/C Ratio	0.028	0.377	0.413	0.341
HCM Control Delay	9.1	11.1	11.5	10.7
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.1	1.7	2	1.5

Intersection	
Intersection Delay, s/veh	12.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	76	21	126	126	8	14	73	36	1	343	34
Future Vol, veh/h	9	76	21	126	126	8	14	73	36	1	343	34
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	6	6	6	8	8	8	3	3	3	3	3	3
Mvmt Flow	9	76	21	126	126	8	14	73	36	1	343	34
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.9	12.5	9.8	14.2
HCM LOS	A	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	8%	48%	0%
Vol Thru, %	59%	72%	48%	91%
Vol Right, %	29%	20%	3%	9%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	123	106	260	378
LT Vol	14	9	126	1
Through Vol	73	76	126	343
RT Vol	36	21	8	34
Lane Flow Rate	123	106	260	378
Geometry Grp	1	1	1	1
Degree of Util (X)	0.186	0.168	0.408	0.542
Departure Headway (Hd)	5.455	5.719	5.646	5.159
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	657	626	637	699
Service Time	3.501	3.766	3.684	3.193
HCM Lane V/C Ratio	0.187	0.169	0.408	0.541
HCM Control Delay	9.8	9.9	12.5	14.2
HCM Lane LOS	A	A	B	B
HCM 95th-tile Q	0.7	0.6	2	3.3

Intersection	
Intersection Delay, s/veh	10.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	3	23	0	1	1	13	78	1	1	302	171
Future Vol, veh/h	40	3	23	0	1	1	13	78	1	1	302	171
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	40	3	23	0	1	1	13	78	1	1	302	171
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.6	8	8.2	11.5
HCM LOS	A	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	61%	0%	0%
Vol Thru, %	85%	5%	50%	64%
Vol Right, %	1%	35%	50%	36%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	92	66	2	474
LT Vol	13	40	0	1
Through Vol	78	3	1	302
RT Vol	1	23	1	171
Lane Flow Rate	92	66	2	474
Geometry Grp	1	1	1	1
Degree of Util (X)	0.118	0.093	0.003	0.53
Departure Headway (Hd)	4.602	5.062	4.947	4.026
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	780	708	722	901
Service Time	2.625	3.093	2.984	2.026
HCM Lane V/C Ratio	0.118	0.093	0.003	0.526
HCM Control Delay	8.2	8.6	8	11.5
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.4	0.3	0	3.2

Intersection	
Intersection Delay, s/veh	15.5
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	383	0	70	0	40	131	171	205	0
Future Vol, veh/h	0	0	0	383	0	70	0	40	131	171	205	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	0	383	0	70	0	40	131	171	205	0
Number of Lanes	0	1	0	0	1	0	0	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	0	19.9	10.6	12.3
HCM LOS	-	C	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	0%	0%	85%	100%	0%
Vol Thru, %	23%	100%	0%	0%	100%
Vol Right, %	77%	0%	15%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	171	0	453	171	205
LT Vol	0	0	383	171	0
Through Vol	40	0	0	0	205
RT Vol	131	0	70	0	0
Lane Flow Rate	171	0	453	171	205
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.263	0	0.69	0.316	0.35
Departure Headway (Hd)	5.536	6.307	5.483	6.661	6.153
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	648	0	661	540	584
Service Time	3.581	4.369	3.515	4.403	3.894
HCM Lane V/C Ratio	0.264	0	0.685	0.317	0.351
HCM Control Delay	10.6	9.4	19.9	12.5	12.2
HCM Lane LOS	B	N	C	B	B
HCM 95th-tile Q	1.1	0	5.5	1.3	1.6

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	92	50	19	262	352	97
Future Vol, veh/h	92	50	19	262	352	97
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	8	8	6	6	5	5
Mvmt Flow	92	50	19	262	352	97
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	10.3	11	13.7
HCM LOS	B	B	B

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	7%	65%	0%
Vol Thru, %	93%	0%	78%
Vol Right, %	0%	35%	22%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	281	142	449
LT Vol	19	92	0
Through Vol	262	0	352
RT Vol	0	50	97
Lane Flow Rate	281	142	449
Geometry Grp	1	1	1
Degree of Util (X)	0.383	0.22	0.572
Departure Headway (Hd)	4.912	5.578	4.586
Convergence, Y/N	Yes	Yes	Yes
Cap	728	638	781
Service Time	2.98	3.671	2.644
HCM Lane V/C Ratio	0.386	0.223	0.575
HCM Control Delay	11	10.3	13.7
HCM Lane LOS	B	B	B
HCM 95th-tile Q	1.8	0.8	3.7

Intersection	
Intersection Delay, s/veh	10.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	20	0	18	1	262	2	51	326	0
Future Vol, veh/h	0	0	0	20	0	18	1	262	2	51	326	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	20	20	20	5	5	5	6	6	6
Mvmt Flow	0	0	0	20	0	18	1	262	2	51	326	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	8.8	9.7	11.2
HCM LOS	-	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	53%	14%
Vol Thru, %	99%	100%	0%	86%
Vol Right, %	1%	0%	47%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	265	0	38	377
LT Vol	1	0	20	51
Through Vol	262	0	0	326
RT Vol	2	0	18	0
Lane Flow Rate	265	0	38	377
Geometry Grp	1	1	1	1
Degree of Util (X)	0.329	0	0.058	0.462
Departure Headway (Hd)	4.473	5.43	5.467	4.409
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	806	0	655	818
Service Time	2.492	3.474	3.504	2.426
HCM Lane V/C Ratio	0.329	0	0.058	0.461
HCM Control Delay	9.7	8.5	8.8	11.2
HCM Lane LOS	A	N	A	B
HCM 95th-tile Q	1.4	0	0.2	2.5

Intersection	
Intersection Delay, s/veh	13
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	138	68	17	213	15	46	77	14	18	244	87
Future Vol, veh/h	36	138	68	17	213	15	46	77	14	18	244	87
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	3	3	3
Mvmt Flow	36	138	68	17	213	15	46	77	14	18	244	87
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.2	12.5	10.9	14.6
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	34%	15%	7%	5%
Vol Thru, %	56%	57%	87%	70%
Vol Right, %	10%	28%	6%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	137	242	245	349
LT Vol	46	36	17	18
Through Vol	77	138	213	244
RT Vol	14	68	15	87
Lane Flow Rate	137	242	245	349
Geometry Grp	1	1	1	1
Degree of Util (X)	0.228	0.381	0.392	0.529
Departure Headway (Hd)	6.003	5.663	5.765	5.461
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	595	632	620	656
Service Time	4.082	3.73	3.834	3.522
HCM Lane V/C Ratio	0.23	0.383	0.395	0.532
HCM Control Delay	10.9	12.2	12.5	14.6
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	0.9	1.8	1.9	3.1

Intersection	
Int Delay, s/veh	3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	54	106	752	82	176	248
Future Vol, veh/h	54	106	752	82	176	248
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	70	0	-	-	85	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	4	4	3	3	3	3
Mvmt Flow	54	106	752	82	176	248

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1269	417	0	0	834	0
Stage 1	793	-	-	-	-	-
Stage 2	476	-	-	-	-	-
Critical Hdwy	6.88	6.98	-	-	4.16	-
Critical Hdwy Stg 1	5.88	-	-	-	-	-
Critical Hdwy Stg 2	5.88	-	-	-	-	-
Follow-up Hdwy	3.54	3.34	-	-	2.23	-
Pot Cap-1 Maneuver	157	579	-	-	789	-
Stage 1	401	-	-	-	-	-
Stage 2	585	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	122	579	-	-	789	-
Mov Cap-2 Maneuver	250	-	-	-	-	-
Stage 1	401	-	-	-	-	-
Stage 2	455	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.2	0	4.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	250	579	789	-
HCM Lane V/C Ratio	-	-	0.216	0.183	0.223	-
HCM Control Delay (s)	-	-	23.3	12.6	10.9	-
HCM Lane LOS	-	-	C	B	B	-
HCM 95th %tile Q(veh)	-	-	0.8	0.7	0.9	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	526	0	0	979
Future Vol, veh/h	0	0	526	0	0	979
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	4	4	4	4
Mvmt Flow	0	0	526	0	0	979

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1505	526	0	0	526	0
Stage 1	526	-	-	-	-	-
Stage 2	979	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.14	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.236	-
Pot Cap-1 Maneuver	133	550	-	-	1031	-
Stage 1	591	-	-	-	-	-
Stage 2	363	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	133	550	-	-	1031	-
Mov Cap-2 Maneuver	133	-	-	-	-	-
Stage 1	591	-	-	-	-	-
Stage 2	363	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1031	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	83	794	452	25	14	30
Future Vol, veh/h	83	794	452	25	14	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	190	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	6	6	6	6	3	3
Mvmt Flow	83	794	452	25	14	30

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	477	0	-	0	1425	465
Stage 1	-	-	-	-	465	-
Stage 2	-	-	-	-	960	-
Critical Hdwy	4.16	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.254	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	1065	-	-	-	149	595
Stage 1	-	-	-	-	630	-
Stage 2	-	-	-	-	370	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1065	-	-	-	137	595
Mov Cap-2 Maneuver	-	-	-	-	137	-
Stage 1	-	-	-	-	630	-
Stage 2	-	-	-	-	341	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	19.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1065	-	-	-	288
HCM Lane V/C Ratio	0.078	-	-	-	0.153
HCM Control Delay (s)	8.7	-	-	-	19.7
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.3	-	-	-	0.5

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	1	2	0	2	0	51	6	1	240	4
Future Vol, veh/h	2	0	1	2	0	2	0	51	6	1	240	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	2	0	1	2	0	2	0	51	6	1	240	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	299	301	242	299	300	54	244	0	0	57	0	0
Stage 1	244	244	-	54	54	-	-	-	-	-	-	-
Stage 2	55	57	-	245	246	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	651	610	794	651	611	1010	1316	-	-	1541	-	-
Stage 1	757	702	-	956	848	-	-	-	-	-	-	-
Stage 2	955	845	-	756	701	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	649	609	794	650	610	1010	1316	-	-	1541	-	-
Mov Cap-2 Maneuver	649	609	-	650	610	-	-	-	-	-	-	-
Stage 1	757	701	-	956	848	-	-	-	-	-	-	-
Stage 2	953	845	-	754	700	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.2	9.6	0	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1316	-	-	691	791	1541	-	-
HCM Lane V/C Ratio	-	-	-	0.004	0.005	0.001	-	-
HCM Control Delay (s)	0	-	-	10.2	9.6	7.3	0	-
HCM Lane LOS	A	-	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	672	2	69	465	1	4	0	96	2	4	4
Future Vol, veh/h	4	672	2	69	465	1	4	0	96	2	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	80	-	90	200	-	-	-	-	240	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	6	6	6	6	6	6	3	3	3	3	3	3
Mvmt Flow	4	672	2	69	465	1	4	0	96	2	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	466	0	0	672	0	0	1288	1284	672	1284	1284	466
Stage 1	-	-	-	-	-	-	680	680	-	604	604	-
Stage 2	-	-	-	-	-	-	608	604	-	680	680	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.254	-	-	2.254	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1075	-	-	900	-	-	140	164	454	141	164	595
Stage 1	-	-	-	-	-	-	439	449	-	484	486	-
Stage 2	-	-	-	-	-	-	481	486	-	439	449	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1075	-	-	900	-	-	128	151	454	104	151	595
Mov Cap-2 Maneuver	-	-	-	-	-	-	128	151	-	104	151	-
Stage 1	-	-	-	-	-	-	437	447	-	482	449	-
Stage 2	-	-	-	-	-	-	437	449	-	345	447	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.2	15.8	24.9
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	128	454	1075	-	-	900	-	-	191
HCM Lane V/C Ratio	0.031	0.211	0.004	-	-	0.077	-	-	0.052
HCM Control Delay (s)	34	15	8.4	-	-	9.3	-	-	24.9
HCM Lane LOS	D	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.1	0.8	0	-	-	0.2	-	-	0.2

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	94	1	3	3	2	72
Future Vol, veh/h	94	1	3	3	2	72
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	94	1	3	3	2	72

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	47	38	74	0	-	0
Stage 1	38	-	-	-	-	-
Stage 2	9	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	960	1031	1519	-	-	-
Stage 1	982	-	-	-	-	-
Stage 2	1011	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	958	1031	1519	-	-	-
Mov Cap-2 Maneuver	958	-	-	-	-	-
Stage 1	982	-	-	-	-	-
Stage 2	1009	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.2	3.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1519	-	959	-	-
HCM Lane V/C Ratio	0.002	-	0.099	-	-
HCM Control Delay (s)	7.4	0	9.2	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	248	0	0	182	1	6	0	1	1	0	2
Future Vol, veh/h	2	248	0	0	182	1	6	0	1	1	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	2	248	0	0	182	1	6	0	1	1	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	183	0	0	248	0	0	436	435	248	436	435	183
Stage 1	-	-	-	-	-	-	252	252	-	183	183	-
Stage 2	-	-	-	-	-	-	184	183	-	253	252	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1386	-	-	1312	-	-	529	513	788	529	513	857
Stage 1	-	-	-	-	-	-	750	697	-	816	746	-
Stage 2	-	-	-	-	-	-	815	746	-	749	697	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1386	-	-	1312	-	-	527	512	788	528	512	857
Mov Cap-2 Maneuver	-	-	-	-	-	-	527	512	-	528	512	-
Stage 1	-	-	-	-	-	-	749	696	-	814	746	-
Stage 2	-	-	-	-	-	-	813	746	-	747	696	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	11.6	10.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	553	1386	-	-	1312	-	-	710
HCM Lane V/C Ratio	0.013	0.001	-	-	-	-	-	0.004
HCM Control Delay (s)	11.6	7.6	0	-	0	-	-	10.1
HCM Lane LOS	B	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	81	0	0	0	0	173
Future Vol, veh/h	81	0	0	0	0	173
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	81	0	0	0	0	173

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	87	87	173	0	-	0
Stage 1	87	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	912	969	1398	-	-	-
Stage 1	934	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	912	969	1398	-	-	-
Mov Cap-2 Maneuver	912	-	-	-	-	-
Stage 1	934	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1398	-	912	-	-
HCM Lane V/C Ratio	-	-	0.089	-	-
HCM Control Delay (s)	0	-	9.3	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection	
Int Delay, s/veh	4.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	494	13	358	669	13	228
Future Vol, veh/h	494	13	358	669	13	228
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	300	250	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	494	13	358	669	13	228

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	494	0	1879	494
Stage 1	-	-	-	-	494	-
Stage 2	-	-	-	-	1385	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1064	-	78	573
Stage 1	-	-	-	-	611	-
Stage 2	-	-	-	-	231	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1064	-	52	573
Mov Cap-2 Maneuver	-	-	-	-	52	-
Stage 1	-	-	-	-	611	-
Stage 2	-	-	-	-	153	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.5	19.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	52	573	-	-	1064	-
HCM Lane V/C Ratio	0.25	0.398	-	-	0.336	-
HCM Control Delay (s)	95.9	15.4	-	-	10.1	-
HCM Lane LOS	F	C	-	-	B	-
HCM 95th %tile Q(veh)	0.9	1.9	-	-	1.5	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	122	0	0	309
Future Vol, veh/h	0	0	122	0	0	309
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	0	122	0	0	309

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	431	122	0	0	122	0
Stage 1	122	-	-	-	-	-
Stage 2	309	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	579	926	-	-	1459	-
Stage 1	901	-	-	-	-	-
Stage 2	742	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	579	926	-	-	1459	-
Mov Cap-2 Maneuver	579	-	-	-	-	-
Stage 1	901	-	-	-	-	-
Stage 2	742	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1459	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	72	35	15	77	342	55
Future Vol, veh/h	72	35	15	77	342	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Free
Storage Length	0	-	-	-	-	90
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	72	35	15	77	342	55

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	449	342	342	0	-	0
Stage 1	342	-	-	-	-	-
Stage 2	107	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	566	698	1211	-	-	0
Stage 1	717	-	-	-	-	0
Stage 2	915	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	559	698	1211	-	-	-
Mov Cap-2 Maneuver	559	-	-	-	-	-
Stage 1	717	-	-	-	-	-
Stage 2	903	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.3	1.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	1211	-	598	-
HCM Lane V/C Ratio	0.012	-	0.179	-
HCM Control Delay (s)	8	0	12.3	-
HCM Lane LOS	A	A	B	-
HCM 95th %tile Q(veh)	0	-	0.6	-

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	573	3	16	272	1	3	4	0	0	89	61
Future Vol, veh/h	11	573	3	16	272	1	3	4	0	0	89	61
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	355	-	-	350	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	6	6	6	6	6	6	8	8	8	8	8	8
Mvmt Flow	11	573	3	16	272	1	3	4	0	0	89	61

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	273	0	0	576	0	0	977	902	575	904	903	273
Stage 1	-	-	-	-	-	-	597	597	-	305	305	-
Stage 2	-	-	-	-	-	-	380	305	-	599	598	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.18	6.58	6.28	7.18	6.58	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Follow-up Hdwy	2.254	-	-	2.254	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	1267	-	-	978	-	-	224	271	506	252	271	752
Stage 1	-	-	-	-	-	-	479	482	-	692	652	-
Stage 2	-	-	-	-	-	-	630	652	-	478	481	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1267	-	-	978	-	-	149	264	506	244	264	752
Mov Cap-2 Maneuver	-	-	-	-	-	-	149	264	-	244	264	-
Stage 1	-	-	-	-	-	-	475	478	-	686	641	-
Stage 2	-	-	-	-	-	-	490	641	-	470	477	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.5	23.8	22
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	198	1267	-	-	978	-	-	359
HCM Lane V/C Ratio	0.035	0.009	-	-	0.016	-	-	0.418
HCM Control Delay (s)	23.8	7.9	-	-	8.7	-	-	22
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	2

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	5	119	7	1	197	1	8	2	0	0	22	67
Future Vol, veh/h	5	119	7	1	197	1	8	2	0	0	22	67
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	8	8	8	10	10	10	8	8	8	8	8	8
Mvmt Flow	5	119	7	1	197	1	8	2	0	0	22	67

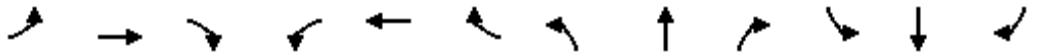
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	198	0	0	126	0	0	377	333	123	334	336	198
Stage 1	-	-	-	-	-	-	133	133	-	200	200	-
Stage 2	-	-	-	-	-	-	244	200	-	134	136	-
Critical Hdwy	4.18	-	-	4.2	-	-	7.18	6.58	6.28	7.18	6.58	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Follow-up Hdwy	2.272	-	-	2.29	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	1339	-	-	1412	-	-	570	577	912	608	575	828
Stage 1	-	-	-	-	-	-	856	775	-	788	725	-
Stage 2	-	-	-	-	-	-	746	725	-	855	773	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1339	-	-	1412	-	-	507	574	912	604	572	828
Mov Cap-2 Maneuver	-	-	-	-	-	-	507	574	-	604	572	-
Stage 1	-	-	-	-	-	-	853	772	-	785	724	-
Stage 2	-	-	-	-	-	-	664	724	-	849	770	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	12.1	10.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	519	1339	-	-	1412	-	-	746
HCM Lane V/C Ratio	0.019	0.004	-	-	0.001	-	-	0.119
HCM Control Delay (s)	12.1	7.7	0	-	7.6	0	-	10.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.4

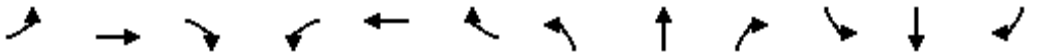
Existing Plus Jackson Township

Alternative 2 AM



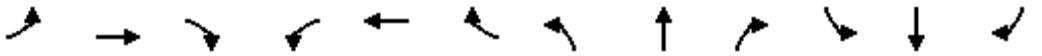
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	636	0	1060	0	0	0	0	1404	566	0	1120	383
Future Volume (vph)	636	0	1060	0	0	0	0	1404	566	0	1120	383
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	4.0		4.0	4.0
Lane Util. Factor	0.97		0.88					0.91	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3367		2733					4988	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3367		2733					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	636	0	1060	0	0	0	0	1404	566	0	1120	383
RTOR Reduction (vph)	0	0	19	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	636	0	1041	0	0	0	0	1404	566	0	1120	383
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	19.6		19.6					16.5	44.1		16.5	44.1
Effective Green, g (s)	19.6		19.6					16.5	44.1		16.5	44.1
Actuated g/C Ratio	0.44		0.44					0.37	1.00		0.37	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	1496		1214					1866	1553		1866	1553
v/s Ratio Prot								c0.28			0.22	
v/s Ratio Perm	0.19		c0.38						0.36			0.25
v/c Ratio	0.43		0.86					0.75	0.36		0.60	0.25
Uniform Delay, d1	8.4		11.0					12.0	0.0		11.1	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.2		6.2					1.8	0.7		0.5	0.4
Delay (s)	8.6		17.2					13.8	0.7		11.7	0.4
Level of Service	A		B					B	A		B	A
Approach Delay (s)		14.0			0.0			10.0			8.8	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	44.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



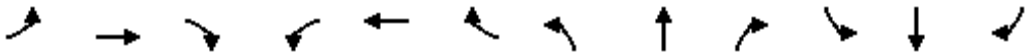
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	134	283	65	235	812	688	321	1146	175	728	1458	99
Future Volume (vph)	134	283	65	235	812	688	321	1146	175	728	1458	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		0.97	0.95	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	3374		3367	3471	2733	3367	4988	1553	3367	4988	1553
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	3374		3367	3471	2733	3367	4988	1553	3367	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	134	283	65	235	812	688	321	1146	175	728	1458	99
RTOR Reduction (vph)	0	26	0	0	0	507	0	0	131	0	0	63
Lane Group Flow (vph)	134	322	0	235	812	181	321	1146	44	728	1458	36
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	4.0	12.7		12.3	21.0	21.0	9.9	20.0	20.0	18.8	28.9	28.9
Effective Green, g (s)	4.0	12.7		12.3	21.0	21.0	9.9	20.0	20.0	18.8	28.9	28.9
Actuated g/C Ratio	0.05	0.16		0.15	0.26	0.26	0.12	0.25	0.25	0.24	0.36	0.36
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	168	536		518	913	719	417	1250	389	793	1806	562
v/s Ratio Prot	0.04	c0.10		0.07	c0.23		0.10	c0.23		c0.22	0.29	
v/s Ratio Perm						0.07			0.03			0.02
v/c Ratio	0.80	0.60		0.45	0.89	0.25	0.77	0.92	0.11	0.92	0.81	0.06
Uniform Delay, d1	37.5	31.2		30.7	28.3	23.2	33.8	29.1	23.1	29.7	22.9	16.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	22.5	1.9		0.6	10.6	0.2	8.3	10.6	0.1	15.4	2.8	0.0
Delay (s)	60.0	33.1		31.3	38.8	23.4	42.2	39.7	23.2	45.1	25.7	16.7
Level of Service	E	C		C	D	C	D	D	C	D	C	B
Approach Delay (s)		40.6			31.7			38.4			31.5	
Approach LOS		D			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	34.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	79.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	82.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	132	460	373	5	1038	27	368	12	2	20	13	219
Future Volume (vph)	132	460	373	5	1038	27	368	12	2	20	13	219
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.97	1.00
Satd. Flow (prot)	1736	3471	1553	1736	3471	1553	1618	1627	1524		1790	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.97	1.00
Satd. Flow (perm)	1736	3471	1553	1736	3471	1553	1618	1627	1524		1790	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	132	460	373	5	1038	27	368	12	2	20	13	219
RTOR Reduction (vph)	0	0	110	0	0	16	0	0	2	0	0	175
Lane Group Flow (vph)	132	460	263	5	1038	11	191	189	0	0	33	44
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4	2	3	8		2	2		6	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	10.3	44.1	60.2	0.7	34.5	34.5	16.1	16.1	16.1		8.4	8.4
Effective Green, g (s)	10.3	44.1	60.2	0.7	34.5	34.5	16.1	16.1	16.1		8.4	8.4
Actuated g/C Ratio	0.12	0.52	0.71	0.01	0.40	0.40	0.19	0.19	0.19		0.10	0.10
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	209	1794	1168	14	1403	628	305	307	287		176	154
v/s Ratio Prot	c0.08	0.13	0.04	0.00	c0.30		c0.12	0.12			0.02	
v/s Ratio Perm			0.13			0.01			0.00			c0.03
v/c Ratio	0.63	0.26	0.23	0.36	0.74	0.02	0.63	0.62	0.00		0.19	0.29
Uniform Delay, d1	35.7	11.5	4.4	42.1	21.6	15.2	31.8	31.8	28.1		35.3	35.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	6.1	0.1	0.1	14.9	2.1	0.0	4.0	3.6	0.0		0.5	1.0
Delay (s)	41.8	11.5	4.5	57.0	23.7	15.2	35.8	35.4	28.1		35.8	36.7
Level of Service	D	B	A	E	C	B	D	D	C		D	D
Approach Delay (s)		13.0			23.6			35.6			36.6	
Approach LOS		B			C			D			D	

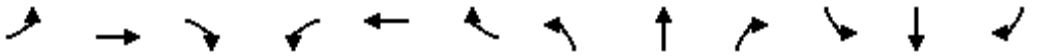
Intersection Summary			
HCM 2000 Control Delay	22.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	85.3	Sum of lost time (s)	20.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	219	194	213	473	59	627	57	344	91	114	34
Future Volume (vph)	26	219	194	213	473	59	627	57	344	91	114	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		0.95	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85		0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00		0.98	
Satd. Flow (prot)	1752	3505	1568	1752	3447		1665	1682	1568		3366	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00		0.98	
Satd. Flow (perm)	1752	3505	1568	1752	3447		1665	1682	1568		3366	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	26	219	194	213	473	59	627	57	344	91	114	34
RTOR Reduction (vph)	0	0	155	0	11	0	0	0	252	0	18	0
Lane Group Flow (vph)	26	219	39	213	521	0	339	345	92	0	221	0
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4						2			
Actuated Green, G (s)	1.8	13.1	13.1	9.1	20.4		17.3	17.3	17.3		9.5	
Effective Green, g (s)	1.8	13.1	13.1	9.1	20.4		17.3	17.3	17.3		9.5	
Actuated g/C Ratio	0.03	0.20	0.20	0.14	0.31		0.27	0.27	0.27		0.15	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	48	706	316	245	1081		443	447	417		491	
v/s Ratio Prot	0.01	0.06		c0.12	c0.15		0.20	c0.21			c0.07	
v/s Ratio Perm			0.02						0.06			
v/c Ratio	0.54	0.31	0.12	0.87	0.48		0.77	0.77	0.22		0.45	
Uniform Delay, d1	31.2	22.1	21.2	27.4	18.0		22.0	22.0	18.6		25.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	11.9	0.3	0.2	26.2	0.3		7.7	8.1	0.3		0.7	
Delay (s)	43.1	22.4	21.4	53.6	18.4		29.7	30.1	18.9		26.0	
Level of Service	D	C	C	D	B		C	C	B		C	
Approach Delay (s)		23.2			28.4			26.2			26.0	
Approach LOS		C			C			C			C	

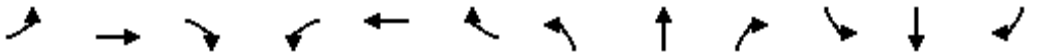
Intersection Summary			
HCM 2000 Control Delay	26.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



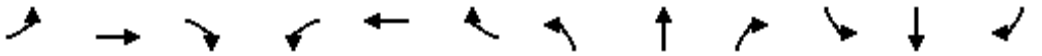
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	300	273	241	699	19	492	48	148	28	144	39
Future Volume (vph)	21	300	273	241	699	19	492	48	148	28	144	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	3.9	3.9	5.5	4.0	4.0	4.3	4.3		5.1	5.1	5.1
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.89		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1568	3400	3505	1568	3367	3078		1752	3505	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	3505	1568	3400	3505	1568	3367	3078		1752	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	21	300	273	241	699	19	492	48	148	28	144	39
RTOR Reduction (vph)	0	0	190	0	0	12	0	116	0	0	0	35
Lane Group Flow (vph)	21	300	83	241	699	7	492	80	0	28	144	4
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	3%	3%	3%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		8	8		4	4	
Permitted Phases			6			2						4
Actuated Green, G (s)	1.2	20.3	20.3	6.7	25.7	25.7	14.2	14.2		6.4	6.4	6.4
Effective Green, g (s)	1.2	20.3	20.3	6.7	25.7	25.7	14.2	14.2		6.4	6.4	6.4
Actuated g/C Ratio	0.02	0.31	0.31	0.10	0.39	0.39	0.21	0.21		0.10	0.10	0.10
Clearance Time (s)	5.5	3.9	3.9	5.5	4.0	4.0	4.3	4.3		5.1	5.1	5.1
Vehicle Extension (s)	1.0	4.9	4.9	1.0	4.1	4.1	2.0	2.0		1.0	1.0	1.0
Lane Grp Cap (vph)	31	1071	479	343	1356	606	720	658		168	337	151
v/s Ratio Prot	0.01	0.09		c0.07	c0.20		c0.15	0.03		0.02	c0.04	
v/s Ratio Perm			0.05			0.00						0.00
v/c Ratio	0.68	0.28	0.17	0.70	0.52	0.01	0.68	0.12		0.17	0.43	0.02
Uniform Delay, d1	32.4	17.5	16.9	28.9	15.6	12.5	24.0	21.1		27.6	28.3	27.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	37.4	0.3	0.4	5.2	0.5	0.0	2.1	0.0		0.2	0.3	0.0
Delay (s)	69.8	17.8	17.3	34.1	16.0	12.5	26.2	21.1		27.7	28.6	27.2
Level of Service	E	B	B	C	B	B	C	C		C	C	C
Approach Delay (s)		19.4			20.5			24.7			28.2	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	22.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	66.4	Sum of lost time (s)	22.9
Intersection Capacity Utilization	56.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	781	0	523	0	932	881	0	378	329
Future Volume (vph)	0	0	0	781	0	523	0	932	881	0	378	329
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.6		4.6		3.5	4.0		5.1	4.0
Lane Util. Factor				0.97		0.88		0.91	1.00		0.91	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3367		2733		4988	1553		4988	1553
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3367		2733		4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	781	0	523	0	932	881	0	378	329
RTOR Reduction (vph)	0	0	0	0	0	106	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	781	0	417	0	932	881	0	378	329
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type				Prot		Perm		NA	Free		NA	Free
Protected Phases				4				6			2	
Permitted Phases						4			Free			Free
Actuated Green, G (s)				10.5		10.5		9.4	28.0		7.8	28.0
Effective Green, g (s)				10.5		10.5		9.4	28.0		7.8	28.0
Actuated g/C Ratio				0.38		0.38		0.34	1.00		0.28	1.00
Clearance Time (s)				4.6		4.6		3.5			5.1	
Vehicle Extension (s)				1.0		1.0		1.0			1.0	
Lane Grp Cap (vph)				1262		1024		1674	1553		1389	1553
v/s Ratio Prot				0.23				0.19			0.08	
v/s Ratio Perm						0.15			c0.57			0.21
v/c Ratio				0.62		0.41		0.56	0.57		0.27	0.21
Uniform Delay, d1				7.1		6.5		7.6	0.0		7.9	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				0.6		0.1		0.2	1.5		0.0	0.3
Delay (s)				7.8		6.6		7.8	1.5		7.9	0.3
Level of Service				A		A		A	A		A	A
Approach Delay (s)		0.0			7.3			4.8			4.4	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	28.0	Sum of lost time (s)	9.7
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	522	0	1067	0	0	0	0	1291	709	0	948	207
Future Volume (vph)	522	0	1067	0	0	0	0	1291	709	0	948	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4		6.4					5.1	4.0		4.6	4.0
Lane Util. Factor	0.97		0.88					0.91	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3367		2733					4988	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3367		2733					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	522	0	1067	0	0	0	0	1291	709	0	948	207
RTOR Reduction (vph)	0	0	34	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	522	0	1033	0	0	0	0	1291	709	0	948	207
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	22.4		22.4					17.3	51.2		17.8	51.2
Effective Green, g (s)	22.4		22.4					17.3	51.2		17.8	51.2
Actuated g/C Ratio	0.44		0.44					0.34	1.00		0.35	1.00
Clearance Time (s)	6.4		6.4					5.1			4.6	
Vehicle Extension (s)	1.0		1.0					1.0			1.0	
Lane Grp Cap (vph)	1473		1195					1685	1553		1734	1553
v/s Ratio Prot								c0.26			0.19	
v/s Ratio Perm	0.16		c0.38						0.46			0.13
v/c Ratio	0.35		0.86					0.77	0.46		0.55	0.13
Uniform Delay, d1	9.6		13.0					15.1	0.0		13.5	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1		6.5					1.9	1.0		0.2	0.2
Delay (s)	9.6		19.5					17.1	1.0		13.6	0.2
Level of Service	A		B					B	A		B	A
Approach Delay (s)		16.3			0.0			11.4			11.2	
Approach LOS		B			A			B			B	

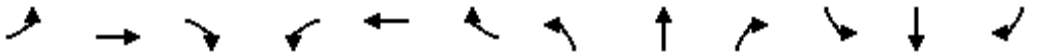
Intersection Summary			
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	51.2	Sum of lost time (s)	11.5
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	250	644	4	279	57
Future Volume (vph)	0	250	644	4	279	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00
Frt		0.85	1.00	0.85	1.00	1.00
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1568	1845	1568	1752	1845
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1568	1845	1568	1752	1845
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	250	644	4	279	57
RTOR Reduction (vph)	0	230	0	2	0	0
Lane Group Flow (vph)	0	20	644	2	279	57
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		3		2		
Actuated Green, G (s)		4.1	22.4	22.4	12.1	38.5
Effective Green, g (s)		4.1	22.4	22.4	12.1	38.5
Actuated g/C Ratio		0.08	0.44	0.44	0.24	0.76
Clearance Time (s)		4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		127	816	694	418	1403
v/s Ratio Prot			c0.35		c0.16	0.03
v/s Ratio Perm		c0.01		0.00		
v/c Ratio		0.16	0.79	0.00	0.67	0.04
Uniform Delay, d1		21.6	12.1	7.9	17.4	1.5
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.6	5.1	0.0	4.0	0.0
Delay (s)		22.2	17.2	7.9	21.4	1.5
Level of Service		C	B	A	C	A
Approach Delay (s)	22.2		17.1			18.1
Approach LOS	C		B			B

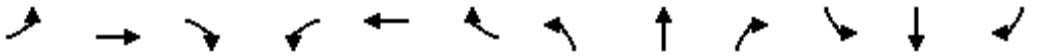
Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	50.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



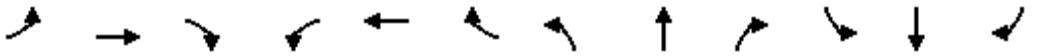
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	823	0	196	0	627	485	0	694	332
Future Volume (vph)	0	0	0	823	0	196	0	627	485	0	694	332
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.9	4.9			4.8	4.0		4.8	4.0
Lane Util. Factor				0.95	0.95			0.95	1.00		0.95	1.00
Frt				1.00	0.94			1.00	0.85		1.00	0.85
Flt Protected				0.95	0.97			1.00	1.00		1.00	1.00
Satd. Flow (prot)				1649	1585			3471	1553		3471	1553
Flt Permitted				0.95	0.97			1.00	1.00		1.00	1.00
Satd. Flow (perm)				1649	1585			3471	1553		3471	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	823	0	196	0	627	485	0	694	332
RTOR Reduction (vph)	0	0	0	0	53	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	518	448	0	0	627	485	0	694	332
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type				Perm	NA			NA	Free		NA	Free
Protected Phases					8			2			6	
Permitted Phases				8					Free			Free
Actuated Green, G (s)				14.1	14.1			10.7	34.5		10.7	34.5
Effective Green, g (s)				14.1	14.1			10.7	34.5		10.7	34.5
Actuated g/C Ratio				0.41	0.41			0.31	1.00		0.31	1.00
Clearance Time (s)				4.9	4.9			4.8			4.8	
Vehicle Extension (s)				1.0	1.0			1.0			1.0	
Lane Grp Cap (vph)				673	647			1076	1553		1076	1553
v/s Ratio Prot								0.18			c0.20	
v/s Ratio Perm				c0.31	0.28				0.31			0.21
v/c Ratio				0.77	0.69			0.58	0.31		0.64	0.21
Uniform Delay, d1				8.8	8.4			10.0	0.0		10.3	0.0
Progression Factor				1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2				4.8	2.6			0.5	0.5		1.0	0.3
Delay (s)				13.6	11.0			10.5	0.5		11.3	0.3
Level of Service				B	B			B	A		B	A
Approach Delay (s)		0.0			12.3			6.2			7.7	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	34.5	Sum of lost time (s)	9.7
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



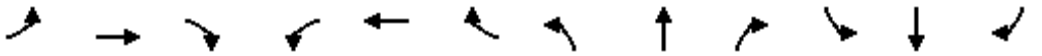
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	232	0	1009	0	0	0	0	931	297	0	1265	204
Future Volume (vph)	232	0	1009	0	0	0	0	931	297	0	1265	204
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	5.1					4.9	4.0		4.8	4.0
Lane Util. Factor	0.95	0.91	0.95					0.91	1.00		0.95	1.00
Frt	1.00	0.86	0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	1649	1421	1475					4988	1553		3471	1553
Flt Permitted	0.95	1.00	1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	1649	1421	1475					4988	1553		3471	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	232	0	1009	0	0	0	0	931	297	0	1265	204
RTOR Reduction (vph)	0	21	21	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	209	496	494	0	0	0	0	931	297	0	1265	204
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA	Perm					NA	Free		NA	Free
Protected Phases		4						2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	20.9	20.9	20.9					22.2	53.1		22.3	53.1
Effective Green, g (s)	20.9	20.9	20.9					22.2	53.1		22.3	53.1
Actuated g/C Ratio	0.39	0.39	0.39					0.42	1.00		0.42	1.00
Clearance Time (s)	5.1	5.1	5.1					4.9			4.8	
Vehicle Extension (s)	1.0	1.0	1.0					1.0			1.0	
Lane Grp Cap (vph)	649	559	580					2085	1553		1457	1553
v/s Ratio Prot								0.19			c0.36	
v/s Ratio Perm	0.13	0.35	0.33						0.19			0.13
v/c Ratio	0.32	0.89	0.85					0.45	0.19		0.87	0.13
Uniform Delay, d1	11.2	15.0	14.7					11.1	0.0		14.1	0.0
Progression Factor	1.00	1.00	1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1	15.2	11.1					0.1	0.3		5.6	0.2
Delay (s)	11.3	30.2	25.8					11.1	0.3		19.6	0.2
Level of Service	B	C	C					B	A		B	A
Approach Delay (s)		25.2			0.0			8.5			16.9	
Approach LOS		C			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	16.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	53.1	Sum of lost time (s)	10.0
Intersection Capacity Utilization	84.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



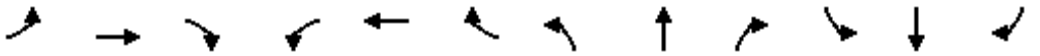
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	954	0	161	0	864	700	0	762	286
Future Volume (vph)	0	0	0	954	0	161	0	864	700	0	762	286
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.8		6.8		4.6	4.0		4.6	4.0
Lane Util. Factor				0.97		1.00		0.91	1.00		0.95	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3400		1568		5036	1568		3505	1568
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3400		1568		5036	1568		3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	954	0	161	0	864	700	0	762	286
RTOR Reduction (vph)	0	0	0	0	0	29	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	954	0	132	0	864	700	0	762	286
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				Perm		Perm		NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases				8		8			Free			Free
Actuated Green, G (s)				14.1		14.1		12.1	37.6		12.1	37.6
Effective Green, g (s)				14.1		14.1		12.1	37.6		12.1	37.6
Actuated g/C Ratio				0.37		0.37		0.32	1.00		0.32	1.00
Clearance Time (s)				6.8		6.8		4.6			4.6	
Vehicle Extension (s)				1.0		1.0		1.0			1.0	
Lane Grp Cap (vph)				1275		588		1620	1568		1127	1568
v/s Ratio Prot								0.17			c0.22	
v/s Ratio Perm				c0.28		0.08			0.45			0.18
v/c Ratio				0.75		0.22		0.53	0.45		0.68	0.18
Uniform Delay, d1				10.2		8.0		10.4	0.0		11.1	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				2.1		0.1		0.2	0.9		1.3	0.3
Delay (s)				12.3		8.1		10.6	0.9		12.3	0.3
Level of Service				B		A		B	A		B	A
Approach Delay (s)		0.0			11.7			6.3			9.0	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	37.6	Sum of lost time (s)	11.4
Intersection Capacity Utilization	55.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



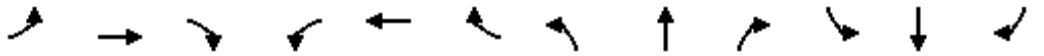
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	348	939	1242	0	0	198	0	1695	9	0	1552	175
Future Volume (vph)	348	939	1242	0	0	198	0	1695	9	0	1552	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0		4.0			4.0	4.0
Lane Util. Factor	0.91	0.86	0.91			0.88		0.86			0.95	1.00
Frt	1.00	0.95	0.85			0.85		1.00			1.00	0.85
Flt Protected	0.95	1.00	1.00			1.00		1.00			1.00	1.00
Satd. Flow (prot)	1595	2998	1427			2733		6341			3505	1568
Flt Permitted	0.95	1.00	1.00			1.00		1.00			1.00	1.00
Satd. Flow (perm)	1595	2998	1427			2733		6341			3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	348	939	1242	0	0	198	0	1695	9	0	1552	175
RTOR Reduction (vph)	0	4	32	0	0	189	0	1	0	0	0	69
Lane Group Flow (vph)	313	1516	664	0	0	9	0	1703	0	0	1552	106
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Turn Type	Split	NA	Perm			Prot		NA			NA	custom
Protected Phases	4	4				1		2			6	
Permitted Phases			4									2
Actuated Green, G (s)	43.0	43.0	43.0			4.0		31.0			39.0	31.0
Effective Green, g (s)	43.0	43.0	43.0			4.0		31.0			39.0	31.0
Actuated g/C Ratio	0.48	0.48	0.48			0.04		0.34			0.43	0.34
Clearance Time (s)	4.0	4.0	4.0			4.0		4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	762	1432	681			121		2184			1518	540
v/s Ratio Prot	0.20	c0.51				0.00		0.27			c0.44	
v/s Ratio Perm			0.47									0.07
v/c Ratio	0.41	1.06	0.98			0.07		0.78			1.02	0.20
Uniform Delay, d1	15.3	23.5	23.0			41.2		26.4			25.5	20.7
Progression Factor	1.00	1.00	1.00			1.00		1.00			1.00	1.00
Incremental Delay, d2	0.4	41.0	28.1			0.3		1.8			28.9	0.2
Delay (s)	15.6	64.5	51.1			41.5		28.3			54.4	20.9
Level of Service	B	E	D			D		C			D	C
Approach Delay (s)		54.7			41.5			28.3			51.0	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	46.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	100.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



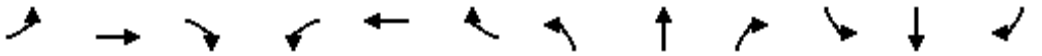
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	356	0	333	0	2036	264	0	1861	1798
Future Volume (vph)	0	0	0	356	0	333	0	2036	264	0	1861	1798
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.5		3.5		4.8	4.0		5.1	4.0
Lane Util. Factor				0.97		0.88		0.91	1.00		0.91	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3303		2682		4988	1553		4988	1553
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3303		2682		4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	356	0	333	0	2036	264	0	1861	1798
RTOR Reduction (vph)	0	0	0	0	0	45	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	356	0	288	0	2036	264	0	1861	1798
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	4%	4%	4%	4%	4%	4%
Turn Type				Perm		Perm		NA	Free		NA	Free
Protected Phases								6			2	
Permitted Phases				8		8			Free			Free
Actuated Green, G (s)				6.8		6.8		18.5	33.6		18.2	33.6
Effective Green, g (s)				6.8		6.8		18.5	33.6		18.2	33.6
Actuated g/C Ratio				0.20		0.20		0.55	1.00		0.54	1.00
Clearance Time (s)				3.5		3.5		4.8			5.1	
Vehicle Extension (s)				1.0		1.0		1.0			1.0	
Lane Grp Cap (vph)				668		542		2746	1553		2701	1553
v/s Ratio Prot								0.41			0.37	
v/s Ratio Perm				0.11		0.11			0.17			c1.16
v/c Ratio				0.53		0.53		0.74	0.17		0.69	1.16
Uniform Delay, d1				12.0		12.0		5.7	0.0		5.6	16.8
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				0.4		0.5		1.0	0.2		0.6	78.7
Delay (s)				12.4		12.5		6.7	0.2		6.2	95.5
Level of Service				B		B		A	A		A	F
Approach Delay (s)		0.0			12.4			6.0			50.1	
Approach LOS		A			B			A			D	

Intersection Summary			
HCM 2000 Control Delay	30.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.56		
Actuated Cycle Length (s)	33.6	Sum of lost time (s)	8.6
Intersection Capacity Utilization	58.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



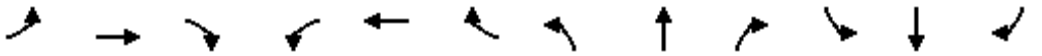
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1102	0	465	0	0	0	0	1206	493	0	2006	209
Future Volume (vph)	1102	0	465	0	0	0	0	1206	493	0	2006	209
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		3.5					4.8	4.0		5.1	4.0
Lane Util. Factor	0.94		0.88					0.86	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	4894		2733					6285	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	4894		2733					6285	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1102	0	465	0	0	0	0	1206	493	0	2006	209
RTOR Reduction (vph)	0	0	32	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	1102	0	433	0	0	0	0	1206	493	0	2006	209
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								6			2	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	13.1		13.1					21.7	43.1		21.4	43.1
Effective Green, g (s)	13.1		13.1					21.7	43.1		21.4	43.1
Actuated g/C Ratio	0.30		0.30					0.50	1.00		0.50	1.00
Clearance Time (s)	3.5		3.5					4.8			5.1	
Vehicle Extension (s)	1.0		1.0					1.0			1.0	
Lane Grp Cap (vph)	1487		830					3164	1553		2476	1553
v/s Ratio Prot								0.19			c0.40	
v/s Ratio Perm	c0.23		0.16						0.32			0.13
v/c Ratio	0.74		0.52					0.38	0.32		0.81	0.13
Uniform Delay, d1	13.5		12.4					6.6	0.0		9.1	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	1.8		0.3					0.0	0.5		2.0	0.2
Delay (s)	15.3		12.7					6.6	0.5		11.1	0.2
Level of Service	B		B					A	A		B	A
Approach Delay (s)		14.5			0.0			4.8			10.1	
Approach LOS		B			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	9.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	43.1	Sum of lost time (s)	8.6
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



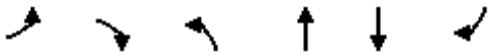
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	588	240	7	0	257	15	8	30	5	7	6	201
Future Volume (vph)	588	240	7	0	257	15	8	30	5	7	6	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.9	6.9		6.0			6.1			6.2	5.5
Lane Util. Factor	1.00	1.00	1.00		1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.85		0.99			0.98			1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00			0.99			0.97	1.00
Satd. Flow (prot)	1703	1792	1524		1795			1799			1779	1553
Flt Permitted	0.95	1.00	1.00		1.00			0.99			0.97	1.00
Satd. Flow (perm)	1703	1792	1524		1795			1799			1779	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	588	240	7	0	257	15	8	30	5	7	6	201
RTOR Reduction (vph)	0	0	2	0	2	0	0	4	0	0	0	105
Lane Group Flow (vph)	588	240	5	0	270	0	0	39	0	0	13	96
Heavy Vehicles (%)	6%	6%	6%	5%	5%	5%	3%	3%	3%	4%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	pm+ov
Protected Phases	1	6		5	2		8	8		4	4	1
Permitted Phases			6									4
Actuated Green, G (s)	36.4	55.3	55.3		14.3			2.5			0.9	37.3
Effective Green, g (s)	36.4	55.3	55.3		14.3			2.5			0.9	37.3
Actuated g/C Ratio	0.47	0.71	0.71		0.18			0.03			0.01	0.48
Clearance Time (s)	5.5	6.9	6.9		6.0			6.1			6.2	5.5
Vehicle Extension (s)	1.0	1.0	1.0		1.0			1.0			1.0	1.0
Lane Grp Cap (vph)	795	1272	1081		329			57			20	743
v/s Ratio Prot	c0.35	0.13			c0.15			c0.02			c0.01	0.06
v/s Ratio Perm			0.00									0.00
v/c Ratio	0.74	0.19	0.00		0.82			0.69			0.65	0.13
Uniform Delay, d1	16.9	3.8	3.3		30.6			37.3			38.3	11.3
Progression Factor	1.00	1.00	1.00		1.00			1.00			1.00	1.00
Incremental Delay, d2	3.1	0.0	0.0		14.5			23.9			45.4	0.0
Delay (s)	20.0	3.8	3.3		45.0			61.2			83.8	11.3
Level of Service	C	A	A		D			E			F	B
Approach Delay (s)		15.2			45.0			61.2			15.7	
Approach LOS		B			D			E			B	

Intersection Summary			
HCM 2000 Control Delay	22.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	77.9	Sum of lost time (s)	24.7
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



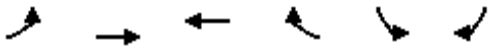
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	234	55	164	451	310	712	0	0	3004	157
Future Volume (vph)	0	0	234	55	164	451	310	712	0	0	3004	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.6		6.2	6.2	4.6	5.0			5.3	5.3
Lane Util. Factor			1.00		1.00	0.88	0.97	0.91			0.86	1.00
Frt			0.86		1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected			1.00		0.99	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)			1596		1770	2682	3303	4893			6166	1524
Flt Permitted			1.00		0.99	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)			1596		1770	2682	3303	4893			6166	1524
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	234	55	164	451	310	712	0	0	3004	157
RTOR Reduction (vph)	0	0	104	0	0	392	0	0	0	0	0	66
Lane Group Flow (vph)	0	0	130	0	219	59	310	712	0	0	3004	91
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type			Over	Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases			1	4	4		1	6			2	
Permitted Phases						4						2
Actuated Green, G (s)			14.1		11.0	11.0	14.1	62.0			43.0	43.0
Effective Green, g (s)			14.1		11.0	11.0	14.1	62.0			43.0	43.0
Actuated g/C Ratio			0.17		0.13	0.13	0.17	0.74			0.51	0.51
Clearance Time (s)			4.6		6.2	6.2	4.6	5.0			5.3	5.3
Vehicle Extension (s)			3.0		3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)			267		231	350	553	3602			3148	778
v/s Ratio Prot			0.08		c0.12		c0.09	0.15			c0.49	
v/s Ratio Perm						0.02						0.06
v/c Ratio			0.49		0.95	0.17	0.56	0.20			0.95	0.12
Uniform Delay, d1			31.8		36.3	32.5	32.2	3.4			19.7	10.7
Progression Factor			1.00		1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2			1.4		44.4	0.2	1.3	0.0			7.9	0.1
Delay (s)			33.2		80.7	32.8	33.5	3.5			27.6	10.8
Level of Service			C		F	C	C	A			C	B
Approach Delay (s)		33.2			48.4			12.6			26.8	
Approach LOS		C			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	27.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	84.2	Sum of lost time (s)	16.1
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



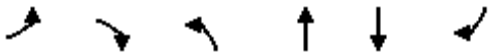
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	873	142	0	0	1044	708
Future Volume (vph)	873	142	0	0	1044	708
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5			4.7	4.0
Lane Util. Factor	0.97	0.91			0.95	1.00
Frt	1.00	0.85			1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00
Satd. Flow (prot)	3306	1386			3406	1524
Flt Permitted	0.95	1.00			1.00	1.00
Satd. Flow (perm)	3306	1386			3406	1524
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	873	142	0	0	1044	708
RTOR Reduction (vph)	3	32	0	0	0	0
Lane Group Flow (vph)	884	96	0	0	1044	708
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%
Turn Type	Prot	Perm			NA	Free
Protected Phases	4				2	
Permitted Phases		4				Free
Actuated Green, G (s)	12.0	12.0			13.8	34.0
Effective Green, g (s)	12.0	12.0			13.8	34.0
Actuated g/C Ratio	0.35	0.35			0.41	1.00
Clearance Time (s)	3.5	3.5			4.7	
Vehicle Extension (s)	1.5	1.5			1.0	
Lane Grp Cap (vph)	1166	489			1382	1524
v/s Ratio Prot	c0.27				c0.31	
v/s Ratio Perm		0.07				0.46
v/c Ratio	0.76	0.20			0.76	0.46
Uniform Delay, d1	9.7	7.6			8.7	0.0
Progression Factor	1.00	1.00			1.00	1.00
Incremental Delay, d2	2.6	0.1			2.1	1.0
Delay (s)	12.3	7.7			10.8	1.0
Level of Service	B	A			B	A
Approach Delay (s)	11.7			0.0	6.8	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	8.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	34.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



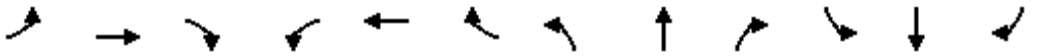
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	311	249	436	137	27	168
Future Volume (vph)	311	249	436	137	27	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1671	3343	3343	1495	1752	1568
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1671	3343	3343	1495	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	311	249	436	137	27	168
RTOR Reduction (vph)	0	0	0	101	0	141
Lane Group Flow (vph)	311	249	436	36	27	27
Heavy Vehicles (%)	8%	8%	8%	8%	3%	3%
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	12.9	28.3	11.4	11.4	6.9	6.9
Effective Green, g (s)	12.9	28.3	11.4	11.4	6.9	6.9
Actuated g/C Ratio	0.30	0.66	0.26	0.26	0.16	0.16
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	498	2189	882	394	279	250
v/s Ratio Prot	c0.19	0.07	c0.13		0.02	
v/s Ratio Perm				0.02		c0.02
v/c Ratio	0.62	0.11	0.49	0.09	0.10	0.11
Uniform Delay, d1	13.1	2.8	13.5	12.0	15.5	15.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.4	0.0	0.4	0.1	0.2	0.2
Delay (s)	15.5	2.8	13.9	12.1	15.6	15.7
Level of Service	B	A	B	B	B	B
Approach Delay (s)		9.9	13.5		15.7	
Approach LOS		A	B		B	

Intersection Summary			
HCM 2000 Control Delay	12.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	43.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	42.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	12	6	24	555	325	284
Future Volume (vph)	12	6	24	555	325	284
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3367	1553	1719	3438	3343	1495
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3367	1553	1719	3438	3343	1495
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	12	6	24	555	325	284
RTOR Reduction (vph)	0	6	0	0	0	222
Lane Group Flow (vph)	12	0	24	555	325	62
Heavy Vehicles (%)	4%	4%	5%	5%	8%	8%
Turn Type	Prot	Over	Prot	NA	NA	Over
Protected Phases	4	5	5	2	6	4
Permitted Phases						
Actuated Green, G (s)	7.0	0.6	0.6	17.3	12.7	7.0
Effective Green, g (s)	7.0	0.6	0.6	17.3	12.7	7.0
Actuated g/C Ratio	0.22	0.02	0.02	0.54	0.39	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	729	28	31	1841	1314	323
v/s Ratio Prot	0.00	0.00	0.01	c0.16	0.10	c0.04
v/s Ratio Perm						
v/c Ratio	0.02	0.00	0.77	0.30	0.25	0.19
Uniform Delay, d1	9.9	15.6	15.8	4.2	6.6	10.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0	0.1	73.6	0.1	0.1	0.3
Delay (s)	10.0	15.6	89.4	4.2	6.7	10.6
Level of Service	A	B	F	A	A	B
Approach Delay (s)	11.8			7.8	8.5	
Approach LOS	B			A	A	

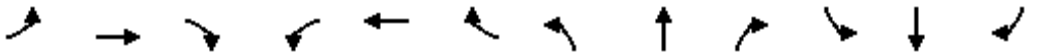
Intersection Summary			
HCM 2000 Control Delay	8.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	32.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	27.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	691	0	645	0	0	0	0	2273	590	0	1790	1584
Future Volume (vph)	691	0	645	0	0	0	0	2273	590	0	1790	1584
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	4.0		4.0	4.0
Lane Util. Factor	0.97		0.88					0.86	1.00		0.86	0.86
Frt	1.00		0.85					1.00	0.85		0.95	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3400		2760					6346	1568		4540	1348
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3400		2760					6346	1568		4540	1348
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	691	0	645	0	0	0	0	2273	590	0	1790	1584
RTOR Reduction (vph)	0	0	24	0	0	0	0	0	0	0	132	0
Lane Group Flow (vph)	691	0	621	0	0	0	0	2273	590	0	2450	792
Turn Type	Prot		Perm					NA	Free		NA	Free
Protected Phases	4							2			6	
Permitted Phases			4						Free			Free
Actuated Green, G (s)	15.9		15.9					36.0	59.9		36.0	59.9
Effective Green, g (s)	15.9		15.9					36.0	59.9		36.0	59.9
Actuated g/C Ratio	0.27		0.27					0.60	1.00		0.60	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	902		732					3813	1568		2728	1348
v/s Ratio Prot	0.20							0.36			c0.54	
v/s Ratio Perm			c0.22						0.38			0.59
v/c Ratio	0.77		0.85					0.60	0.38		0.90	0.59
Uniform Delay, d1	20.3		20.9					7.4	0.0		10.4	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	3.9		9.0					0.3	0.7		4.4	1.9
Delay (s)	24.2		29.9					7.7	0.7		14.7	1.9
Level of Service	C		C					A	A		B	A
Approach Delay (s)		26.9			0.0			6.2			11.7	
Approach LOS		C			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	12.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	59.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	438	0	1254	0	2099	862	0	3010	1406
Future Volume (vph)	0	0	0	438	0	1254	0	2099	862	0	3010	1406
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0		4.0		4.0	4.0		4.0	4.0
Lane Util. Factor				0.97		0.76		0.86	0.86		0.81	0.81
Frt				1.00		0.85		0.99	0.85		0.97	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3400		3575		4698	1348		5824	1270
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3400		3575		4698	1348		5824	1270
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	438	0	1254	0	2099	862	0	3010	1406
RTOR Reduction (vph)	0	0	0	0	0	13	0	9	0	0	34	0
Lane Group Flow (vph)	0	0	0	438	0	1241	0	2288	664	0	3595	787
Turn Type				Prot		Perm		NA	Free		NA	Free
Protected Phases				8				2			6	
Permitted Phases						8			Free			Free
Actuated Green, G (s)				36.0		36.0		66.0	110.0		66.0	110.0
Effective Green, g (s)				36.0		36.0		66.0	110.0		66.0	110.0
Actuated g/C Ratio				0.33		0.33		0.60	1.00		0.60	1.00
Clearance Time (s)				4.0		4.0		4.0			4.0	
Vehicle Extension (s)				3.0		3.0		3.0			3.0	
Lane Grp Cap (vph)				1112		1170		2818	1348		3494	1270
v/s Ratio Prot				0.13				0.49			c0.62	
v/s Ratio Perm						c0.35			0.49			0.62
v/c Ratio				0.39		1.06		0.81	0.49		1.03	0.62
Uniform Delay, d1				28.6		37.0		17.2	0.0		22.0	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				0.2		43.9		1.9	1.3		23.3	2.3
Delay (s)				28.8		80.9		19.0	1.3		45.3	2.3
Level of Service				C		F		B	A		D	A
Approach Delay (s)		0.0			67.4			15.1			37.6	
Approach LOS		A			E			B			D	

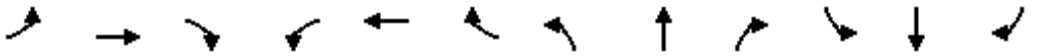
Intersection Summary			
HCM 2000 Control Delay	35.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	637	384	229	726	275	184
Future Volume (vph)	637	384	229	726	275	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3154	1411	1577	3154	3060	1411
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3154	1411	1577	3154	3060	1411
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	637	384	229	726	275	184
RTOR Reduction (vph)	0	265	0	0	0	146
Lane Group Flow (vph)	637	119	229	726	275	38
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	14.5	14.5	10.5	29.0	9.7	9.7
Effective Green, g (s)	14.5	14.5	10.5	29.0	9.7	9.7
Actuated g/C Ratio	0.31	0.31	0.22	0.62	0.21	0.21
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	979	438	354	1958	635	293
v/s Ratio Prot	c0.20		c0.15	0.23	c0.09	
v/s Ratio Perm		0.08				0.03
v/c Ratio	0.65	0.27	0.65	0.37	0.43	0.13
Uniform Delay, d1	13.9	12.1	16.4	4.4	16.1	15.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.6	0.3	4.0	0.1	0.5	0.2
Delay (s)	15.5	12.5	20.5	4.5	16.6	15.3
Level of Service	B	B	C	A	B	B
Approach Delay (s)	14.3			8.3	16.1	
Approach LOS	B			A	B	

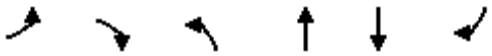
Intersection Summary			
HCM 2000 Control Delay	12.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	46.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	219	375	0	1	271	33	1	1	0	45	2	455
Future Volume (vph)	219	375	0	1	271	33	1	1	0	45	2	455
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00		0.95	0.95	1.00
Frt	1.00	1.00		1.00	0.98			1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98		0.95	0.96	1.00
Satd. Flow (prot)	1736	3471		1736	3415			1800		1665	1676	1568
Flt Permitted	0.95	1.00		0.95	1.00			0.98		0.95	0.96	1.00
Satd. Flow (perm)	1736	3471		1736	3415			1800		1665	1676	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	219	375	0	1	271	33	1	1	0	45	2	455
RTOR Reduction (vph)	0	0	0	0	12	0	0	0	0	0	0	385
Lane Group Flow (vph)	219	375	0	1	292	0	0	2	0	23	24	70
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases												6
Actuated Green, G (s)	10.8	23.2		0.7	13.1			5.7		8.3	8.3	8.3
Effective Green, g (s)	10.8	23.2		0.7	13.1			5.7		8.3	8.3	8.3
Actuated g/C Ratio	0.20	0.43		0.01	0.24			0.11		0.15	0.15	0.15
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	347	1494		22	829			190		256	258	241
v/s Ratio Prot	c0.13	0.11		0.00	c0.09			c0.00		0.01	0.01	
v/s Ratio Perm												c0.04
v/c Ratio	0.63	0.25		0.05	0.35			0.01		0.09	0.09	0.29
Uniform Delay, d1	19.7	9.8		26.3	16.9			21.6		19.6	19.6	20.2
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2	3.7	0.1		0.9	0.3			0.0		0.2	0.2	0.7
Delay (s)	23.4	9.9		27.1	17.1			21.6		19.7	19.7	20.9
Level of Service	C	A		C	B			C		B	B	C
Approach Delay (s)		14.9			17.2			21.6			20.8	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	17.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	53.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	284	27	21	789	636	90
Future Volume (vph)	284	27	21	789	636	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	0.98	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1743		1752	1845	1814	
Flt Permitted	0.96		0.95	1.00	1.00	
Satd. Flow (perm)	1743		1752	1845	1814	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	284	27	21	789	636	90
RTOR Reduction (vph)	6	0	0	0	8	0
Lane Group Flow (vph)	305	0	21	789	718	0
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	13.1		0.7	31.0	26.3	
Effective Green, g (s)	13.1		0.7	31.0	26.3	
Actuated g/C Ratio	0.25		0.01	0.60	0.50	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	438		23	1097	915	
v/s Ratio Prot	c0.17		0.01	c0.43	0.40	
v/s Ratio Perm						
v/c Ratio	0.70		0.91	0.72	0.78	
Uniform Delay, d1	17.7		25.7	7.5	10.6	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	4.8		147.5	2.3	4.5	
Delay (s)	22.5		173.2	9.8	15.0	
Level of Service	C		F	A	B	
Approach Delay (s)	22.5			14.0	15.0	
Approach LOS	C			B	B	

Intersection Summary			
HCM 2000 Control Delay	15.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	52.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	123	31	619	76	5	198
Future Volume (vph)	123	31	619	76	5	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	1.00
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	1568	3447		1752	1845
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	1568	3447		1752	1845
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	123	31	619	76	5	198
RTOR Reduction (vph)	0	27	15	0	0	0
Lane Group Flow (vph)	123	4	680	0	5	198
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		8				
Actuated Green, G (s)	4.8	4.8	19.5		0.5	24.0
Effective Green, g (s)	4.8	4.8	19.5		0.5	24.0
Actuated g/C Ratio	0.13	0.13	0.53		0.01	0.65
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	228	204	1826		23	1203
v/s Ratio Prot	c0.07		c0.20		0.00	c0.11
v/s Ratio Perm		0.00				
v/c Ratio	0.54	0.02	0.37		0.22	0.16
Uniform Delay, d1	15.0	13.9	5.1		18.0	2.5
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	2.4	0.0	0.1		4.7	0.1
Delay (s)	17.4	14.0	5.2		22.7	2.6
Level of Service	B	B	A		C	A
Approach Delay (s)	16.7		5.2			3.1
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	6.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	36.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	33.0%	ICU Level of Service	A
Analysis Period (min)	15		

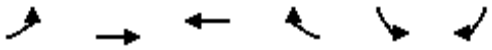
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	32	23	633	135	33	556
Future Volume (vph)	32	23	633	135	33	556
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	1.00
Frt	1.00	0.85	0.97		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	1568	3412		1752	1845
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	1568	3412		1752	1845
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	32	23	633	135	33	556
RTOR Reduction (vph)	0	22	21	0	0	0
Lane Group Flow (vph)	32	1	747	0	33	556
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		8				
Actuated Green, G (s)	1.1	1.1	23.1		0.4	27.5
Effective Green, g (s)	1.1	1.1	23.1		0.4	27.5
Actuated g/C Ratio	0.03	0.03	0.63		0.01	0.75
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	52	47	2153		19	1386
v/s Ratio Prot	c0.02		0.22		0.02	c0.30
v/s Ratio Perm		0.00				
v/c Ratio	0.62	0.01	0.35		1.74	0.40
Uniform Delay, d1	17.5	17.2	3.2		18.1	1.6
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	19.7	0.1	0.1		484.4	0.2
Delay (s)	37.2	17.3	3.3		502.5	1.8
Level of Service	D	B	A		F	A
Approach Delay (s)	28.9		3.3			29.9
Approach LOS	C		A			C

Intersection Summary			
HCM 2000 Control Delay	15.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	36.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	39.3%	ICU Level of Service	A
Analysis Period (min)	15		

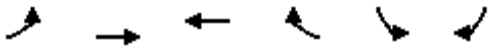
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	919	559	996	76	118	307
Future Volume (vph)	919	559	996	76	118	307
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	0.95	0.91		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3400	3505	4982		1752	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3400	3505	4982		1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	919	559	996	76	118	307
RTOR Reduction (vph)	0	0	14	0	0	254
Lane Group Flow (vph)	919	559	1058	0	118	53
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	17.1	35.8	14.7		9.1	9.1
Effective Green, g (s)	17.1	35.8	14.7		9.1	9.1
Actuated g/C Ratio	0.32	0.68	0.28		0.17	0.17
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	1099	2372	1384		301	269
v/s Ratio Prot	c0.27	0.16	c0.21		c0.07	
v/s Ratio Perm						0.03
v/c Ratio	0.84	0.24	0.76		0.39	0.20
Uniform Delay, d1	16.6	3.3	17.5		19.4	18.8
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	5.7	0.1	2.6		0.8	0.4
Delay (s)	22.3	3.3	20.1		20.3	19.1
Level of Service	C	A	C		C	B
Approach Delay (s)		15.1	20.1		19.4	
Approach LOS		B	C		B	

Intersection Summary			
HCM 2000 Control Delay	17.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	52.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

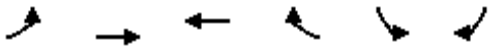
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	173	382	839	109	292	122
Future Volume (vph)	173	382	839	109	292	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3400	3505	3505	1568	3400	1568
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3400	3505	3505	1568	3400	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	173	382	839	109	292	122
RTOR Reduction (vph)	0	0	0	69	0	93
Lane Group Flow (vph)	173	382	839	40	292	29
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	2.2	19.7	13.5	13.5	8.8	8.8
Effective Green, g (s)	2.2	19.7	13.5	13.5	8.8	8.8
Actuated g/C Ratio	0.06	0.54	0.37	0.37	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	204	1891	1296	579	819	378
v/s Ratio Prot	c0.05	0.11	c0.24		c0.09	
v/s Ratio Perm				0.03		0.02
v/c Ratio	0.85	0.20	0.65	0.07	0.36	0.08
Uniform Delay, d1	17.0	4.3	9.5	7.4	11.5	10.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	26.4	0.1	1.1	0.1	0.3	0.1
Delay (s)	43.4	4.4	10.7	7.5	11.8	10.8
Level of Service	D	A	B	A	B	B
Approach Delay (s)		16.6	10.3		11.5	
Approach LOS		B	B		B	

Intersection Summary			
HCM 2000 Control Delay	12.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	36.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	23	651	768	14	79	96
Future Volume (vph)	23	651	768	14	79	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3495		1752	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3495		1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	23	651	768	14	79	96
RTOR Reduction (vph)	0	0	2	0	0	74
Lane Group Flow (vph)	23	651	780	0	79	22
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	0.4	16.1	11.7		7.0	7.0
Effective Green, g (s)	0.4	16.1	11.7		7.0	7.0
Actuated g/C Ratio	0.01	0.52	0.38		0.23	0.23
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	22	1814	1314		394	352
v/s Ratio Prot	0.01	c0.19	c0.22		c0.05	
v/s Ratio Perm						0.01
v/c Ratio	1.05	0.36	0.59		0.20	0.06
Uniform Delay, d1	15.4	4.4	7.8		9.8	9.5
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	206.7	0.1	0.7		0.3	0.1
Delay (s)	222.0	4.6	8.5		10.0	9.5
Level of Service	F	A	A		B	A
Approach Delay (s)		12.0	8.5		9.8	
Approach LOS		B	A		A	

Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	31.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	34.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	130	0	0	133	0
Future Volume (vph)	0	130	0	0	133	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	
Lane Util. Factor		1.00			0.97	
Frt		0.85			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		1568			3400	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		1568			3400	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	130	0	0	133	0
RTOR Reduction (vph)	0	114	0	0	0	0
Lane Group Flow (vph)	0	16	0	0	133	0
Turn Type		Perm	Prot		Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)		3.3			16.0	
Effective Green, g (s)		3.3			16.0	
Actuated g/C Ratio		0.12			0.59	
Clearance Time (s)		4.0			4.0	
Vehicle Extension (s)		3.0			3.0	
Lane Grp Cap (vph)		189			1992	
v/s Ratio Prot					c0.04	
v/s Ratio Perm		c0.01				
v/c Ratio		0.08			0.07	
Uniform Delay, d1		10.7			2.4	
Progression Factor		1.00			1.00	
Incremental Delay, d2		0.2			0.0	
Delay (s)		10.8			2.4	
Level of Service		B			A	
Approach Delay (s)	10.8			0.0	2.4	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.09		
Actuated Cycle Length (s)	27.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	11.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	0	218	466	542	575	0	1421	665	0	1291	313
Future Volume (veh/h)	58	0	218	466	542	575	0	1421	665	0	1291	313
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1827	1827	1827	0	1827	1827	0	1827	1827
Adj Flow Rate, veh/h	58	0	218	466	830	383	0	1421	0	0	1291	313
Adj No. of Lanes	0	1	2	2	2	1	0	3	1	0	4	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	0	4	4	0	4	4
Cap, veh/h	206	0	324	1094	1149	488	0	1895	590	0	2388	590
Arrive On Green	0.12	0.00	0.12	0.31	0.31	0.31	0.00	0.38	0.00	0.00	0.38	0.38
Sat Flow, veh/h	1757	0	2760	3480	3654	1553	0	5152	1553	0	6540	1553
Grp Volume(v), veh/h	58	0	218	466	830	383	0	1421	0	0	1291	313
Grp Sat Flow(s),veh/h/ln	1757	0	1380	1740	1827	1553	0	1663	1553	0	1571	1553
Q Serve(g_s), s	1.9	0.0	4.8	6.8	12.9	14.3	0.0	15.8	0.0	0.0	10.2	10.0
Cycle Q Clear(g_c), s	1.9	0.0	4.8	6.8	12.9	14.3	0.0	15.8	0.0	0.0	10.2	10.0
Prop In Lane	1.00		1.00	1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	206	0	324	1094	1149	488	0	1895	590	0	2388	590
V/C Ratio(X)	0.28	0.00	0.67	0.43	0.72	0.78	0.00	0.75	0.00	0.00	0.54	0.53
Avail Cap(c_a), veh/h	441	0	692	1200	1260	536	0	1955	609	0	2464	609
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	25.7	0.0	27.0	17.3	19.4	19.9	0.0	17.1	0.0	0.0	15.4	15.4
Incr Delay (d2), s/veh	0.7	0.0	2.4	0.3	1.9	6.9	0.0	1.6	0.0	0.0	0.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	2.0	3.3	6.8	7.0	0.0	7.4	0.0	0.0	4.4	4.4
LnGrp Delay(d),s/veh	26.4	0.0	29.4	17.6	21.3	26.8	0.0	18.7	0.0	0.0	15.7	16.2
LnGrp LOS	C		C	B	C	C		B			B	B
Approach Vol, veh/h		276			1679			1421			1604	
Approach Delay, s/veh		28.8			21.5			18.7			15.8	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		28.2		11.5		28.2		24.1
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		25.0		16.0		25.0		22.0
Max Q Clear Time (g_c+I1), s		17.8		6.8		12.2		16.3
Green Ext Time (p_c), s		6.5		0.7		10.8		3.7

Intersection Summary	
HCM 2010 Ctrl Delay	19.3
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	300	34	138	10	82	38	149	1434	19	16	832	212
Future Volume (veh/h)	300	34	138	10	82	38	149	1434	19	16	832	212
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1827	1900	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	324	0	138	10	82	38	149	1434	19	16	832	212
Adj No. of Lanes	2	0	1	0	1	0	2	3	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	4	4	4	4	4	4
Cap, veh/h	557	0	248	13	109	50	250	1972	26	29	1151	515
Arrive On Green	0.16	0.00	0.16	0.10	0.10	0.10	0.07	0.39	0.39	0.02	0.33	0.33
Sat Flow, veh/h	3514	0	1568	133	1092	506	3375	5073	67	1740	3471	1553
Grp Volume(v), veh/h	324	0	138	130	0	0	149	940	513	16	832	212
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1731	0	0	1688	1663	1815	1740	1736	1553
Q Serve(g_s), s	4.1	0.0	3.9	3.5	0.0	0.0	2.0	11.5	11.5	0.4	10.0	5.0
Cycle Q Clear(g_c), s	4.1	0.0	3.9	3.5	0.0	0.0	2.0	11.5	11.5	0.4	10.0	5.0
Prop In Lane	1.00		1.00	0.08		0.29	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	557	0	248	173	0	0	250	1293	706	29	1151	515
V/C Ratio(X)	0.58	0.00	0.56	0.75	0.00	0.00	0.60	0.73	0.73	0.55	0.72	0.41
Avail Cap(c_a), veh/h	1181	0	527	582	0	0	355	1607	877	146	1605	718
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.6	0.0	18.5	20.9	0.0	0.0	21.3	12.4	12.4	23.2	14.0	12.3
Incr Delay (d2), s/veh	1.0	0.0	1.9	6.5	0.0	0.0	2.3	1.3	2.3	14.8	1.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	1.8	2.0	0.0	0.0	1.0	5.5	6.2	0.3	4.9	2.2
LnGrp Delay(d),s/veh	19.5	0.0	20.4	27.4	0.0	0.0	23.6	13.7	14.7	38.0	15.0	12.8
LnGrp LOS	B		C	C			C	B	B	D	B	B
Approach Vol, veh/h		462			130			1602			1060	
Approach Delay, s/veh		19.8			27.4			14.9			14.9	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.8	22.5		11.5	7.5	19.8		8.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	23.0		16.0	5.0	22.0		16.0
Max Q Clear Time (g_c+I1), s	2.4	13.5		6.1	4.0	12.0		5.5
Green Ext Time (p_c), s	0.9	5.0		1.5	0.1	3.8		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	16.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	228	394	43	107	253	258	72	1192	112	257	430	84
Future Volume (veh/h)	228	394	43	107	253	258	72	1192	112	257	430	84
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	228	394	43	107	253	258	72	1192	112	257	430	84
Adj No. of Lanes	1	2	0	1	2	1	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	263	807	88	137	635	284	127	1276	120	306	1564	700
Arrive On Green	0.15	0.25	0.25	0.08	0.18	0.18	0.04	0.40	0.40	0.09	0.45	0.45
Sat Flow, veh/h	1757	3190	346	1757	3505	1568	3375	3208	301	3375	3471	1553
Grp Volume(v), veh/h	228	215	222	107	253	258	72	644	660	257	430	84
Grp Sat Flow(s),veh/h/ln	1757	1752	1784	1757	1752	1568	1688	1736	1774	1688	1736	1553
Q Serve(g_s), s	11.2	9.3	9.4	5.3	5.6	14.3	1.9	31.4	31.6	6.6	6.9	2.8
Cycle Q Clear(g_c), s	11.2	9.3	9.4	5.3	5.6	14.3	1.9	31.4	31.6	6.6	6.9	2.8
Prop In Lane	1.00		0.19	1.00		1.00	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	263	443	451	137	635	284	127	690	705	306	1564	700
V/C Ratio(X)	0.87	0.49	0.49	0.78	0.40	0.91	0.57	0.93	0.94	0.84	0.27	0.12
Avail Cap(c_a), veh/h	278	443	451	239	635	284	191	707	723	306	1564	700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.7	28.1	28.2	40.0	31.9	35.5	41.8	25.5	25.5	39.6	15.2	14.1
Incr Delay (d2), s/veh	23.1	0.8	0.8	9.4	0.4	30.9	4.0	19.1	19.3	18.6	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	4.6	4.7	2.9	2.7	8.6	0.9	18.7	19.2	3.9	3.3	1.2
LnGrp Delay(d),s/veh	59.8	28.9	29.0	49.4	32.3	66.4	45.8	44.6	44.8	58.1	15.3	14.2
LnGrp LOS	E	C	C	D	C	E	D	D	D	E	B	B
Approach Vol, veh/h		665			618			1376			771	
Approach Delay, s/veh		39.5			49.5			44.8			29.5	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	39.1	10.9	26.4	7.3	43.8	17.2	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	36.0	12.0	18.0	5.0	39.0	14.0	16.0
Max Q Clear Time (g_c+I1), s	8.6	33.6	7.3	11.4	3.9	8.9	13.2	16.3
Green Ext Time (p_c), s	0.0	1.6	0.1	2.4	0.0	11.2	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	41.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	188	226	198	368	287	44	667	115	74	485	2
Future Volume (veh/h)	9	188	226	198	368	287	44	667	115	74	485	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1900	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	9	188	226	198	368	287	44	667	115	74	485	2
Adj No. of Lanes	1	1	2	1	2	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	16	367	549	245	622	479	65	952	426	92	1028	4
Arrive On Green	0.01	0.20	0.20	0.14	0.34	0.34	0.04	0.27	0.27	0.05	0.29	0.29
Sat Flow, veh/h	1707	1792	2682	1707	1835	1411	1757	3505	1568	1757	3580	15
Grp Volume(v), veh/h	9	188	226	198	341	314	44	667	115	74	237	250
Grp Sat Flow(s),veh/h/ln	1707	1792	1341	1707	1703	1543	1757	1752	1568	1757	1752	1842
Q Serve(g_s), s	0.3	4.6	3.6	5.5	8.1	8.2	1.2	8.4	2.8	2.0	5.5	5.5
Cycle Q Clear(g_c), s	0.3	4.6	3.6	5.5	8.1	8.2	1.2	8.4	2.8	2.0	5.5	5.5
Prop In Lane	1.00		1.00	1.00		0.91	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	16	367	549	245	577	523	65	952	426	92	503	529
V/C Ratio(X)	0.56	0.51	0.41	0.81	0.59	0.60	0.68	0.70	0.27	0.80	0.47	0.47
Avail Cap(c_a), veh/h	140	587	878	280	697	632	144	1148	514	144	574	603
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	17.2	16.9	20.3	13.3	13.4	23.2	16.0	14.0	22.9	14.4	14.4
Incr Delay (d2), s/veh	27.1	1.1	0.5	14.3	1.0	1.1	11.8	1.5	0.3	16.2	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.4	1.4	3.6	3.9	3.6	0.8	4.2	1.2	1.4	2.7	2.9
LnGrp Delay(d),s/veh	51.2	18.4	17.4	34.6	14.3	14.5	35.1	17.5	14.3	39.1	15.0	15.0
LnGrp LOS	D	B	B	C	B	B	D	B	B	D	B	B
Approach Vol, veh/h		423			853			826			561	
Approach Delay, s/veh		18.5			19.1			18.0			18.2	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.6	17.3	11.0	14.0	5.8	18.0	4.5	20.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	8.0	16.0	4.0	16.0	4.0	20.0
Max Q Clear Time (g_c+I1), s	4.0	10.4	7.5	6.6	3.2	7.5	2.3	10.2
Green Ext Time (p_c), s	0.0	2.9	0.0	3.5	0.0	3.9	0.0	3.5

Intersection Summary	
HCM 2010 Ctrl Delay	18.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	266	128	101	297	118	233	721	154	29	427	126
Future Volume (veh/h)	103	266	128	101	297	118	233	721	154	29	427	126
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	103	266	128	101	297	118	233	721	154	29	427	126
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	130	721	322	128	504	196	257	1266	566	47	847	379
Arrive On Green	0.07	0.21	0.21	0.07	0.20	0.20	0.15	0.36	0.36	0.03	0.24	0.24
Sat Flow, veh/h	1757	3505	1568	1757	2468	960	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	103	266	128	101	209	206	233	721	154	29	427	126
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1675	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	2.8	3.1	3.4	2.7	5.2	5.3	6.3	7.9	3.3	0.8	5.0	3.2
Cycle Q Clear(g_c), s	2.8	3.1	3.4	2.7	5.2	5.3	6.3	7.9	3.3	0.8	5.0	3.2
Prop In Lane	1.00		1.00	1.00		0.57	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	130	721	322	128	358	342	257	1266	566	47	847	379
V/C Ratio(X)	0.79	0.37	0.40	0.79	0.58	0.60	0.91	0.57	0.27	0.62	0.50	0.33
Avail Cap(c_a), veh/h	183	1170	523	183	585	559	257	1389	622	147	1170	523
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.8	16.4	16.5	21.9	17.2	17.3	20.1	12.3	10.8	23.1	15.7	15.0
Incr Delay (d2), s/veh	14.1	0.3	0.8	13.7	1.5	1.7	33.0	0.5	0.3	12.5	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	1.5	1.5	1.8	2.6	2.6	5.4	3.9	1.5	0.5	2.5	1.4
LnGrp Delay(d),s/veh	35.9	16.7	17.3	35.5	18.8	19.0	53.2	12.8	11.1	35.6	16.2	15.5
LnGrp LOS	D	B	B	D	B	B	D	B	B	D	B	B
Approach Vol, veh/h		497			516			1108			582	
Approach Delay, s/veh		20.8			22.1			21.0			17.0	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.3	21.3	7.5	13.9	11.0	15.6	7.6	13.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	19.0	5.0	16.0	7.0	16.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	2.8	9.9	4.7	5.4	8.3	7.0	4.8	7.3
Green Ext Time (p_c), s	0.0	4.6	0.0	2.7	0.0	4.5	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	20.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	183	263	104	51	323	101	85	792	113	63	266	59
Future Volume (veh/h)	183	263	104	51	323	101	85	792	113	63	266	59
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	183	263	104	51	323	101	85	792	113	63	266	59
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	230	947	423	72	633	283	106	1066	477	84	1021	457
Arrive On Green	0.13	0.27	0.27	0.04	0.18	0.18	0.06	0.30	0.30	0.05	0.29	0.29
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	183	263	104	51	323	101	85	792	113	63	266	59
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1568	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	4.8	2.8	2.5	1.4	4.0	2.7	2.3	9.6	2.6	1.7	2.8	1.3
Cycle Q Clear(g_c), s	4.8	2.8	2.5	1.4	4.0	2.7	2.3	9.6	2.6	1.7	2.8	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	230	947	423	72	633	283	106	1066	477	84	1021	457
V/C Ratio(X)	0.80	0.28	0.25	0.70	0.51	0.36	0.80	0.74	0.24	0.75	0.26	0.13
Avail Cap(c_a), veh/h	259	1402	627	148	1181	528	148	1255	561	148	1255	561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.0	13.7	13.6	22.5	17.6	17.0	22.0	14.9	12.4	22.3	12.9	12.4
Incr Delay (d2), s/veh	14.4	0.2	0.3	11.7	0.6	0.8	18.5	2.0	0.3	12.8	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	1.4	1.1	0.9	1.9	1.2	1.6	4.9	1.1	1.1	1.3	0.6
LnGrp Delay(d),s/veh	34.4	13.8	13.8	34.2	18.2	17.8	40.5	16.9	12.6	35.2	13.0	12.5
LnGrp LOS	C	B	B	C	B	B	D	B	B	D	B	B
Approach Vol, veh/h		550			475			990			388	
Approach Delay, s/veh		20.7			19.8			18.4			16.6	
Approach LOS		C			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	18.4	6.0	16.8	6.9	17.8	10.2	12.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	17.0	4.0	19.0	4.0	17.0	7.0	16.0
Max Q Clear Time (g_c+I1), s	3.7	11.6	3.4	4.8	4.3	4.8	6.8	6.0
Green Ext Time (p_c), s	0.0	2.8	0.0	3.1	0.0	4.9	0.0	2.6

Intersection Summary	
HCM 2010 Ctrl Delay	18.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	414	372	84	142	393	531	83	1918	219	641	1356	503
Future Volume (veh/h)	414	372	84	142	393	531	83	1918	219	641	1356	503
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	414	372	84	142	393	531	83	1918	219	641	1356	503
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	351	1055	472	186	885	651	123	1727	538	549	2356	734
Arrive On Green	0.10	0.30	0.30	0.05	0.25	0.25	0.04	0.35	0.35	0.16	0.47	0.47
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	414	372	84	142	393	531	83	1918	219	641	1356	503
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	15.5	12.5	6.0	6.2	14.2	38.0	3.7	52.1	16.2	24.5	29.6	38.0
Cycle Q Clear(g_c), s	15.5	12.5	6.0	6.2	14.2	38.0	3.7	52.1	16.2	24.5	29.6	38.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	351	1055	472	186	885	651	123	1727	538	549	2356	734
V/C Ratio(X)	1.18	0.35	0.18	0.76	0.44	0.82	0.67	1.11	0.41	1.17	0.58	0.69
Avail Cap(c_a), veh/h	351	1055	472	256	885	651	170	1727	538	549	2356	734
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.5	41.1	38.9	70.2	47.4	38.9	71.6	49.2	37.4	63.0	28.8	31.0
Incr Delay (d2), s/veh	106.3	0.1	0.1	5.4	0.1	7.4	2.4	58.8	0.2	93.4	0.2	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.4	6.1	2.6	3.1	6.9	20.8	1.7	33.2	6.9	18.5	13.6	16.7
LnGrp Delay(d),s/veh	173.8	41.2	38.9	75.6	47.5	46.3	74.0	108.0	37.6	156.4	29.0	33.2
LnGrp LOS	F	D	D	E	D	D	E	F	D	F	C	C
Approach Vol, veh/h		870			1066			2220			2500	
Approach Delay, s/veh		104.1			50.6			99.8			62.5	
Approach LOS		F			D			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	75.9	21.0	42.6	30.0	56.9	13.7	49.9
Change Period (Y+Rc), s	5.5	4.8	5.5	* 4.6	5.5	* 4.8	5.5	4.6
Max Green Setting (Gmax), s	7.6	68.8	15.5	* 38	24.5	* 52	11.3	41.9
Max Q Clear Time (g_c+I1), s	5.7	40.0	17.5	40.0	26.5	54.1	8.2	14.5
Green Ext Time (p_c), s	0.0	8.8	0.0	0.0	0.0	0.0	0.1	1.4

Intersection Summary	
HCM 2010 Ctrl Delay	78.5
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	2	19	0	221	0	1902	52	58	1450	6
Future Volume (veh/h)	10	0	2	19	0	221	0	1902	52	58	1450	6
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	10	0	2	19	0	221	0	1902	52	58	1450	6
Adj No. of Lanes	0	1	0	1	0	2	1	3	1	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	13	0	3	181	0	323	3	2391	744	71	3123	13
Arrive On Green	0.01	0.00	0.01	0.10	0.00	0.10	0.00	0.48	0.48	0.04	0.61	0.61
Sat Flow, veh/h	1435	0	287	1757	0	3136	1740	4988	1553	1740	5127	21
Grp Volume(v), veh/h	12	0	0	19	0	221	0	1902	52	58	940	516
Grp Sat Flow(s),veh/h/ln	1722	0	0	1757	0	1568	1740	1663	1553	1740	1663	1823
Q Serve(g_s), s	0.4	0.0	0.0	0.6	0.0	3.9	0.0	18.4	1.0	1.9	8.8	8.8
Cycle Q Clear(g_c), s	0.4	0.0	0.0	0.6	0.0	3.9	0.0	18.4	1.0	1.9	8.8	8.8
Prop In Lane	0.83		0.17	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	16	0	0	181	0	323	3	2391	744	71	2026	1111
V/C Ratio(X)	0.77	0.00	0.00	0.11	0.00	0.68	0.00	0.80	0.07	0.81	0.46	0.46
Avail Cap(c_a), veh/h	90	0	0	367	0	656	91	2624	817	118	2026	1111
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.4	0.0	0.0	23.3	0.0	24.8	0.0	12.6	8.0	27.3	6.1	6.1
Incr Delay (d2), s/veh	24.4	0.0	0.0	0.1	0.0	1.0	0.0	2.4	0.1	8.0	0.5	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.3	0.0	1.7	0.0	8.8	0.5	1.1	4.1	4.6
LnGrp Delay(d),s/veh	52.7	0.0	0.0	23.4	0.0	25.8	0.0	15.0	8.2	35.3	6.7	7.1
LnGrp LOS	D			C		C		B	A	D	A	A
Approach Vol, veh/h		12			240			1954			1514	
Approach Delay, s/veh		52.7			25.6			14.8			7.9	
Approach LOS		D			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	40.0		6.0	7.5	32.5		11.4
Change Period (Y+Rc), s	* 4.6	5.0		5.5	* 5.1	* 5		5.5
Max Green Setting (Gmax), s	* 3	31.4		3.0	* 3.9	* 30		12.0
Max Q Clear Time (g_c+I1), s	0.0	10.8		2.4	3.9	20.4		5.9
Green Ext Time (p_c), s	0.0	20.4		0.0	0.0	7.1		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	12.8
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	109	23	169	158	702	34	1319	182	246	1080	89
Future Volume (veh/h)	44	109	23	169	158	702	34	1319	182	246	1080	89
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1845	1845	1845	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	44	109	23	169	158	702	34	1319	182	246	1080	89
Adj No. of Lanes	2	2	1	2	2	1	2	3	0	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	78	1042	466	233	1211	542	62	1402	193	306	1825	150
Arrive On Green	0.02	0.30	0.30	0.07	0.35	0.35	0.02	0.32	0.32	0.09	0.39	0.39
Sat Flow, veh/h	3375	3471	1553	3408	3505	1568	3375	4432	612	3375	4697	387
Grp Volume(v), veh/h	44	109	23	169	158	702	34	989	512	246	764	405
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1704	1752	1568	1688	1663	1719	1688	1663	1759
Q Serve(g_s), s	1.3	2.2	1.0	4.8	3.0	33.9	1.0	28.4	28.4	7.0	17.9	17.9
Cycle Q Clear(g_c), s	1.3	2.2	1.0	4.8	3.0	33.9	1.0	28.4	28.4	7.0	17.9	17.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.36	1.00		0.22
Lane Grp Cap(c), veh/h	78	1042	466	233	1211	542	62	1052	544	306	1292	683
V/C Ratio(X)	0.56	0.10	0.05	0.72	0.13	1.30	0.55	0.94	0.94	0.80	0.59	0.59
Avail Cap(c_a), veh/h	107	1058	473	250	1211	542	127	1091	564	306	1292	683
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.4	24.8	24.4	44.8	22.0	32.1	47.7	32.6	32.6	43.8	23.8	23.8
Incr Delay (d2), s/veh	2.3	0.0	0.0	7.7	0.0	146.4	2.7	14.5	23.2	13.3	0.5	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.1	0.4	2.5	1.5	36.7	0.5	15.2	17.0	3.8	8.3	8.8
LnGrp Delay(d),s/veh	49.7	24.8	24.4	52.5	22.0	178.5	50.5	47.2	55.9	57.1	24.3	24.8
LnGrp LOS	D	C	C	D	C	F	D	D	E	E	C	C
Approach Vol, veh/h		176			1029			1535			1415	
Approach Delay, s/veh		31.0			133.8			50.2			30.1	
Approach LOS		C			F			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	43.4	7.8	39.6	14.4	36.3	12.2	35.2
Change Period (Y+Rc), s	5.5	5.3	5.5	* 5.7	5.5	* 5.3	5.5	* 5.7
Max Green Setting (Gmax), s	3.7	37.3	3.1	* 34	8.9	* 32	7.2	* 30
Max Q Clear Time (g_c+I1), s	3.0	19.9	3.3	35.9	9.0	30.4	6.8	4.2
Green Ext Time (p_c), s	0.0	4.0	0.0	0.0	0.0	0.6	0.0	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	63.2
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	46	103	1363	24	61	1260
Future Volume (veh/h)	46	103	1363	24	61	1260
Number	3	18	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1827	1900	1827	1827
Adj Flow Rate, veh/h	46	103	1363	24	61	1260
Adj No. of Lanes	1	1	3	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	4	4	4	4
Cap, veh/h	163	146	1999	35	71	2028
Arrive On Green	0.09	0.09	0.40	0.40	0.04	0.58
Sat Flow, veh/h	1757	1568	5212	89	1740	3563
Grp Volume(v), veh/h	46	103	898	489	61	1260
Grp Sat Flow(s),veh/h/ln	1757	1568	1663	1811	1740	1736
Q Serve(g_s), s	0.8	2.0	7.1	7.1	1.1	7.6
Cycle Q Clear(g_c), s	0.8	2.0	7.1	7.1	1.1	7.6
Prop In Lane	1.00	1.00		0.05	1.00	
Lane Grp Cap(c), veh/h	163	146	1317	717	71	2028
V/C Ratio(X)	0.28	0.71	0.68	0.68	0.86	0.62
Avail Cap(c_a), veh/h	248	221	1929	1051	382	3287
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.5	14.0	8.0	8.0	15.2	4.3
Incr Delay (d2), s/veh	0.3	2.4	0.2	0.4	10.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.0	3.3	3.6	0.7	3.5
LnGrp Delay(d),s/veh	13.8	16.4	8.2	8.4	25.7	4.4
LnGrp LOS	B	B	A	A	C	A
Approach Vol, veh/h	149		1387			1321
Approach Delay, s/veh	15.6		8.3			5.4
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		23.4			6.0	17.4		8.5
Change Period (Y+Rc), s		4.8			* 4.7	4.8		5.5
Max Green Setting (Gmax), s		30.2			* 7	18.5		4.5
Max Q Clear Time (g_c+I1), s		9.6			3.1	9.1		4.0
Green Ext Time (p_c), s		4.3			0.0	3.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	7.3
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	337	1	73	609	366	89	1020	55	350	865	151
Future Volume (veh/h)	63	337	1	73	609	366	89	1020	55	350	865	151
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1792	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	63	337	1	73	609	366	89	1020	55	350	865	151
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	4	4	4	4	4	4
Cap, veh/h	68	534	2	92	568	483	111	1005	450	341	1459	653
Arrive On Green	0.04	0.30	0.30	0.05	0.32	0.32	0.06	0.29	0.29	0.20	0.42	0.42
Sat Flow, veh/h	1707	1786	5	1707	1792	1524	1740	3471	1553	1740	3471	1553
Grp Volume(v), veh/h	63	0	338	73	609	366	89	1020	55	350	865	151
Grp Sat Flow(s),veh/h/ln	1707	0	1792	1707	1792	1524	1740	1736	1553	1740	1736	1553
Q Serve(g_s), s	4.6	0.0	20.4	5.3	39.6	27.0	6.3	36.2	3.3	24.5	24.0	7.8
Cycle Q Clear(g_c), s	4.6	0.0	20.4	5.3	39.6	27.0	6.3	36.2	3.3	24.5	24.0	7.8
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	68	0	536	92	568	483	111	1005	450	341	1459	653
V/C Ratio(X)	0.92	0.00	0.63	0.80	1.07	0.76	0.80	1.01	0.12	1.03	0.59	0.23
Avail Cap(c_a), veh/h	68	0	536	116	568	483	175	1005	450	341	1459	653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.8	0.0	37.8	58.5	42.7	38.4	57.8	44.4	32.7	50.3	28.0	23.3
Incr Delay (d2), s/veh	81.0	0.0	1.8	20.0	58.7	6.1	5.9	32.1	0.0	55.6	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.0	10.3	3.0	28.8	12.2	3.2	21.8	1.4	17.0	11.6	3.3
LnGrp Delay(d),s/veh	140.8	0.0	39.7	78.5	101.4	44.5	63.6	76.5	32.7	105.9	28.4	23.3
LnGrp LOS	F		D	E	F	D	E	F	C	F	C	C
Approach Vol, veh/h		401			1048			1164			1366	
Approach Delay, s/veh		55.6			79.9			73.4			47.7	
Approach LOS		E			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	45.0	12.7	57.3	12.2	42.8	29.0	41.0
Change Period (Y+Rc), s	5.0	* 5.4	* 4.7	4.8	5.5	* 5.4	4.5	4.8
Max Green Setting (Gmax), s	5.0	* 40	* 13	47.9	8.5	* 36	24.5	36.2
Max Q Clear Time (g_c+I1), s	6.6	41.6	8.3	26.0	7.3	22.4	26.5	38.2
Green Ext Time (p_c), s	0.0	0.0	0.0	3.1	0.0	1.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	64.5
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	199	144	29	30	109	7	91	900	19	18	596	261
Future Volume (veh/h)	199	144	29	30	109	7	91	900	19	18	596	261
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1827	1827	1900	1845	1827	1827
Adj Flow Rate, veh/h	199	144	29	30	109	7	91	900	19	18	596	261
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	3	4	4
Cap, veh/h	248	426	362	36	178	11	114	1090	23	23	956	428
Arrive On Green	0.14	0.23	0.23	0.02	0.10	0.10	0.07	0.31	0.31	0.01	0.28	0.28
Sat Flow, veh/h	1757	1845	1568	1757	1715	110	1740	3477	73	1757	3471	1553
Grp Volume(v), veh/h	199	144	29	30	0	116	91	449	470	18	596	261
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1825	1740	1736	1814	1757	1736	1553
Q Serve(g_s), s	5.4	3.2	0.7	0.8	0.0	3.0	2.5	11.7	11.7	0.5	7.3	7.1
Cycle Q Clear(g_c), s	5.4	3.2	0.7	0.8	0.0	3.0	2.5	11.7	11.7	0.5	7.3	7.1
Prop In Lane	1.00		1.00	1.00		0.06	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	248	426	362	36	0	190	114	544	569	23	956	428
V/C Ratio(X)	0.80	0.34	0.08	0.83	0.00	0.61	0.80	0.83	0.83	0.77	0.62	0.61
Avail Cap(c_a), veh/h	306	582	495	194	0	475	157	729	762	112	1415	633
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.3	15.7	14.7	23.8	0.0	20.9	22.5	15.5	15.5	24.0	15.5	15.4
Incr Delay (d2), s/veh	9.5	0.2	0.0	16.2	0.0	1.2	12.4	4.4	4.2	17.6	0.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	1.6	0.3	0.6	0.0	1.5	1.6	6.2	6.4	0.3	3.5	3.1
LnGrp Delay(d),s/veh	29.8	15.8	14.8	40.0	0.0	22.1	34.9	19.9	19.7	41.6	15.7	15.9
LnGrp LOS	C	B	B	D		C	C	B	B	D	B	B
Approach Vol, veh/h		372			146			1010			875	
Approach Delay, s/veh		23.2			25.8			21.2			16.3	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	18.2	12.4	10.4	5.9	20.1	6.2	16.6
Change Period (Y+Rc), s	* 4.6	4.8	5.5	* 5.3	* 5.3	4.8	* 5.2	* 5.3
Max Green Setting (Gmax), s	* 4.4	19.9	8.5	* 13	* 3.1	20.5	* 5.4	* 15
Max Q Clear Time (g_c+I1), s	4.5	9.3	7.4	5.0	2.5	13.7	2.8	5.2
Green Ext Time (p_c), s	0.0	1.8	0.0	0.2	0.0	1.6	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	20.0
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

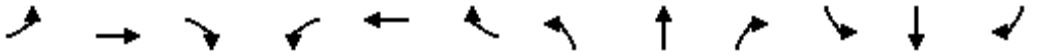
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	228	31	16	276	71	92	862	6	39	372	198
Future Volume (veh/h)	112	228	31	16	276	71	92	862	6	39	372	198
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1845	1845	1845	1827	1827	1845	1845	1827	1827
Adj Flow Rate, veh/h	112	228	31	16	276	71	92	862	6	39	372	198
Adj No. of Lanes	0	1	1	1	1	1	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	3	3	4	4
Cap, veh/h	119	242	312	253	265	226	112	849	729	48	789	670
Arrive On Green	0.20	0.20	0.20	0.14	0.14	0.14	0.06	0.46	0.46	0.03	0.43	0.43
Sat Flow, veh/h	598	1217	1568	1757	1845	1568	1740	1827	1568	1757	1827	1553
Grp Volume(v), veh/h	340	0	31	16	276	71	92	862	6	39	372	198
Grp Sat Flow(s),veh/h/ln	1815	0	1568	1757	1845	1568	1740	1827	1568	1757	1827	1553
Q Serve(g_s), s	27.2	0.0	2.4	1.2	21.2	6.0	7.7	68.5	0.3	3.3	21.4	12.2
Cycle Q Clear(g_c), s	27.2	0.0	2.4	1.2	21.2	6.0	7.7	68.5	0.3	3.3	21.4	12.2
Prop In Lane	0.33		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	361	0	312	253	265	226	112	849	729	48	789	670
V/C Ratio(X)	0.94	0.00	0.10	0.06	1.04	0.31	0.82	1.01	0.01	0.82	0.47	0.30
Avail Cap(c_a), veh/h	394	0	341	253	265	226	184	849	729	48	789	670
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.1	0.0	48.2	54.5	63.1	56.6	68.1	39.4	21.2	71.3	29.9	27.3
Incr Delay (d2), s/veh	28.5	0.0	0.1	0.1	66.0	0.8	5.5	34.6	0.0	66.7	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.6	0.0	1.0	0.6	15.6	2.6	3.9	42.6	0.1	2.5	10.8	5.2
LnGrp Delay(d),s/veh	86.7	0.0	48.3	54.6	129.1	57.3	73.5	74.1	21.2	138.0	30.0	27.4
LnGrp LOS	F		D	D	F	E	E	F	C	F	C	C
Approach Vol, veh/h		371			363			960			609	
Approach Delay, s/veh		83.5			111.8			73.7			36.1	
Approach LOS		F			F			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.2	68.7		28.0	9.3	73.6		36.4
Change Period (Y+Rc), s	* 4.7	5.1		6.8	* 5.3	5.1		7.1
Max Green Setting (Gmax), s	* 16	57.5		21.2	* 4	68.5		32.0
Max Q Clear Time (g_c+I1), s	9.7	23.4		23.2	5.3	70.5		29.2
Green Ext Time (p_c), s	0.0	1.5		0.0	0.0	0.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	71.3
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	332	126	29	317	7	345	862	188	10	311	97
Future Volume (veh/h)	80	332	126	29	317	7	345	862	188	10	311	97
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1827	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	80	332	126	29	317	7	345	862	188	10	311	97
Adj No. of Lanes	1	2	0	1	2	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	102	516	192	34	583	261	387	1338	292	13	694	213
Arrive On Green	0.06	0.21	0.21	0.02	0.17	0.17	0.22	0.47	0.47	0.01	0.27	0.27
Sat Flow, veh/h	1740	2476	923	1740	3471	1553	1740	2835	618	1740	2618	803
Grp Volume(v), veh/h	80	231	227	29	317	7	345	528	522	10	204	204
Grp Sat Flow(s),veh/h/ln	1740	1736	1664	1740	1736	1553	1740	1736	1718	1740	1736	1685
Q Serve(g_s), s	3.2	8.7	8.9	1.2	6.0	0.3	13.7	16.5	16.5	0.4	7.0	7.2
Cycle Q Clear(g_c), s	3.2	8.7	8.9	1.2	6.0	0.3	13.7	16.5	16.5	0.4	7.0	7.2
Prop In Lane	1.00		0.55	1.00		1.00	1.00		0.36	1.00		0.48
Lane Grp Cap(c), veh/h	102	362	347	34	583	261	387	819	811	13	460	447
V/C Ratio(X)	0.79	0.64	0.65	0.85	0.54	0.03	0.89	0.64	0.64	0.76	0.44	0.46
Avail Cap(c_a), veh/h	144	411	394	73	680	304	490	882	873	76	479	465
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.2	25.8	25.9	34.9	27.2	24.8	26.9	14.3	14.3	35.4	21.9	21.9
Incr Delay (d2), s/veh	10.8	8.4	9.3	19.2	3.6	0.2	13.5	3.9	3.9	27.6	3.1	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	5.0	5.0	0.7	3.2	0.1	8.1	8.7	8.6	0.3	3.7	3.8
LnGrp Delay(d),s/veh	44.0	34.2	35.2	54.1	30.8	25.0	40.4	18.2	18.2	63.0	24.9	25.3
LnGrp LOS	D	C	D	D	C	C	D	B	B	E	C	C
Approach Vol, veh/h		538			353			1395			418	
Approach Delay, s/veh		36.1			32.6			23.7			26.0	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.8	24.1	9.3	17.2	6.0	38.9	6.4	20.1
Change Period (Y+Rc), s	* 4.9	* 5.2	* 5.1	* 5.2	5.5	* 5.2	5.0	* 5.2
Max Green Setting (Gmax), s	* 20	* 20	* 5.9	* 14	3.1	* 36	3.0	* 17
Max Q Clear Time (g_c+I1), s	15.7	9.2	5.2	8.0	2.4	18.5	3.2	10.9
Green Ext Time (p_c), s	0.2	9.4	0.0	4.0	0.0	15.2	0.0	3.9

Intersection Summary	
HCM 2010 Ctrl Delay	27.7
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	313	274	46	309	44	654	1233	185	26	382	39
Future Volume (veh/h)	96	313	274	46	309	44	654	1233	185	26	382	39
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	96	313	274	46	309	44	654	1233	185	26	382	39
Adj No. of Lanes	2	2	1	2	2	1	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	138	915	409	82	858	384	717	1423	212	53	948	424
Arrive On Green	0.04	0.26	0.26	0.02	0.24	0.24	0.21	0.47	0.47	0.02	0.27	0.27
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	3030	452	3375	3471	1553
Grp Volume(v), veh/h	96	313	274	46	309	44	654	703	715	26	382	39
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1736	1747	1688	1736	1553
Q Serve(g_s), s	2.7	7.0	15.1	1.3	7.0	2.1	18.2	34.8	35.4	0.7	8.7	1.8
Cycle Q Clear(g_c), s	2.7	7.0	15.1	1.3	7.0	2.1	18.2	34.8	35.4	0.7	8.7	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	138	915	409	82	858	384	717	815	821	53	948	424
V/C Ratio(X)	0.70	0.34	0.67	0.56	0.36	0.11	0.91	0.86	0.87	0.49	0.40	0.09
Avail Cap(c_a), veh/h	138	1091	488	145	1091	488	753	827	832	109	994	445
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.6	28.9	31.9	46.5	30.1	28.3	37.1	22.8	22.9	47.0	28.6	26.1
Incr Delay (d2), s/veh	12.1	1.0	8.4	2.2	0.8	0.4	14.5	10.8	11.3	2.6	0.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	3.5	7.4	0.6	3.5	1.0	9.9	19.0	19.5	0.4	4.3	0.8
LnGrp Delay(d),s/veh	57.7	29.9	40.3	48.7	31.0	28.7	51.6	33.6	34.3	49.7	29.5	26.4
LnGrp LOS	E	C	D	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		683			399			2072			447	
Approach Delay, s/veh		38.0			32.8			39.5			30.4	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	31.8	9.4	29.2	7.0	50.8	7.8	30.8
Change Period (Y+Rc), s	5.5	* 5.5	5.5	5.6	5.5	* 5.5	5.5	* 5.6
Max Green Setting (Gmax), s	21.5	* 28	3.9	30.0	3.1	* 46	4.1	* 30
Max Q Clear Time (g_c+I1), s	20.2	10.7	4.7	9.0	2.7	37.4	3.3	17.1
Green Ext Time (p_c), s	0.2	15.0	0.0	11.4	0.0	7.9	0.0	8.1

Intersection Summary	
HCM 2010 Ctrl Delay	37.3
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	708	32	19	687	8	188	42	138	7	16	55
Future Volume (veh/h)	14	708	32	19	687	8	188	42	138	7	16	55
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	14	708	32	19	687	8	188	42	138	7	16	55
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	23	876	744	30	883	751	231	84	275	13	31	105
Arrive On Green	0.01	0.49	0.49	0.02	0.49	0.49	0.13	0.22	0.22	0.01	0.08	0.08
Sat Flow, veh/h	1707	1792	1524	1707	1792	1524	1757	379	1246	1757	366	1257
Grp Volume(v), veh/h	14	708	32	19	687	8	188	0	180	7	0	71
Grp Sat Flow(s),veh/h/ln	1707	1792	1524	1707	1792	1524	1757	0	1625	1757	0	1623
Q Serve(g_s), s	0.5	22.4	0.7	0.7	21.2	0.2	7.0	0.0	6.5	0.3	0.0	2.8
Cycle Q Clear(g_c), s	0.5	22.4	0.7	0.7	21.2	0.2	7.0	0.0	6.5	0.3	0.0	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.77	1.00		0.77
Lane Grp Cap(c), veh/h	23	876	744	30	883	751	231	0	359	13	0	136
V/C Ratio(X)	0.60	0.81	0.04	0.63	0.78	0.01	0.82	0.00	0.50	0.55	0.00	0.52
Avail Cap(c_a), veh/h	102	972	826	102	972	826	283	0	673	105	0	508
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.9	14.5	9.0	32.7	14.0	8.7	28.4	0.0	22.9	33.2	0.0	29.5
Incr Delay (d2), s/veh	15.5	5.4	0.0	13.5	4.3	0.0	12.8	0.0	1.0	22.4	0.0	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	12.3	0.3	0.5	11.4	0.1	4.2	0.0	3.0	0.2	0.0	1.4
LnGrp Delay(d),s/veh	48.5	19.9	9.0	46.2	18.3	8.7	41.2	0.0	23.9	55.6	0.0	32.3
LnGrp LOS	D	B	A	D	B	A	D		C	E		C
Approach Vol, veh/h		754			714			368			78	
Approach Delay, s/veh		19.9			19.0			32.7			34.4	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.7	39.2	13.2	10.0	4.4	39.5	4.0	19.2
Change Period (Y+Rc), s	3.5	6.4	4.4	* 4.4	3.5	6.4	3.5	4.4
Max Green Setting (Gmax), s	4.0	36.4	10.8	* 21	4.0	36.4	4.0	27.8
Max Q Clear Time (g_c+I1), s	2.7	24.4	9.0	4.8	2.5	23.2	2.3	8.5
Green Ext Time (p_c), s	0.0	8.4	0.1	0.9	0.0	9.1	0.0	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	22.6
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	145	184	101	114	328	137	110	437	105	70	250	52
Future Volume (veh/h)	145	184	101	114	328	137	110	437	105	70	250	52
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	145	184	101	114	328	137	110	437	105	70	250	52
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	184	467	245	145	446	183	140	511	435	87	455	387
Arrive On Green	0.10	0.21	0.21	0.08	0.18	0.18	0.08	0.28	0.28	0.05	0.25	0.25
Sat Flow, veh/h	1757	2224	1167	1757	2427	995	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	145	143	142	114	235	230	110	437	105	70	250	52
Grp Sat Flow(s),veh/h/ln	1757	1752	1639	1757	1752	1669	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	4.2	3.6	3.9	3.3	6.5	6.7	3.2	11.6	2.7	2.0	6.1	1.3
Cycle Q Clear(g_c), s	4.2	3.6	3.9	3.3	6.5	6.7	3.2	11.6	2.7	2.0	6.1	1.3
Prop In Lane	1.00		0.71	1.00		0.60	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	184	368	344	145	322	307	140	511	435	87	455	387
V/C Ratio(X)	0.79	0.39	0.41	0.79	0.73	0.75	0.78	0.85	0.24	0.80	0.55	0.13
Avail Cap(c_a), veh/h	299	1016	950	170	874	832	295	1105	939	153	959	815
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.6	17.6	17.7	23.3	19.9	20.0	23.4	17.7	14.5	24.3	17.0	15.2
Incr Delay (d2), s/veh	2.8	0.2	0.3	15.6	1.2	1.4	3.6	1.6	0.1	6.3	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	1.8	1.8	2.2	3.2	3.2	1.7	6.1	1.2	1.1	3.1	0.6
LnGrp Delay(d),s/veh	25.4	17.8	18.0	38.9	21.1	21.4	26.9	19.3	14.6	30.7	17.4	15.2
LnGrp LOS	C	B	B	D	C	C	C	B	B	C	B	B
Approach Vol, veh/h		430			579			652			372	
Approach Delay, s/veh		20.4			24.7			19.8			19.6	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	14.3	9.6	17.2	9.3	15.7	8.1	18.7
Change Period (Y+Rc), s	* 5.2	4.8	5.5	* 4.4	5.0	* 4.8	5.5	* 4.4
Max Green Setting (Gmax), s	* 8.8	25.8	8.7	* 27	5.0	* 30	4.5	* 31
Max Q Clear Time (g_c+I1), s	6.2	8.7	5.2	8.1	5.3	5.9	4.0	13.6
Green Ext Time (p_c), s	0.0	0.8	0.0	0.7	0.0	0.8	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	21.3
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	40	32	326	30	231	57	1384	277	523	976	59
Future Volume (veh/h)	76	40	32	326	30	231	57	1384	277	523	976	59
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	76	40	32	326	30	231	57	1384	277	523	976	59
Adj No. of Lanes	1	1	0	2	1	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	83	45	36	603	326	277	72	1640	511	523	2155	130
Arrive On Green	0.05	0.05	0.05	0.18	0.18	0.18	0.04	0.33	0.33	0.15	0.45	0.45
Sat Flow, veh/h	1757	950	760	3408	1845	1568	1740	4988	1553	3375	4810	290
Grp Volume(v), veh/h	76	0	72	326	30	231	57	1384	277	523	674	361
Grp Sat Flow(s),veh/h/ln	1757	0	1711	1704	1845	1568	1740	1663	1553	1688	1663	1776
Q Serve(g_s), s	3.2	0.0	3.1	6.5	1.0	10.6	2.4	19.1	10.8	11.5	10.4	10.5
Cycle Q Clear(g_c), s	3.2	0.0	3.1	6.5	1.0	10.6	2.4	19.1	10.8	11.5	10.4	10.5
Prop In Lane	1.00		0.44	1.00		1.00	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	83	0	81	603	326	277	72	1640	511	523	1490	795
V/C Ratio(X)	0.92	0.00	0.89	0.54	0.09	0.83	0.80	0.84	0.54	1.00	0.45	0.45
Avail Cap(c_a), veh/h	83	0	81	1102	596	507	171	1969	613	523	1523	813
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	0.0	35.2	27.8	25.6	29.5	35.3	23.1	20.4	31.4	14.2	14.2
Incr Delay (d2), s/veh	70.6	0.0	64.1	0.3	0.0	2.5	7.3	2.6	0.3	39.4	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	2.9	3.1	0.5	4.8	1.3	9.1	4.7	8.2	4.8	5.1
LnGrp Delay(d),s/veh	105.9	0.0	99.3	28.1	25.6	32.0	42.6	25.7	20.7	70.8	14.3	14.3
LnGrp LOS	F		F	C	C	C	D	C	C	F	B	B
Approach Vol, veh/h		148			587			1718			1558	
Approach Delay, s/veh		102.7			29.5			25.5			33.3	
Approach LOS		F			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.2	38.5		9.0	17.0	29.6		18.6
Change Period (Y+Rc), s	* 5.1	* 5.2		5.5	5.5	* 5.2		5.5
Max Green Setting (Gmax), s	* 7.3	* 34		3.5	11.5	* 29		24.0
Max Q Clear Time (g_c+I1), s	4.4	12.5		5.2	13.5	21.1		12.6
Green Ext Time (p_c), s	0.0	4.3		0.0	0.0	3.3		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	31.9
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	242	180	153	111	108	7	351	1491	222	42	634	171
Future Volume (veh/h)	242	180	153	111	108	7	351	1491	222	42	634	171
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	242	180	153	111	108	7	351	1491	222	42	634	171
Adj No. of Lanes	2	2	0	2	2	0	2	3	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	348	263	211	191	321	21	471	1903	593	87	930	416
Arrive On Green	0.10	0.14	0.14	0.06	0.10	0.10	0.14	0.38	0.38	0.03	0.27	0.27
Sat Flow, veh/h	3408	1852	1483	3408	3344	215	3375	4988	1553	3375	3471	1553
Grp Volume(v), veh/h	242	170	163	111	56	59	351	1491	222	42	634	171
Grp Sat Flow(s),veh/h/ln	1704	1752	1583	1704	1752	1807	1688	1663	1553	1688	1736	1553
Q Serve(g_s), s	3.9	5.2	5.6	1.8	1.7	1.7	5.6	14.9	5.8	0.7	9.2	5.1
Cycle Q Clear(g_c), s	3.9	5.2	5.6	1.8	1.7	1.7	5.6	14.9	5.8	0.7	9.2	5.1
Prop In Lane	1.00		0.94	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	348	249	225	191	168	173	471	1903	593	87	930	416
V/C Ratio(X)	0.70	0.68	0.73	0.58	0.33	0.34	0.75	0.78	0.37	0.49	0.68	0.41
Avail Cap(c_a), veh/h	392	962	869	428	993	1023	747	3231	1006	179	1677	750
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.5	23.0	23.2	26.0	23.9	23.9	23.3	15.4	12.6	27.2	18.5	17.0
Incr Delay (d2), s/veh	3.4	1.2	1.7	1.0	0.4	0.4	0.9	0.3	0.1	1.6	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	2.6	2.5	0.9	0.8	0.9	2.7	6.8	2.5	0.3	4.4	2.2
LnGrp Delay(d),s/veh	27.9	24.2	24.9	27.1	24.3	24.3	24.2	15.7	12.7	28.7	18.9	17.3
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		575			226			2064			847	
Approach Delay, s/veh		26.0			25.7			16.8			19.0	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.4	20.7	11.3	11.1	6.9	27.2	8.7	13.7
Change Period (Y+Rc), s	5.5	* 5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	12.5	* 27	6.5	* 32	3.0	* 37	7.1	* 31
Max Q Clear Time (g_c+I1), s	7.6	11.2	5.9	3.7	2.7	16.9	3.8	7.6
Green Ext Time (p_c), s	0.3	3.9	0.0	0.5	0.0	4.0	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	19.3
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	198	604	6	11	483	472	48	1559	26	328	457	180
Future Volume (veh/h)	198	604	6	11	483	472	48	1559	26	328	457	180
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1845	1845	1792	1792	1845	1845	1900	1827	1845	1827
Adj Flow Rate, veh/h	198	604	6	11	483	472	48	1559	26	328	457	0
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	3	3	6	6	3	3	3	4	3	4
Cap, veh/h	156	591	517	13	447	380	61	1362	23	244	1712	758
Arrive On Green	0.09	0.33	0.33	0.01	0.25	0.25	0.03	0.39	0.39	0.14	0.49	0.00
Sat Flow, veh/h	1707	1792	1568	1757	1792	1524	1757	3528	59	1740	3505	1553
Grp Volume(v), veh/h	198	604	6	11	483	472	48	774	811	328	457	0
Grp Sat Flow(s),veh/h/ln	1707	1792	1568	1757	1792	1524	1757	1752	1834	1740	1752	1553
Q Serve(g_s), s	13.7	49.5	0.4	0.9	37.4	37.4	4.1	57.9	57.9	21.0	11.5	0.0
Cycle Q Clear(g_c), s	13.7	49.5	0.4	0.9	37.4	37.4	4.1	57.9	57.9	21.0	11.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	156	591	517	13	447	380	61	676	708	244	1712	758
V/C Ratio(X)	1.27	1.02	0.01	0.85	1.08	1.24	0.78	1.14	1.15	1.35	0.27	0.00
Avail Cap(c_a), veh/h	156	591	517	35	447	380	85	676	708	244	1712	758
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	68.2	50.3	33.8	74.4	56.3	56.3	71.8	46.1	46.1	64.5	22.6	0.0
Incr Delay (d2), s/veh	162.2	42.5	0.0	79.1	66.0	129.6	17.2	81.4	81.8	180.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.5	31.5	0.2	0.7	26.7	29.5	2.3	43.3	45.4	22.3	5.6	0.0
LnGrp Delay(d),s/veh	230.3	92.7	33.8	153.4	122.3	185.9	89.0	127.5	127.8	245.2	22.6	0.0
LnGrp LOS	F	F	C	F	F	F	F	F	F	F	C	
Approach Vol, veh/h		808			966			1633			785	
Approach Delay, s/veh		126.0			153.7			126.5			115.6	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	78.4	18.0	43.0	26.0	63.0	5.9	55.1
Change Period (Y+Rc), s	* 5.4	5.1	* 4.3	5.6	5.0	5.1	* 4.8	* 5.6
Max Green Setting (Gmax), s	* 7.3	71.2	* 14	37.4	21.0	57.9	* 3	* 48
Max Q Clear Time (g_c+I1), s	6.1	13.5	15.7	39.4	23.0	59.9	2.9	51.5
Green Ext Time (p_c), s	0.0	12.6	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	130.6
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	216	49	54	387	34	177	1618	55	21	452	8
Future Volume (veh/h)	23	216	49	54	387	34	177	1618	55	21	452	8
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	23	216	49	54	387	34	177	1618	55	21	452	8
Adj No. of Lanes	2	1	0	2	1	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	48	363	82	95	439	39	213	1710	58	25	1363	24
Arrive On Green	0.01	0.25	0.25	0.03	0.26	0.26	0.12	0.49	0.49	0.01	0.39	0.39
Sat Flow, veh/h	3408	1456	330	3408	1672	147	1757	3459	117	1757	3524	62
Grp Volume(v), veh/h	23	0	265	54	0	421	177	817	856	21	225	235
Grp Sat Flow(s),veh/h/ln	1704	0	1786	1704	0	1819	1757	1752	1824	1757	1752	1834
Q Serve(g_s), s	0.7	0.0	12.9	1.5	0.0	21.9	9.7	43.6	44.1	1.2	8.9	8.9
Cycle Q Clear(g_c), s	0.7	0.0	12.9	1.5	0.0	21.9	9.7	43.6	44.1	1.2	8.9	8.9
Prop In Lane	1.00		0.18	1.00		0.08	1.00		0.06	1.00		0.03
Lane Grp Cap(c), veh/h	48	0	445	95	0	478	213	866	901	25	678	709
V/C Ratio(X)	0.47	0.00	0.60	0.57	0.00	0.88	0.83	0.94	0.95	0.85	0.33	0.33
Avail Cap(c_a), veh/h	107	0	570	128	0	591	345	896	933	55	678	709
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.3	0.0	32.7	47.4	0.0	34.9	42.4	23.7	23.8	48.6	21.3	21.3
Incr Delay (d2), s/veh	7.0	0.0	1.3	5.3	0.0	12.4	8.7	17.7	18.1	50.5	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	6.5	0.8	0.0	12.6	5.2	25.1	26.6	0.9	4.3	4.5
LnGrp Delay(d),s/veh	55.3	0.0	33.9	52.7	0.0	47.3	51.1	41.4	41.9	99.1	21.4	21.4
LnGrp LOS	E		C	D		D	D	D	D	F	C	C
Approach Vol, veh/h		288			475			1850			481	
Approach Delay, s/veh		35.7			47.9			42.5			24.8	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.5	43.2	8.2	29.8	6.9	53.8	6.9	31.1
Change Period (Y+Rc), s	5.5	5.0	5.5	* 5.2	5.5	5.0	5.5	* 5.2
Max Green Setting (Gmax), s	19.4	34.2	3.7	* 32	3.1	50.5	3.1	* 32
Max Q Clear Time (g_c+I1), s	11.7	10.9	3.5	14.9	3.2	46.1	2.7	23.9
Green Ext Time (p_c), s	0.4	10.6	0.0	2.8	0.0	2.7	0.0	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	40.0
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	118	58	70	144	113	206	1736	69	14	397	106
Future Volume (veh/h)	90	118	58	70	144	113	206	1736	69	14	397	106
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1833	1900	1845	1815	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	90	118	58	70	144	113	206	1736	69	14	397	106
Adj No. of Lanes	2	1	0	2	1	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	4	4	3	6	6	3	3	3	3	3	3
Cap, veh/h	121	204	100	114	164	128	246	1949	77	17	1199	317
Arrive On Green	0.04	0.18	0.18	0.03	0.17	0.17	0.14	0.57	0.57	0.01	0.44	0.44
Sat Flow, veh/h	3408	1161	571	3408	944	741	1757	3437	136	1757	2744	725
Grp Volume(v), veh/h	90	0	176	70	0	257	206	881	924	14	252	251
Grp Sat Flow(s),veh/h/ln	1704	0	1732	1704	0	1684	1757	1752	1821	1757	1752	1717
Q Serve(g_s), s	2.6	0.0	9.2	2.0	0.0	14.7	11.3	43.1	43.9	0.8	9.3	9.5
Cycle Q Clear(g_c), s	2.6	0.0	9.2	2.0	0.0	14.7	11.3	43.1	43.9	0.8	9.3	9.5
Prop In Lane	1.00		0.33	1.00		0.44	1.00		0.07	1.00		0.42
Lane Grp Cap(c), veh/h	121	0	304	114	0	292	246	994	1033	17	766	750
V/C Ratio(X)	0.74	0.00	0.58	0.61	0.00	0.88	0.84	0.89	0.89	0.82	0.33	0.33
Avail Cap(c_a), veh/h	121	0	549	114	0	530	437	1090	1133	55	766	750
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.1	0.0	37.3	47.0	0.0	39.7	41.3	18.6	18.7	48.7	18.2	18.3
Incr Delay (d2), s/veh	21.7	0.0	0.6	9.3	0.0	3.4	7.4	8.5	8.9	60.3	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	4.5	1.1	0.0	7.1	5.9	22.9	24.4	0.7	4.5	4.5
LnGrp Delay(d),s/veh	68.7	0.0	37.9	56.3	0.0	43.1	48.7	27.0	27.6	108.9	18.5	18.6
LnGrp LOS	E		D	E		D	D	C	C	F	B	B
Approach Vol, veh/h		266			327			2011			517	
Approach Delay, s/veh		48.3			45.9			29.5			21.0	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	61.0	9.0	22.1	19.3	48.1	8.8	22.3
Change Period (Y+Rc), s	5.5	* 5.1	5.5	* 5	5.5	* 5.1	5.5	* 5
Max Green Setting (Gmax), s	3.1	* 61	3.5	* 31	24.5	* 40	3.3	* 31
Max Q Clear Time (g_c+I1), s	2.8	45.9	4.6	16.7	13.3	11.5	4.0	11.2
Green Ext Time (p_c), s	0.0	9.9	0.0	0.4	0.6	15.9	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	31.4
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	380	217	130	33	130	323	76	1310	164	51	370	100
Future Volume (veh/h)	380	217	130	33	130	323	76	1310	164	51	370	100
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1827	1843	1900	1845	1845	1900
Adj Flow Rate, veh/h	380	217	130	33	130	323	76	1310	164	51	370	100
Adj No. of Lanes	2	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	3	3	3	3	3
Cap, veh/h	406	356	213	41	110	273	96	1337	166	65	1113	297
Arrive On Green	0.12	0.33	0.33	0.02	0.23	0.23	0.06	0.43	0.43	0.04	0.41	0.41
Sat Flow, veh/h	3408	1082	648	1757	470	1168	1740	3134	390	1757	2737	731
Grp Volume(v), veh/h	380	0	347	33	0	453	76	728	746	51	235	235
Grp Sat Flow(s),veh/h/ln	1704	0	1730	1757	0	1638	1740	1751	1774	1757	1752	1716
Q Serve(g_s), s	12.7	0.0	19.4	2.2	0.0	26.9	5.0	47.0	47.8	3.3	10.6	10.8
Cycle Q Clear(g_c), s	12.7	0.0	19.4	2.2	0.0	26.9	5.0	47.0	47.8	3.3	10.6	10.8
Prop In Lane	1.00		0.37	1.00		0.71	1.00		0.22	1.00		0.43
Lane Grp Cap(c), veh/h	406	0	570	41	0	383	96	747	757	65	713	698
V/C Ratio(X)	0.94	0.00	0.61	0.80	0.00	1.18	0.79	0.98	0.99	0.78	0.33	0.34
Avail Cap(c_a), veh/h	406	0	570	69	0	383	162	747	757	69	713	698
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.3	0.0	32.4	55.9	0.0	44.1	53.7	32.4	32.6	54.9	23.4	23.5
Incr Delay (d2), s/veh	29.2	0.0	1.4	12.2	0.0	105.8	5.3	26.8	28.9	37.6	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	0.0	9.5	1.2	0.0	23.4	2.5	28.2	29.5	2.3	5.2	5.1
LnGrp Delay(d),s/veh	79.4	0.0	33.7	68.1	0.0	149.9	59.0	59.2	61.5	92.6	23.7	23.7
LnGrp LOS	E		C	E		F	E	E	E	F	C	C
Approach Vol, veh/h		727			486			1550			521	
Approach Delay, s/veh		57.6			144.4			60.3			30.4	
Approach LOS		E			F			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	54.2	19.2	32.3	11.7	51.9	8.2	43.3
Change Period (Y+Rc), s	* 5.1	5.1	5.5	* 5.4	* 5.3	5.1	5.5	* 5.4
Max Green Setting (Gmax), s	* 4.5	49.1	13.7	* 27	* 11	42.7	4.5	* 36
Max Q Clear Time (g_c+I1), s	5.3	49.8	14.7	28.9	7.0	12.8	4.2	21.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	12.4	0.0	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	67.4
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	743	2	448	791	52	6	529	695	40	216	333
Future Volume (veh/h)	188	743	2	448	791	52	6	529	695	40	216	333
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1793	1900	1845	1792	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	188	743	2	448	791	52	6	529	695	40	216	333
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	6	6	3	6	3	3	3	3	3	3	3
Cap, veh/h	209	711	2	363	994	457	7	324	425	35	304	468
Arrive On Green	0.12	0.20	0.20	0.21	0.29	0.29	0.00	0.45	0.45	0.02	0.46	0.46
Sat Flow, veh/h	1757	3485	9	1757	3406	1568	1757	725	952	1757	656	1011
Grp Volume(v), veh/h	188	363	382	448	791	52	6	0	1224	40	0	549
Grp Sat Flow(s),veh/h/ln	1757	1703	1791	1757	1703	1568	1757	0	1677	1757	0	1666
Q Serve(g_s), s	15.8	30.6	30.6	31.0	32.1	3.6	0.5	0.0	67.0	3.0	0.0	39.6
Cycle Q Clear(g_c), s	15.8	30.6	30.6	31.0	32.1	3.6	0.5	0.0	67.0	3.0	0.0	39.6
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.57	1.00		0.61
Lane Grp Cap(c), veh/h	209	347	365	363	994	457	7	0	749	35	0	771
V/C Ratio(X)	0.90	1.05	1.05	1.23	0.80	0.11	0.92	0.00	1.63	1.14	0.00	0.71
Avail Cap(c_a), veh/h	211	347	365	363	994	457	23	0	749	35	0	771
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	65.2	59.7	59.7	59.5	49.0	38.9	74.7	0.0	41.5	73.5	0.0	32.3
Incr Delay (d2), s/veh	35.8	60.6	59.4	126.9	4.8	0.2	140.9	0.0	291.5	196.1	0.0	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.8	20.2	21.1	27.8	15.8	1.6	0.5	0.0	91.6	3.4	0.0	18.8
LnGrp Delay(d),s/veh	101.0	120.3	119.1	186.4	53.8	39.1	215.6	0.0	333.0	275.3	0.0	35.3
LnGrp LOS	F	F	F	F	D	D	F		F	F		D
Approach Vol, veh/h		933			1291			1230			589	
Approach Delay, s/veh		115.9			99.3			332.5			51.6	
Approach LOS		F			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.0	37.0	4.6	73.4	21.8	50.2	7.0	71.0
Change Period (Y+Rc), s	4.0	6.4	4.0	4.0	4.0	6.4	4.0	4.0
Max Green Setting (Gmax), s	31.0	30.6	2.0	68.0	18.0	43.6	3.0	67.0
Max Q Clear Time (g_c+I1), s	33.0	32.6	2.5	41.6	17.8	34.1	5.0	69.0
Green Ext Time (p_c), s	0.0	0.0	0.0	14.3	0.0	6.6	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	167.1
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	332	47	320	25	63	161	205	643	13	105	1286	892
Future Volume (veh/h)	332	47	320	25	63	161	205	643	13	105	1286	892
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1900	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	366	0	320	25	63	161	205	643	13	105	1286	0
Adj No. of Lanes	2	0	1	0	1	1	1	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	812	0	362	37	94	113	243	1793	36	133	1445	450
Arrive On Green	0.23	0.00	0.23	0.07	0.07	0.07	0.14	0.36	0.36	0.08	0.29	0.00
Sat Flow, veh/h	3480	0	1553	517	1302	1568	1740	5032	102	1740	4988	1553
Grp Volume(v), veh/h	366	0	320	88	0	161	205	424	232	105	1286	0
Grp Sat Flow(s),veh/h/ln	1740	0	1553	1819	0	1568	1740	1663	1809	1740	1663	1553
Q Serve(g_s), s	6.9	0.0	15.2	3.6	0.0	5.5	8.8	7.2	7.2	4.5	18.9	0.0
Cycle Q Clear(g_c), s	6.9	0.0	15.2	3.6	0.0	5.5	8.8	7.2	7.2	4.5	18.9	0.0
Prop In Lane	1.00		1.00	0.28		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	812	0	362	131	0	113	243	1185	645	133	1445	450
V/C Ratio(X)	0.45	0.00	0.88	0.67	0.00	1.43	0.84	0.36	0.36	0.79	0.89	0.00
Avail Cap(c_a), veh/h	1229	0	548	131	0	113	257	1185	645	275	1690	526
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	25.1	0.0	28.3	34.6	0.0	35.5	32.1	18.2	18.2	34.7	26.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	7.6	10.5	0.0	235.8	19.7	0.1	0.1	3.8	5.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	7.2	2.2	0.0	9.8	5.5	3.3	3.6	2.3	9.3	0.0
LnGrp Delay(d),s/veh	25.2	0.0	35.9	45.1	0.0	271.3	51.8	18.2	18.3	38.5	31.1	0.0
LnGrp LOS	C		D	D		F	D	B	B	D	C	
Approach Vol, veh/h		686			249			861			1391	
Approach Delay, s/veh		30.2			191.3			26.2			31.7	
Approach LOS		C			F			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.4	26.9		11.0	10.3	32.0		23.1
Change Period (Y+Rc), s	* 4.7	4.8		5.5	* 4.4	* 4.8		5.3
Max Green Setting (Gmax), s	* 11	25.9		5.5	* 12	* 26		27.0
Max Q Clear Time (g_c+I1), s	10.8	20.9		7.5	6.5	9.2		17.2
Green Ext Time (p_c), s	0.0	1.3		0.0	0.0	3.0		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	42.4
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	227	125	35	50	130	281	37	1205	58	695	1441	659
Future Volume (veh/h)	227	125	35	50	130	281	37	1205	58	695	1441	659
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	227	125	35	50	130	281	37	1205	58	695	1441	659
Adj No. of Lanes	2	3	0	2	1	2	2	3	0	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	305	652	170	92	185	1036	72	1482	71	784	2568	800
Arrive On Green	0.09	0.16	0.16	0.03	0.10	0.10	0.02	0.30	0.30	0.23	0.51	0.51
Sat Flow, veh/h	3408	3979	1040	3514	1845	3136	3408	4923	237	3408	5036	1568
Grp Volume(v), veh/h	227	104	56	50	130	281	37	822	441	695	1441	659
Grp Sat Flow(s),veh/h/ln	1704	1679	1661	1757	1845	1568	1704	1679	1803	1704	1679	1568
Q Serve(g_s), s	5.2	2.1	2.3	1.1	5.5	5.3	0.9	18.1	18.1	15.8	15.7	28.4
Cycle Q Clear(g_c), s	5.2	2.1	2.3	1.1	5.5	5.3	0.9	18.1	18.1	15.8	15.7	28.4
Prop In Lane	1.00		0.63	1.00		1.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	305	550	272	92	185	1036	72	1010	543	784	2568	800
V/C Ratio(X)	0.74	0.19	0.21	0.54	0.70	0.27	0.52	0.81	0.81	0.89	0.56	0.82
Avail Cap(c_a), veh/h	324	1394	690	185	692	1898	128	1188	638	951	2980	928
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.5	28.8	28.9	38.4	34.8	19.7	38.7	25.9	25.9	29.8	13.4	16.6
Incr Delay (d2), s/veh	7.2	0.1	0.1	1.8	1.8	0.1	2.1	3.2	5.9	7.8	0.1	4.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	1.0	1.1	0.6	2.9	2.3	0.4	8.8	9.8	8.3	7.2	13.1
LnGrp Delay(d),s/veh	42.7	28.9	29.1	40.3	36.6	19.7	40.9	29.1	31.7	37.6	13.5	21.2
LnGrp LOS	D	C	C	D	D	B	D	C	C	D	B	C
Approach Vol, veh/h		387			461			1300			2795	
Approach Delay, s/veh		37.0			26.7			30.3			21.3	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	46.4	12.7	13.7	23.9	29.7	7.6	18.8
Change Period (Y+Rc), s	5.5	5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	3.0	47.3	7.6	* 30	22.3	* 28	4.2	* 33
Max Q Clear Time (g_c+I1), s	2.9	30.4	7.2	7.5	17.8	20.1	3.1	4.3
Green Ext Time (p_c), s	0.0	5.3	0.0	0.6	0.6	3.9	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	25.4
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	64	13	38	46	66	37	1164	63	133	846	215
Future Volume (veh/h)	105	64	13	38	46	66	37	1164	63	133	846	215
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	91	84	13	38	46	66	37	1164	63	133	846	215
Adj No. of Lanes	1	1	0	1	1	1	1	3	0	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	155	138	21	128	134	114	43	1546	84	199	1608	406
Arrive On Green	0.09	0.09	0.09	0.07	0.07	0.07	0.02	0.32	0.32	0.11	0.40	0.40
Sat Flow, veh/h	1757	1561	242	1757	1845	1568	1757	4891	265	1757	4010	1013
Grp Volume(v), veh/h	91	0	97	38	46	66	37	799	428	133	707	354
Grp Sat Flow(s),veh/h/ln	1757	0	1802	1757	1845	1568	1757	1679	1798	1757	1679	1666
Q Serve(g_s), s	2.5	0.0	2.6	1.0	1.2	2.0	1.0	10.6	10.6	3.6	8.0	8.0
Cycle Q Clear(g_c), s	2.5	0.0	2.6	1.0	1.2	2.0	1.0	10.6	10.6	3.6	8.0	8.0
Prop In Lane	1.00		0.13	1.00		1.00	1.00		0.15	1.00		0.61
Lane Grp Cap(c), veh/h	155	0	159	128	134	114	43	1061	568	199	1347	668
V/C Ratio(X)	0.59	0.00	0.61	0.30	0.34	0.58	0.86	0.75	0.75	0.67	0.53	0.53
Avail Cap(c_a), veh/h	987	0	1013	952	1000	850	127	1738	931	310	2075	1030
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.8	0.0	21.9	21.9	22.0	22.4	24.2	15.3	15.3	21.2	11.3	11.3
Incr Delay (d2), s/veh	1.3	0.0	1.4	0.5	0.6	1.7	16.3	0.4	0.8	1.4	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	1.4	0.5	0.6	0.9	0.7	4.9	5.4	1.8	3.7	3.7
LnGrp Delay(d),s/veh	23.1	0.0	23.3	22.4	22.5	24.1	40.5	15.7	16.1	22.6	11.4	11.6
LnGrp LOS	C		C	C	C	C	D	B	B	C	B	B
Approach Vol, veh/h		188			150			1264			1194	
Approach Delay, s/veh		23.2			23.2			16.5			12.7	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.0	24.8		9.1	10.3	20.6		9.9
Change Period (Y+Rc), s	* 4.8	4.8		5.5	* 4.6	4.8		5.5
Max Green Setting (Gmax), s	* 3.6	30.8		27.0	* 8.8	25.8		28.0
Max Q Clear Time (g_c+I1), s	3.0	10.0		4.0	5.6	12.6		4.6
Green Ext Time (p_c), s	0.0	3.3		0.1	0.0	3.1		0.2

Intersection Summary			
HCM 2010 Ctrl Delay		15.7	
HCM 2010 LOS		B	

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

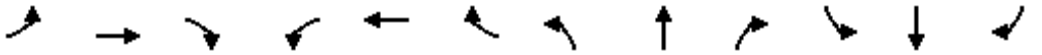
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	319	171	76	301	187	293	939	98	123	346	164
Future Volume (veh/h)	126	319	171	76	301	187	293	939	98	123	346	164
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	126	319	171	76	301	187	293	939	98	123	346	164
Adj No. of Lanes	2	3	0	2	3	1	2	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	214	663	309	138	882	274	412	1285	400	210	669	298
Arrive On Green	0.06	0.20	0.20	0.04	0.18	0.18	0.12	0.26	0.26	0.06	0.20	0.20
Sat Flow, veh/h	3408	3357	1568	3408	5036	1568	3408	5036	1568	3408	3414	1520
Grp Volume(v), veh/h	126	319	171	76	301	187	293	939	98	123	340	170
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1679	1568	1704	1679	1576
Q Serve(g_s), s	1.8	4.2	4.9	1.1	2.6	5.6	4.2	8.6	2.5	1.8	4.6	4.9
Cycle Q Clear(g_c), s	1.8	4.2	4.9	1.1	2.6	5.6	4.2	8.6	2.5	1.8	4.6	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.96
Lane Grp Cap(c), veh/h	214	663	309	138	882	274	412	1285	400	210	658	309
V/C Ratio(X)	0.59	0.48	0.55	0.55	0.34	0.68	0.71	0.73	0.24	0.59	0.52	0.55
Avail Cap(c_a), veh/h	237	1909	892	264	2904	904	440	3084	960	291	1909	896
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.9	17.9	18.2	23.7	18.2	19.4	21.3	17.1	14.9	23.0	18.1	18.2
Incr Delay (d2), s/veh	1.6	0.2	0.6	1.3	0.1	1.1	4.0	0.3	0.1	1.0	0.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.0	2.2	0.5	1.2	2.5	2.2	3.9	1.1	0.8	2.1	2.2
LnGrp Delay(d),s/veh	24.6	18.1	18.8	25.0	18.3	20.5	25.3	17.4	15.0	23.9	18.3	18.8
LnGrp LOS	C	B	B	C	B	C	C	B	B	C	B	B
Approach Vol, veh/h		616			564			1330			633	
Approach Delay, s/veh		19.6			19.9			19.0			19.5	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.6	15.5	8.7	14.6	8.6	18.4	7.5	15.7
Change Period (Y+Rc), s	5.5	* 5.6	5.5	5.8	5.5	* 5.6	5.5	5.8
Max Green Setting (Gmax), s	6.5	* 29	3.5	29.0	4.3	* 31	3.9	28.6
Max Q Clear Time (g_c+I1), s	6.2	6.9	3.8	7.6	3.8	10.6	3.1	6.9
Green Ext Time (p_c), s	0.0	2.3	0.0	1.2	0.0	2.3	0.0	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	19.4
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	349	178	12	50	264	247	14	372	69	58	153	101
Future Volume (veh/h)	349	178	12	50	264	247	14	372	69	58	153	101
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	349	178	12	50	264	247	14	372	69	58	153	101
Adj No. of Lanes	1	2	0	1	1	1	1	1	0	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	347	1192	80	62	349	297	18	416	77	105	545	463
Arrive On Green	0.20	0.36	0.36	0.04	0.19	0.19	0.01	0.27	0.27	0.03	0.30	0.30
Sat Flow, veh/h	1757	3335	223	1757	1845	1568	1757	1514	281	3408	1845	1568
Grp Volume(v), veh/h	349	93	97	50	264	247	14	0	441	58	153	101
Grp Sat Flow(s),veh/h/ln	1757	1752	1805	1757	1845	1568	1757	0	1795	1704	1845	1568
Q Serve(g_s), s	13.5	2.5	2.5	1.9	9.2	10.4	0.5	0.0	16.1	1.1	4.4	3.3
Cycle Q Clear(g_c), s	13.5	2.5	2.5	1.9	9.2	10.4	0.5	0.0	16.1	1.1	4.4	3.3
Prop In Lane	1.00		0.12	1.00		1.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	347	626	645	62	349	297	18	0	493	105	545	463
V/C Ratio(X)	1.00	0.15	0.15	0.81	0.76	0.83	0.78	0.00	0.89	0.55	0.28	0.22
Avail Cap(c_a), veh/h	347	1029	1060	188	908	772	77	0	902	150	919	781
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.4	14.9	14.9	32.7	26.2	26.6	33.7	0.0	23.8	32.6	18.5	18.1
Incr Delay (d2), s/veh	49.5	0.0	0.0	8.7	1.3	2.3	22.8	0.0	2.3	1.7	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.2	1.2	1.2	1.1	4.8	4.7	0.4	0.0	8.3	0.6	2.2	1.4
LnGrp Delay(d),s/veh	76.9	14.9	14.9	41.4	27.5	29.0	56.5	0.0	26.2	34.3	18.6	18.2
LnGrp LOS	F	B	B	D	C	C	E		C	C	B	B
Approach Vol, veh/h		539			561			455			312	
Approach Delay, s/veh		55.0			29.4			27.1			21.4	
Approach LOS		E			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	17.8	6.2	25.3	7.5	29.3	7.6	23.9
Change Period (Y+Rc), s	5.5	* 4.9	5.5	* 5.1	* 5.1	* 4.9	5.5	* 5.1
Max Green Setting (Gmax), s	13.5	* 34	3.0	* 34	* 7.3	* 40	3.0	* 34
Max Q Clear Time (g_c+I1), s	15.5	12.4	2.5	6.4	3.9	4.5	3.1	18.1
Green Ext Time (p_c), s	0.0	0.6	0.0	0.6	0.0	0.6	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	34.9
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	97	60	417	297	172	77	1283	94	224	1922	375
Future Volume (veh/h)	184	97	60	417	297	172	77	1283	94	224	1922	375
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	184	97	60	417	320	156	77	1283	94	224	1922	375
Adj No. of Lanes	2	2	1	2	2	1	2	4	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	256	440	197	491	702	437	129	2493	616	299	2230	694
Arrive On Green	0.07	0.13	0.13	0.14	0.19	0.19	0.04	0.40	0.40	0.09	0.45	0.45
Sat Flow, veh/h	3408	3505	1568	3514	3689	1568	3375	6285	1553	3375	4988	1553
Grp Volume(v), veh/h	184	97	60	417	320	156	77	1283	94	224	1922	375
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1757	1845	1568	1688	1571	1553	1688	1663	1553
Q Serve(g_s), s	4.7	2.2	3.1	10.3	6.8	7.1	2.0	13.8	3.5	5.8	30.9	15.7
Cycle Q Clear(g_c), s	4.7	2.2	3.1	10.3	6.8	7.1	2.0	13.8	3.5	5.8	30.9	15.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	256	440	197	491	702	437	129	2493	616	299	2230	694
V/C Ratio(X)	0.72	0.22	0.30	0.85	0.46	0.36	0.60	0.51	0.15	0.75	0.86	0.54
Avail Cap(c_a), veh/h	325	1142	511	545	1417	741	129	2493	616	485	2336	727
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.3	35.0	35.4	37.4	31.9	25.7	42.1	20.4	17.2	39.6	22.1	17.9
Incr Delay (d2), s/veh	3.5	0.4	1.3	10.2	1.3	1.4	5.2	0.1	0.0	1.4	4.3	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	1.1	1.4	5.7	3.6	3.2	1.0	6.0	1.5	2.7	14.9	7.1
LnGrp Delay(d),s/veh	43.8	35.4	36.7	47.6	33.2	27.1	47.4	20.4	17.3	41.0	26.4	20.2
LnGrp LOS	D	D	D	D	C	C	D	C	B	D	C	C
Approach Vol, veh/h		341			893			1454			2521	
Approach Delay, s/veh		40.1			38.8			21.7			26.8	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	45.2	12.2	22.8	13.4	40.7	17.9	17.0
Change Period (Y+Rc), s	5.5	* 5.4	5.5	5.8	5.5	* 5.4	5.5	* 5.8
Max Green Setting (Gmax), s	3.4	* 42	8.5	34.2	12.8	* 32	13.8	* 29
Max Q Clear Time (g_c+I1), s	4.0	32.9	6.7	9.1	7.8	15.8	12.3	5.1
Green Ext Time (p_c), s	0.0	6.9	0.0	6.2	0.1	16.0	0.1	6.1

Intersection Summary	
HCM 2010 Ctrl Delay	28.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	233	118	111	331	135	316	1264	41	221	887	320
Future Volume (veh/h)	126	233	118	111	331	135	316	1264	41	221	887	320
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1827	1827	1827	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	126	233	118	111	331	135	316	1264	41	221	887	320
Adj No. of Lanes	2	2	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	4	4	4	4	4	4
Cap, veh/h	182	609	272	165	843	263	375	2496	777	280	2355	733
Arrive On Green	0.05	0.17	0.17	0.05	0.17	0.17	0.11	0.50	0.50	0.08	0.47	0.47
Sat Flow, veh/h	3408	3505	1568	3375	4988	1553	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	126	233	118	111	331	135	316	1264	41	221	887	320
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1688	1663	1553	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	4.3	6.9	7.9	3.8	6.9	9.3	10.8	19.9	1.6	7.6	13.4	16.1
Cycle Q Clear(g_c), s	4.3	6.9	7.9	3.8	6.9	9.3	10.8	19.9	1.6	7.6	13.4	16.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	182	609	272	165	843	263	375	2496	777	280	2355	733
V/C Ratio(X)	0.69	0.38	0.43	0.67	0.39	0.51	0.84	0.51	0.05	0.79	0.38	0.44
Avail Cap(c_a), veh/h	565	1013	453	560	1451	452	560	2732	851	560	2723	848
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.7	43.0	43.4	55.0	43.5	44.5	51.2	19.7	15.1	52.9	19.9	20.6
Incr Delay (d2), s/veh	1.7	0.8	2.2	1.8	1.0	5.3	4.7	0.3	0.1	1.9	0.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	3.4	3.6	1.8	3.3	4.4	5.3	9.2	0.7	3.6	6.2	7.0
LnGrp Delay(d),s/veh	56.4	43.8	45.6	56.8	44.5	49.7	56.0	20.0	15.1	54.8	20.1	21.5
LnGrp LOS	E	D	D	E	D	D	E	B	B	D	C	C
Approach Vol, veh/h		477			577			1621			1428	
Approach Delay, s/veh		47.6			48.1			26.9			25.8	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.6	61.3	11.8	25.9	15.3	64.6	11.2	26.4
Change Period (Y+Rc), s	5.5	* 5.8	5.5	* 6	5.5	* 5.8	5.5	6.0
Max Green Setting (Gmax), s	19.5	* 64	19.5	* 34	19.5	* 64	19.5	34.0
Max Q Clear Time (g_c+I1), s	12.8	18.1	6.3	11.3	9.6	21.9	5.8	9.9
Green Ext Time (p_c), s	0.3	37.4	0.1	8.6	0.2	35.0	0.1	8.8

Intersection Summary	
HCM 2010 Ctrl Delay	31.9
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	70	174	12	30	14	468	1538	5	51	685	179
Future Volume (veh/h)	55	70	174	12	30	14	468	1538	5	51	685	179
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	55	70	174	12	30	14	468	1538	5	51	685	179
Adj No. of Lanes	2	1	2	1	1	0	2	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	110	194	291	16	98	46	606	1952	6	61	1176	366
Arrive On Green	0.03	0.11	0.11	0.01	0.08	0.08	0.18	0.38	0.38	0.04	0.24	0.24
Sat Flow, veh/h	3408	1845	2760	1757	1191	556	3375	5132	17	1740	4988	1553
Grp Volume(v), veh/h	55	70	174	12	0	44	468	996	547	51	685	179
Grp Sat Flow(s),veh/h/ln	1704	1845	1380	1757	0	1747	1688	1663	1824	1740	1663	1553
Q Serve(g_s), s	0.8	1.7	3.0	0.3	0.0	1.2	6.5	13.0	13.0	1.4	6.0	4.9
Cycle Q Clear(g_c), s	0.8	1.7	3.0	0.3	0.0	1.2	6.5	13.0	13.0	1.4	6.0	4.9
Prop In Lane	1.00		1.00	1.00		0.32	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	110	194	291	16	0	144	606	1264	694	61	1176	366
V/C Ratio(X)	0.50	0.36	0.60	0.74	0.00	0.31	0.77	0.79	0.79	0.84	0.58	0.49
Avail Cap(c_a), veh/h	208	1242	1859	122	0	1208	858	3051	1674	209	3846	1197
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.4	20.4	21.0	24.3	0.0	21.2	19.2	13.5	13.5	23.6	16.6	16.2
Incr Delay (d2), s/veh	1.3	0.4	0.7	21.4	0.0	0.4	1.6	0.4	0.8	10.5	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.9	1.1	0.3	0.0	0.6	3.1	6.0	6.7	0.9	2.7	2.1
LnGrp Delay(d),s/veh	24.7	20.9	21.7	45.7	0.0	21.7	20.8	13.9	14.2	34.1	16.8	16.6
LnGrp LOS	C	C	C	D		C	C	B	B	C	B	B
Approach Vol, veh/h		299			56			2011			915	
Approach Delay, s/veh		22.1			26.8			15.6			17.7	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.3	17.6	7.1	10.1	7.2	24.7	6.0	11.3
Change Period (Y+Rc), s	5.5	6.0	5.5	* 6.1	5.5	* 6	5.5	* 6.1
Max Green Setting (Gmax), s	12.5	37.9	3.0	* 34	5.9	* 45	3.4	* 33
Max Q Clear Time (g_c+I1), s	8.5	8.0	2.8	3.2	3.4	15.0	2.3	5.0
Green Ext Time (p_c), s	0.3	3.6	0.0	0.3	0.0	3.6	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	17.0
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	38	66	37	161	203	409	1729	57	52	486	78
Future Volume (veh/h)	170	38	66	37	161	203	409	1729	57	52	486	78
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1759	1759	1759	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	170	38	66	37	161	203	409	1729	57	52	486	78
Adj No. of Lanes	2	2	0	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	8	8	8	4	4	4	4	4	4
Cap, veh/h	189	353	316	74	564	252	503	1988	619	96	1386	432
Arrive On Green	0.06	0.20	0.20	0.02	0.17	0.17	0.15	0.40	0.40	0.03	0.28	0.28
Sat Flow, veh/h	3408	1752	1568	3250	3343	1495	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	170	38	66	37	161	203	409	1729	57	52	486	78
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1625	1671	1495	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	3.1	1.1	2.2	0.7	2.7	8.2	7.4	20.1	1.4	1.0	4.9	2.4
Cycle Q Clear(g_c), s	3.1	1.1	2.2	0.7	2.7	8.2	7.4	20.1	1.4	1.0	4.9	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	189	353	316	74	564	252	503	1988	619	96	1386	432
V/C Ratio(X)	0.90	0.11	0.21	0.50	0.29	0.80	0.81	0.87	0.09	0.54	0.35	0.18
Avail Cap(c_a), veh/h	189	625	559	155	1166	522	508	2333	726	161	1819	566
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.6	20.6	21.0	30.5	22.9	25.2	26.0	17.5	11.8	30.2	18.2	17.3
Incr Delay (d2), s/veh	37.7	0.0	0.1	1.9	0.1	2.3	9.0	3.0	0.0	1.8	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.5	1.0	0.3	1.2	3.6	4.0	9.7	0.6	0.5	2.3	1.0
LnGrp Delay(d),s/veh	67.3	20.6	21.1	32.4	23.0	27.5	35.0	20.5	11.9	32.0	18.3	17.4
LnGrp LOS	E	C	C	C	C	C	C	C	B	C	B	B
Approach Vol, veh/h		274			401			2195			616	
Approach Delay, s/veh		49.7			26.2			22.9			19.3	
Approach LOS		D			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.9	23.0	9.0	16.1	7.3	30.6	6.9	18.2
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	9.5	23.0	3.5	22.0	3.0	29.5	3.0	22.5
Max Q Clear Time (g_c+I1), s	9.4	6.9	5.1	10.2	3.0	22.1	2.7	4.2
Green Ext Time (p_c), s	0.0	4.0	0.0	0.4	0.0	3.0	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	24.8
HCM 2010 LOS	C



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	47	255	1657	43	53	518
Future Volume (veh/h)	47	255	1657	43	53	518
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1827	1827	1827	1827
Adj Flow Rate, veh/h	47	255	1657	43	53	518
Adj No. of Lanes	2	1	3	1	2	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	4	4	4	4
Cap, veh/h	402	185	2140	666	114	2107
Arrive On Green	0.12	0.12	0.43	0.43	0.03	0.61
Sat Flow, veh/h	3408	1568	5152	1553	3375	3563
Grp Volume(v), veh/h	47	255	1657	43	53	518
Grp Sat Flow(s),veh/h/ln	1704	1568	1663	1553	1688	1736
Q Serve(g_s), s	0.5	4.5	10.8	0.6	0.6	2.6
Cycle Q Clear(g_c), s	0.5	4.5	10.8	0.6	0.6	2.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	402	185	2140	666	114	2107
V/C Ratio(X)	0.12	1.38	0.77	0.06	0.46	0.25
Avail Cap(c_a), veh/h	402	185	3332	1037	1680	4547
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.1	16.8	9.3	6.4	18.1	3.5
Incr Delay (d2), s/veh	0.0	200.9	0.2	0.0	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	14.0	5.0	0.3	0.3	1.2
LnGrp Delay(d),s/veh	15.1	217.7	9.5	6.4	19.2	3.5
LnGrp LOS	B	F	A	A	B	A
Approach Vol, veh/h	302		1700			571
Approach Delay, s/veh	186.2		9.5			4.9
Approach LOS	F		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		28.2		10.0	6.8	21.4		
Change Period (Y+Rc), s		5.0		5.5	5.5	5.0		
Max Green Setting (Gmax), s		50.0		4.5	19.0	25.5		
Max Q Clear Time (g_c+I1), s		4.6		6.5	2.6	12.8		
Green Ext Time (p_c), s		4.0		0.0	0.0	3.5		

Intersection Summary	
HCM 2010 Ctrl Delay	29.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	324	1	2	35	6	147	6	1115	28	57	459	59
Future Volume (veh/h)	324	1	2	35	6	147	6	1115	28	57	459	59
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1900	1845	1845	1845	1827	1827	1827	1829	1900
Adj Flow Rate, veh/h	324	1	2	35	6	147	6	1115	28	57	459	59
Adj No. of Lanes	0	1	0	0	1	1	1	2	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	4	4	4	4	4
Cap, veh/h	371	1	2	185	32	193	8	1202	538	103	1195	153
Arrive On Green	0.21	0.21	0.21	0.12	0.12	0.12	0.00	0.35	0.35	0.03	0.39	0.39
Sat Flow, veh/h	1740	5	11	1510	259	1568	1757	3471	1553	3375	3100	397
Grp Volume(v), veh/h	327	0	0	41	0	147	6	1115	28	57	256	262
Grp Sat Flow(s),veh/h/ln	1756	0	0	1769	0	1568	1757	1736	1553	1688	1737	1759
Q Serve(g_s), s	12.1	0.0	0.0	1.4	0.0	6.1	0.2	20.8	0.8	1.1	7.2	7.2
Cycle Q Clear(g_c), s	12.1	0.0	0.0	1.4	0.0	6.1	0.2	20.8	0.8	1.1	7.2	7.2
Prop In Lane	0.99		0.01	0.85		1.00	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	375	0	0	217	0	193	8	1202	538	103	670	678
V/C Ratio(X)	0.87	0.00	0.00	0.19	0.00	0.76	0.72	0.93	0.05	0.56	0.38	0.39
Avail Cap(c_a), veh/h	418	0	0	474	0	420	78	1223	547	151	670	678
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.6	0.0	0.0	26.5	0.0	28.5	33.4	21.2	14.6	32.1	14.9	14.9
Incr Delay (d2), s/veh	16.8	0.0	0.0	0.4	0.0	6.2	75.7	12.0	0.0	4.6	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	0.0	0.0	0.7	0.0	2.9	0.3	11.9	0.3	0.6	3.5	3.6
LnGrp Delay(d),s/veh	42.3	0.0	0.0	26.9	0.0	34.7	109.1	33.2	14.7	36.8	15.3	15.3
LnGrp LOS	D			C		C	F	C	B	D	B	B
Approach Vol, veh/h		327			188			1149			575	
Approach Delay, s/veh		42.3			33.0			33.2			17.4	
Approach LOS		D			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.3	30.9		13.7	6.9	28.3		18.4
Change Period (Y+Rc), s	4.0	5.0		* 5.4	* 4.9	5.0		4.0
Max Green Setting (Gmax), s	3.0	24.6		* 18	* 3	23.7		16.0
Max Q Clear Time (g_c+I1), s	2.2	9.2		8.1	3.1	22.8		14.1
Green Ext Time (p_c), s	0.0	7.6		0.4	0.0	0.5		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	30.4
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	331	1	39	511	321	6	675	15	106	276	139
Future Volume (veh/h)	80	331	1	39	511	321	6	675	15	106	276	139
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1792	1845	1845	1900	1827	1845	1845
Adj Flow Rate, veh/h	80	331	1	39	511	321	6	675	15	106	276	139
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	6	3	3	3	4	3	3
Cap, veh/h	100	630	536	50	577	590	8	725	16	129	872	830
Arrive On Green	0.06	0.34	0.34	0.03	0.31	0.31	0.00	0.40	0.40	0.07	0.47	0.47
Sat Flow, veh/h	1757	1845	1568	1757	1845	1524	1757	1798	40	1740	1845	1568
Grp Volume(v), veh/h	80	331	1	39	511	321	6	0	690	106	276	139
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1524	1757	0	1838	1740	1845	1568
Q Serve(g_s), s	5.9	18.8	0.1	2.9	34.4	21.4	0.4	0.0	47.0	7.9	12.1	6.0
Cycle Q Clear(g_c), s	5.9	18.8	0.1	2.9	34.4	21.4	0.4	0.0	47.0	7.9	12.1	6.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	100	630	536	50	577	590	8	0	741	129	872	830
V/C Ratio(X)	0.80	0.53	0.00	0.78	0.88	0.54	0.76	0.00	0.93	0.82	0.32	0.17
Avail Cap(c_a), veh/h	121	733	623	107	719	706	40	0	828	146	944	892
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.0	34.6	28.4	63.2	42.7	31.2	65.1	0.0	37.3	59.8	21.4	15.9
Incr Delay (d2), s/veh	25.8	0.7	0.0	22.7	10.8	0.8	86.6	0.0	16.0	24.7	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	9.7	0.0	1.7	19.3	9.2	0.4	0.0	27.1	4.7	6.3	2.6
LnGrp Delay(d),s/veh	86.8	35.2	28.4	85.9	53.6	31.9	151.7	0.0	53.4	84.5	21.6	16.0
LnGrp LOS	F	D	C	F	D	C	F		D	F	C	B
Approach Vol, veh/h		412			871			696			521	
Approach Delay, s/veh		45.2			47.0			54.2			32.9	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.7	50.7	4.6	67.8	11.5	47.0	13.7	58.8
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	8.0	52.0	3.0	67.0	9.0	51.0	11.0	59.0
Max Q Clear Time (g_c+I1), s	4.9	20.8	2.4	14.1	7.9	36.4	9.9	49.0
Green Ext Time (p_c), s	0.0	5.5	0.0	5.9	0.0	4.5	0.0	3.8

Intersection Summary	
HCM 2010 Ctrl Delay	45.8
HCM 2010 LOS	D

Notes

User approved changes to right turn type.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	109	12	49	570	198	123
Future Volume (veh/h)	109	12	49	570	198	123
Number	7	14	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1900	1827	1827	1827	1900
Adj Flow Rate, veh/h	109	12	49	570	198	123
Adj No. of Lanes	0	0	1	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	4	4	4	4
Cap, veh/h	132	15	60	967	295	183
Arrive On Green	0.09	0.09	0.03	0.53	0.28	0.28
Sat Flow, veh/h	1453	160	1740	1827	1056	656
Grp Volume(v), veh/h	122	0	49	570	0	321
Grp Sat Flow(s),veh/h/ln	1626	0	1740	1827	0	1711
Q Serve(g_s), s	1.9	0.0	0.7	5.4	0.0	4.2
Cycle Q Clear(g_c), s	1.9	0.0	0.7	5.4	0.0	4.2
Prop In Lane	0.89	0.10	1.00			0.38
Lane Grp Cap(c), veh/h	148	0	60	967	0	478
V/C Ratio(X)	0.83	0.00	0.82	0.59	0.00	0.67
Avail Cap(c_a), veh/h	319	0	409	2197	0	1260
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.4	0.0	12.2	4.1	0.0	8.2
Incr Delay (d2), s/veh	11.0	0.0	9.6	0.2	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.5	2.7	0.0	2.0
LnGrp Delay(d),s/veh	22.4	0.0	21.8	4.3	0.0	8.8
LnGrp LOS	C		C	A		A
Approach Vol, veh/h	122			619	321	
Approach Delay, s/veh	22.4			5.7	8.8	
Approach LOS	C			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	6.4	12.8		6.3		19.2		
Change Period (Y+Rc), s	5.5	* 5.7		4.0		* 5.7		
Max Green Setting (Gmax), s	6.0	* 19		5.0		* 31		
Max Q Clear Time (g_c+I1), s	2.7	6.2		3.9		7.4		
Green Ext Time (p_c), s	0.0	0.9		0.0		0.9		

Intersection Summary	
HCM 2010 Ctrl Delay	8.6
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	120	16	16	491	298	8	20	6	304	213	680
Future Volume (veh/h)	132	120	16	16	491	298	8	20	6	304	213	680
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1792	1792	1900	1792	1792	1792
Adj Flow Rate, veh/h	132	120	16	16	491	298	8	20	6	203	311	709
Adj No. of Lanes	2	2	0	1	1	1	1	1	0	1	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	6	6	6	6	6	6
Cap, veh/h	213	1105	145	20	549	467	36	28	8	460	483	822
Arrive On Green	0.06	0.35	0.35	0.01	0.30	0.30	0.02	0.02	0.02	0.27	0.27	0.27
Sat Flow, veh/h	3408	3116	409	1757	1845	1568	1707	1325	397	1707	1792	3047
Grp Volume(v), veh/h	132	67	69	16	491	298	8	0	26	203	311	709
Grp Sat Flow(s),veh/h/ln	1704	1752	1773	1757	1845	1568	1707	0	1722	1707	1792	1524
Q Serve(g_s), s	2.4	1.6	1.7	0.6	16.4	10.6	0.3	0.0	1.0	6.3	9.8	14.2
Cycle Q Clear(g_c), s	2.4	1.6	1.7	0.6	16.4	10.6	0.3	0.0	1.0	6.3	9.8	14.2
Prop In Lane	1.00		0.23	1.00		1.00	1.00		0.23	1.00		1.00
Lane Grp Cap(c), veh/h	213	622	629	20	549	467	36	0	37	460	483	822
V/C Ratio(X)	0.62	0.11	0.11	0.79	0.89	0.64	0.22	0.00	0.71	0.44	0.64	0.86
Avail Cap(c_a), veh/h	250	748	757	153	833	708	558	0	563	638	670	1139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.3	13.9	13.9	31.6	21.6	19.5	30.9	0.0	31.2	19.4	20.7	22.3
Incr Delay (d2), s/veh	1.8	0.0	0.0	21.2	6.0	0.5	1.1	0.0	9.0	0.2	0.5	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.8	0.8	0.4	9.2	4.6	0.2	0.0	0.5	3.0	4.9	6.3
LnGrp Delay(d),s/veh	31.2	13.9	13.9	52.8	27.6	20.1	32.0	0.0	40.2	19.7	21.2	26.2
LnGrp LOS	C	B	B	D	C	C	C		D	B	C	C
Approach Vol, veh/h		268			805			34			1223	
Approach Delay, s/veh		22.4			25.3			38.3			23.9	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.5	25.0		22.8	5.8	28.7		6.9
Change Period (Y+Rc), s	5.5	* 5.9		5.5	* 5.1	* 5.9		5.5
Max Green Setting (Gmax), s	4.7	* 29		24.0	* 5.6	* 27		21.0
Max Q Clear Time (g_c+I1), s	4.4	18.4		16.2	2.6	3.7		3.0
Green Ext Time (p_c), s	0.0	0.7		1.1	0.0	0.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	24.4
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	162	26	108	461	288	59
Future Volume (veh/h)	162	26	108	461	288	59
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1792	1792	1810	1810
Adj Flow Rate, veh/h	162	26	108	461	288	59
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	8	8	6	6	5	5
Cap, veh/h	231	206	134	941	503	427
Arrive On Green	0.14	0.14	0.08	0.52	0.28	0.28
Sat Flow, veh/h	1675	1495	1707	1792	1810	1538
Grp Volume(v), veh/h	162	26	108	461	288	59
Grp Sat Flow(s),veh/h/ln	1675	1495	1707	1792	1810	1538
Q Serve(g_s), s	3.0	0.5	2.0	5.4	4.5	0.9
Cycle Q Clear(g_c), s	3.0	0.5	2.0	5.4	4.5	0.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	231	206	134	941	503	427
V/C Ratio(X)	0.70	0.13	0.81	0.49	0.57	0.14
Avail Cap(c_a), veh/h	822	733	330	1538	899	764
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.4	12.3	14.8	5.0	10.1	8.8
Incr Delay (d2), s/veh	3.8	0.3	10.8	0.4	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.4	1.3	2.7	2.3	0.4
LnGrp Delay(d),s/veh	17.2	12.6	25.6	5.4	11.2	9.0
LnGrp LOS	B	B	C	A	B	A
Approach Vol, veh/h	188			569	347	
Approach Delay, s/veh	16.6			9.2	10.8	
Approach LOS	B			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		22.6		10.0	8.1	14.6		
Change Period (Y+Rc), s		5.5		5.5	5.5	5.5		
Max Green Setting (Gmax), s		28.0		16.0	6.3	16.2		
Max Q Clear Time (g_c+I1), s		7.4		5.0	4.0	6.5		
Green Ext Time (p_c), s		3.5		0.5	0.1	2.6		

Intersection Summary	
HCM 2010 Ctrl Delay	11.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	173	252	5	64	689	40	2	190	36	13	200	102
Future Volume (veh/h)	173	252	5	64	689	40	2	190	36	13	200	102
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1900	1900	1810	1900	1900	1810	1900
Adj Flow Rate, veh/h	173	252	5	64	689	40	2	190	36	13	200	102
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	5	5	5	5	5	5
Cap, veh/h	105	775	15	81	719	42	2	217	41	12	189	96
Arrive On Green	0.06	0.44	0.44	0.05	0.43	0.43	0.15	0.15	0.15	0.17	0.17	0.17
Sat Flow, veh/h	1707	1752	35	1707	1678	97	15	1466	278	71	1085	553
Grp Volume(v), veh/h	173	0	257	64	0	729	228	0	0	315	0	0
Grp Sat Flow(s),veh/h/ln	1707	0	1786	1707	0	1775	1760	0	0	1708	0	0
Q Serve(g_s), s	7.4	0.0	11.3	4.5	0.0	48.0	15.3	0.0	0.0	21.0	0.0	0.0
Cycle Q Clear(g_c), s	7.4	0.0	11.3	4.5	0.0	48.0	15.3	0.0	0.0	21.0	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.05	0.01		0.16	0.04		0.32
Lane Grp Cap(c), veh/h	105	0	790	81	0	761	260	0	0	298	0	0
V/C Ratio(X)	1.65	0.00	0.33	0.79	0.00	0.96	0.88	0.00	0.00	1.06	0.00	0.00
Avail Cap(c_a), veh/h	105	0	790	130	0	781	380	0	0	298	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	56.5	0.0	21.9	56.8	0.0	33.4	50.2	0.0	0.0	49.7	0.0	0.0
Incr Delay (d2), s/veh	330.7	0.0	0.5	6.2	0.0	22.8	14.4	0.0	0.0	68.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.1	0.0	5.7	2.3	0.0	28.3	8.5	0.0	0.0	15.5	0.0	0.0
LnGrp Delay(d),s/veh	387.2	0.0	22.4	63.0	0.0	56.2	64.6	0.0	0.0	117.8	0.0	0.0
LnGrp LOS	F		C	E		E	E			F		
Approach Vol, veh/h		430			793			228			315	
Approach Delay, s/veh		169.1			56.7			64.6			117.8	
Approach LOS		F			E			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	57.6		27.0	10.3	59.3		23.8
Change Period (Y+Rc), s	4.6	6.0		6.0	4.6	6.0		6.0
Max Green Setting (Gmax), s	7.4	53.0		21.0	9.2	51.2		26.0
Max Q Clear Time (g_c+I1), s	9.4	50.0		23.0	6.5	13.3		17.3
Green Ext Time (p_c), s	0.0	1.6		0.0	0.0	13.0		0.6

Intersection Summary		
HCM 2010 Ctrl Delay		96.0
HCM 2010 LOS		F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	456	90	121	428	205	115	1030	161	115	539	148
Future Volume (veh/h)	190	456	90	121	428	205	115	1030	161	115	539	148
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	190	456	90	121	428	205	115	1030	161	115	539	148
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	230	686	134	154	670	300	149	1254	561	146	1250	559
Arrive On Green	0.13	0.23	0.23	0.09	0.19	0.19	0.08	0.36	0.36	0.08	0.36	0.36
Sat Flow, veh/h	1757	2923	573	1757	3505	1568	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	190	272	274	121	428	205	115	1030	161	115	539	148
Grp Sat Flow(s),veh/h/ln	1757	1752	1744	1757	1752	1568	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	7.1	9.5	9.6	4.6	7.6	8.2	4.3	18.1	5.0	4.3	7.9	4.5
Cycle Q Clear(g_c), s	7.1	9.5	9.6	4.6	7.6	8.2	4.3	18.1	5.0	4.3	7.9	4.5
Prop In Lane	1.00		0.33	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	230	411	409	154	670	300	149	1254	561	146	1250	559
V/C Ratio(X)	0.82	0.66	0.67	0.79	0.64	0.68	0.77	0.82	0.29	0.79	0.43	0.26
Avail Cap(c_a), veh/h	234	440	438	208	829	371	286	1399	626	182	1250	559
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.6	23.5	23.5	30.2	25.2	25.5	30.3	19.8	15.5	30.4	16.6	15.5
Incr Delay (d2), s/veh	20.6	3.4	3.6	13.0	1.1	3.8	8.3	3.7	0.3	16.4	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	5.0	5.0	2.8	3.8	3.9	2.4	9.4	2.2	2.8	3.9	2.0
LnGrp Delay(d),s/veh	49.2	26.8	27.1	43.2	26.3	29.2	38.6	23.4	15.8	46.8	16.8	15.7
LnGrp LOS	D	C	C	D	C	C	D	C	B	D	B	B
Approach Vol, veh/h		736			754			1306			802	
Approach Delay, s/veh		32.7			29.8			23.8			20.9	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	28.2	9.9	19.9	9.7	28.1	12.9	16.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	27.0	8.0	17.0	11.0	23.0	9.0	16.0
Max Q Clear Time (g_c+I1), s	6.3	20.1	6.6	11.6	6.3	9.9	9.1	10.2
Green Ext Time (p_c), s	0.0	4.1	0.0	2.6	0.1	7.6	0.0	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	26.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	413	114	60	366	104	71	1079	111	81	491	109
Future Volume (veh/h)	179	413	114	60	366	104	71	1079	111	81	491	109
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	179	413	114	60	366	104	71	1079	111	81	491	109
Adj No. of Lanes	1	2	1	1	2	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	219	949	425	76	512	144	91	1253	129	102	1133	250
Arrive On Green	0.12	0.27	0.27	0.04	0.19	0.19	0.05	0.39	0.39	0.06	0.40	0.40
Sat Flow, veh/h	1757	3505	1568	1757	2704	759	1740	3178	327	1740	2828	624
Grp Volume(v), veh/h	179	413	114	60	236	234	71	589	601	81	300	300
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1711	1740	1736	1769	1740	1736	1717
Q Serve(g_s), s	6.8	6.7	3.9	2.3	8.6	8.8	2.8	21.3	21.4	3.2	8.6	8.7
Cycle Q Clear(g_c), s	6.8	6.7	3.9	2.3	8.6	8.8	2.8	21.3	21.4	3.2	8.6	8.7
Prop In Lane	1.00		1.00	1.00		0.44	1.00		0.18	1.00		0.36
Lane Grp Cap(c), veh/h	219	949	425	76	332	324	91	685	698	102	695	688
V/C Ratio(X)	0.82	0.44	0.27	0.79	0.71	0.72	0.78	0.86	0.86	0.80	0.43	0.44
Avail Cap(c_a), veh/h	231	971	435	154	409	399	203	759	774	102	695	688
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.3	20.7	19.7	32.5	26.0	26.1	32.1	19.0	19.0	31.9	14.9	14.9
Incr Delay (d2), s/veh	19.5	0.3	0.3	16.6	4.3	4.9	13.7	9.2	9.1	34.6	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	3.3	1.7	1.5	4.6	4.6	1.7	11.9	12.1	2.5	4.2	4.2
LnGrp Delay(d),s/veh	48.8	21.0	20.0	49.1	30.3	31.0	45.8	28.2	28.1	66.5	15.3	15.4
LnGrp LOS	D	C	B	D	C	C	D	C	C	E	B	B
Approach Vol, veh/h		706			530			1261			681	
Approach Delay, s/veh		27.9			32.8			29.2			21.4	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	31.0	7.0	22.6	7.6	31.5	12.5	17.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	30.0	6.0	19.0	8.0	26.0	9.0	16.0
Max Q Clear Time (g_c+I1), s	5.2	23.4	4.3	8.7	4.8	10.7	8.8	10.8
Green Ext Time (p_c), s	0.0	3.7	0.0	3.4	0.0	7.8	0.0	2.2

Intersection Summary	
HCM 2010 Ctrl Delay	27.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	537	156	50	790	133	181	996	190	95	444	124
Future Volume (veh/h)	164	537	156	50	790	133	181	996	190	95	444	124
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1827	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	164	537	156	50	790	133	181	996	190	95	444	124
Adj No. of Lanes	1	3	0	1	2	1	1	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	186	1244	352	62	870	389	223	1050	200	117	1040	465
Arrive On Green	0.11	0.32	0.32	0.04	0.25	0.25	0.13	0.36	0.36	0.07	0.30	0.30
Sat Flow, veh/h	1740	3864	1094	1740	3471	1553	1740	2910	554	1740	3471	1553
Grp Volume(v), veh/h	164	460	233	50	790	133	181	593	593	95	444	124
Grp Sat Flow(s),veh/h/ln	1740	1663	1634	1740	1736	1553	1740	1736	1729	1740	1736	1553
Q Serve(g_s), s	6.9	8.1	8.4	2.1	16.5	5.2	7.6	24.8	24.9	4.0	7.7	4.5
Cycle Q Clear(g_c), s	6.9	8.1	8.4	2.1	16.5	5.2	7.6	24.8	24.9	4.0	7.7	4.5
Prop In Lane	1.00		0.67	1.00		1.00	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	186	1070	526	62	870	389	223	626	624	117	1040	465
V/C Ratio(X)	0.88	0.43	0.44	0.80	0.91	0.34	0.81	0.95	0.95	0.82	0.43	0.27
Avail Cap(c_a), veh/h	186	1070	526	140	883	395	326	628	625	117	1040	465
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.9	19.9	20.0	35.7	27.1	22.9	31.7	23.2	23.2	34.4	21.0	19.9
Incr Delay (d2), s/veh	34.8	0.3	0.6	20.5	13.0	0.5	9.4	23.6	24.2	34.3	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	3.7	3.8	1.4	9.5	2.3	4.2	16.0	16.0	3.0	3.7	2.0
LnGrp Delay(d),s/veh	67.7	20.2	20.6	56.2	40.1	23.4	41.1	46.8	47.4	68.7	21.3	20.2
LnGrp LOS	E	C	C	E	D	C	D	D	D	E	C	C
Approach Vol, veh/h		857			973			1367			663	
Approach Delay, s/veh		29.4			38.7			46.3			27.9	
Approach LOS		C			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	30.9	6.7	28.0	13.6	26.4	12.0	22.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	27.0	6.0	21.0	14.0	18.0	8.0	19.0
Max Q Clear Time (g_c+I1), s	6.0	26.9	4.1	10.4	9.6	9.7	8.9	18.5
Green Ext Time (p_c), s	0.0	0.1	0.0	5.8	0.3	5.2	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	37.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	283	334	93	70	660	163	170	703	49	58	168	80
Future Volume (veh/h)	283	334	93	70	660	163	170	703	49	58	168	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	283	334	93	70	660	163	170	703	49	58	168	80
Adj No. of Lanes	1	2	0	1	2	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	3	3	3	3	3	3
Cap, veh/h	330	1113	306	89	760	188	209	913	409	73	641	287
Arrive On Green	0.19	0.41	0.41	0.05	0.28	0.28	0.12	0.26	0.26	0.04	0.18	0.18
Sat Flow, veh/h	1740	2693	739	1740	2761	681	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	283	214	213	70	415	408	170	703	49	58	168	80
Grp Sat Flow(s),veh/h/ln	1740	1736	1697	1740	1736	1707	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	10.8	5.6	5.8	2.7	15.6	15.6	6.5	12.7	1.6	2.2	2.8	3.0
Cycle Q Clear(g_c), s	10.8	5.6	5.8	2.7	15.6	15.6	6.5	12.7	1.6	2.2	2.8	3.0
Prop In Lane	1.00		0.44	1.00		0.40	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	330	718	701	89	478	470	209	913	409	73	641	287
V/C Ratio(X)	0.86	0.30	0.30	0.78	0.87	0.87	0.81	0.77	0.12	0.80	0.26	0.28
Avail Cap(c_a), veh/h	380	718	701	228	531	522	230	1175	525	128	970	434
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.9	13.5	13.5	32.2	23.7	23.7	29.5	23.5	19.4	32.6	24.1	24.1
Incr Delay (d2), s/veh	15.9	0.2	0.2	13.8	13.3	13.6	18.1	2.4	0.1	17.5	0.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	2.7	2.7	1.6	9.2	9.1	4.2	6.5	0.7	1.4	1.4	1.3
LnGrp Delay(d),s/veh	42.8	13.7	13.7	45.9	36.9	37.3	47.5	25.9	19.5	50.1	24.3	24.7
LnGrp LOS	D	B	B	D	D	D	D	C	B	D	C	C
Approach Vol, veh/h		710			893			922			306	
Approach Delay, s/veh		25.3			37.8			29.5			29.3	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	21.9	7.5	32.4	12.2	16.6	17.0	22.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	23.0	9.0	27.0	9.0	19.0	15.0	21.0
Max Q Clear Time (g_c+I1), s	4.2	14.7	4.7	7.8	8.5	5.0	12.8	17.6
Green Ext Time (p_c), s	0.0	3.2	0.1	5.7	0.0	4.2	0.3	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	31.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	381	413	23	74	494	291	43	463	38	119	240	297
Future Volume (veh/h)	381	413	23	74	494	291	43	463	38	119	240	297
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1827	1900	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	381	413	23	74	494	291	43	463	38	119	240	297
Adj No. of Lanes	2	2	1	2	2	0	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	490	1294	579	167	584	342	119	724	59	207	864	387
Arrive On Green	0.15	0.37	0.37	0.05	0.28	0.28	0.04	0.22	0.22	0.06	0.25	0.25
Sat Flow, veh/h	3375	3471	1553	3375	2107	1237	3375	3250	266	3375	3471	1553
Grp Volume(v), veh/h	381	413	23	74	407	378	43	247	254	119	240	297
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1688	1736	1609	1688	1736	1780	1688	1736	1553
Q Serve(g_s), s	5.9	4.6	0.5	1.2	12.1	12.1	0.7	7.0	7.1	1.9	3.0	9.7
Cycle Q Clear(g_c), s	5.9	4.6	0.5	1.2	12.1	12.1	0.7	7.0	7.1	1.9	3.0	9.7
Prop In Lane	1.00		1.00	1.00		0.77	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	490	1294	579	167	481	445	119	387	397	207	864	387
V/C Ratio(X)	0.78	0.32	0.04	0.44	0.85	0.85	0.36	0.64	0.64	0.58	0.28	0.77
Avail Cap(c_a), veh/h	496	1294	579	248	510	472	248	510	523	248	1019	456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.4	12.2	10.9	25.2	18.6	18.6	25.7	19.2	19.2	24.9	16.5	19.0
Incr Delay (d2), s/veh	7.6	0.1	0.0	1.8	12.0	13.2	1.9	1.7	1.7	2.5	0.2	6.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	2.2	0.2	0.6	7.4	7.0	0.3	3.5	3.7	0.9	1.5	4.8
LnGrp Delay(d),s/veh	30.0	12.3	10.9	27.0	30.6	31.8	27.5	20.9	20.9	27.4	16.7	25.6
LnGrp LOS	C	B	B	C	C	C	C	C	C	C	B	C
Approach Vol, veh/h		817			859			544			656	
Approach Delay, s/veh		20.5			30.8			21.5			22.6	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	16.1	6.7	24.3	5.9	17.6	11.9	19.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	4.0	20.0	4.0	16.0	8.0	16.0
Max Q Clear Time (g_c+I1), s	3.9	9.1	3.2	6.6	2.7	11.7	7.9	14.1
Green Ext Time (p_c), s	0.0	2.7	0.0	5.0	0.0	1.9	0.0	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	24.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1	26	110	3	1	102	875	37	0	433	0
Future Volume (veh/h)	0	1	26	110	3	1	102	875	37	0	433	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1759	1900	1845	1845	1900	1792	1792	1792	1792	1792	1900
Adj Flow Rate, veh/h	0	1	26	110	3	1	102	875	37	0	433	0
Adj No. of Lanes	0	1	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	8	8	8	3	3	3	6	6	6	6	6	6
Cap, veh/h	0	5	119	187	141	47	132	1012	860	4	726	0
Arrive On Green	0.00	0.08	0.08	0.11	0.11	0.11	0.08	0.56	0.56	0.00	0.40	0.00
Sat Flow, veh/h	0	56	1448	1757	1325	442	1707	1792	1524	1707	1792	0
Grp Volume(v), veh/h	0	0	27	110	0	4	102	875	37	0	433	0
Grp Sat Flow(s),veh/h/ln	0	0	1504	1757	0	1767	1707	1792	1524	1707	1792	0
Q Serve(g_s), s	0.0	0.0	0.8	2.9	0.0	0.1	2.8	20.2	0.5	0.0	9.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.8	2.9	0.0	0.1	2.8	20.2	0.5	0.0	9.2	0.0
Prop In Lane	0.00		0.96	1.00		0.25	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	0	0	124	187	0	188	132	1012	860	4	726	0
V/C Ratio(X)	0.00	0.00	0.22	0.59	0.00	0.02	0.77	0.86	0.04	0.00	0.60	0.00
Avail Cap(c_a), veh/h	0	0	495	579	0	582	457	1771	1505	141	1439	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	20.8	20.7	0.0	19.5	22.0	9.0	4.7	0.0	11.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.9	2.9	0.0	0.0	9.2	2.4	0.0	0.0	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.4	1.6	0.0	0.1	1.7	10.4	0.2	0.0	4.6	0.0
LnGrp Delay(d),s/veh	0.0	0.0	21.7	23.7	0.0	19.5	31.2	11.4	4.7	0.0	12.1	0.0
LnGrp LOS			C	C		B	C	B	A		B	
Approach Vol, veh/h		27			114			1014			433	
Approach Delay, s/veh		21.7			23.5			13.1			12.1	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	31.4		8.0	7.8	23.7		9.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	48.0		16.0	13.0	39.0		16.0
Max Q Clear Time (g_c+I1), s	0.0	22.2		2.8	4.8	11.2		4.9
Green Ext Time (p_c), s	0.0	5.2		0.0	0.2	1.9		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	13.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	1	3	254	4	399	2	827	131	188	573	1
Future Volume (veh/h)	2	1	3	254	4	399	2	827	131	188	573	1
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	2	1	3	254	4	399	2	827	131	188	573	1
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	4	40	119	250	4	369	4	813	129	195	1162	2
Arrive On Green	0.00	0.10	0.10	0.14	0.24	0.24	0.00	0.52	0.52	0.11	0.63	0.63
Sat Flow, veh/h	1757	407	1222	1757	16	1555	1757	1555	246	1757	1841	3
Grp Volume(v), veh/h	2	0	4	254	0	403	2	0	958	188	0	574
Grp Sat Flow(s),veh/h/ln	1757	0	1629	1757	0	1570	1757	0	1801	1757	0	1844
Q Serve(g_s), s	0.1	0.0	0.3	18.0	0.0	30.0	0.1	0.0	66.0	13.5	0.0	21.0
Cycle Q Clear(g_c), s	0.1	0.0	0.3	18.0	0.0	30.0	0.1	0.0	66.0	13.5	0.0	21.0
Prop In Lane	1.00		0.75	1.00		0.99	1.00		0.14	1.00		0.00
Lane Grp Cap(c), veh/h	4	0	158	250	0	373	4	0	941	195	0	1164
V/C Ratio(X)	0.53	0.00	0.03	1.01	0.00	1.08	0.53	0.00	1.02	0.97	0.00	0.49
Avail Cap(c_a), veh/h	56	0	206	250	0	373	56	0	941	195	0	1164
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	62.9	0.0	51.6	54.1	0.0	48.1	62.9	0.0	30.1	55.9	0.0	12.5
Incr Delay (d2), s/veh	83.5	0.0	0.1	60.6	0.0	69.7	83.5	0.0	33.8	54.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.1	12.9	0.0	20.2	0.2	0.0	41.5	9.5	0.0	10.8
LnGrp Delay(d),s/veh	146.5	0.0	51.7	114.8	0.0	117.9	146.5	0.0	63.9	110.2	0.0	12.8
LnGrp LOS	F		D	F		F	F		F	F		B
Approach Vol, veh/h		6			657			960			762	
Approach Delay, s/veh		83.3			116.7			64.1			36.8	
Approach LOS		F			F			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	70.0	22.0	16.3	4.3	83.7	4.3	34.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	14.0	66.0	18.0	16.0	4.0	76.0	4.0	30.0
Max Q Clear Time (g_c+I1), s	15.5	68.0	20.0	2.3	2.1	23.0	2.1	32.0
Green Ext Time (p_c), s	0.0	0.0	0.0	1.7	0.0	11.3	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	69.9
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	299	6	4	1	5	7	3	459	1	0	520	297
Future Volume (veh/h)	299	6	4	1	5	7	3	459	1	0	520	297
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1900	1845	1900	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	299	6	4	1	5	7	3	459	1	0	520	0
Adj No. of Lanes	0	1	1	0	1	0	1	1	0	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	384	8	349	2	9	12	6	875	2	4	694	590
Arrive On Green	0.22	0.22	0.22	0.01	0.01	0.01	0.00	0.48	0.48	0.00	0.38	0.00
Sat Flow, veh/h	1724	35	1568	129	646	904	1757	1840	4	1757	1845	1568
Grp Volume(v), veh/h	305	0	4	13	0	0	3	0	460	0	520	0
Grp Sat Flow(s),veh/h/ln	1758	0	1568	1679	0	0	1757	0	1844	1757	1845	1568
Q Serve(g_s), s	6.8	0.0	0.1	0.3	0.0	0.0	0.1	0.0	7.3	0.0	10.2	0.0
Cycle Q Clear(g_c), s	6.8	0.0	0.1	0.3	0.0	0.0	0.1	0.0	7.3	0.0	10.2	0.0
Prop In Lane	0.98		1.00	0.08		0.54	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	392	0	349	23	0	0	6	0	877	4	694	590
V/C Ratio(X)	0.78	0.00	0.01	0.58	0.00	0.00	0.52	0.00	0.52	0.00	0.75	0.00
Avail Cap(c_a), veh/h	676	0	602	645	0	0	169	0	1018	169	1019	866
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	15.2	0.0	12.6	20.4	0.0	0.0	20.7	0.0	7.6	0.0	11.3	0.0
Incr Delay (d2), s/veh	3.4	0.0	0.0	21.2	0.0	0.0	58.0	0.0	0.5	0.0	1.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.0	0.0	0.3	0.0	0.0	0.1	0.0	3.7	0.0	5.4	0.0
LnGrp Delay(d),s/veh	18.6	0.0	12.6	41.7	0.0	0.0	78.7	0.0	8.1	0.0	13.0	0.0
LnGrp LOS	B		B	D			E		A		B	
Approach Vol, veh/h		309			13			463			520	
Approach Delay, s/veh		18.5			41.7			8.6			13.0	
Approach LOS		B			D			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	23.8		13.3	4.1	19.7		4.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	23.0		16.0	4.0	23.0		16.0
Max Q Clear Time (g_c+I1), s	0.0	9.3		8.8	2.1	12.2		2.3
Green Ext Time (p_c), s	0.0	3.9		0.8	0.0	3.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	3	62	68	5	32	5	267	24	10	218	21
Future Volume (veh/h)	6	3	62	68	5	32	5	267	24	10	218	21
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	6	3	62	68	5	32	5	267	24	10	218	21
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	9	123	105	80	198	168	7	723	64	14	731	70
Arrive On Green	0.00	0.07	0.07	0.05	0.11	0.11	0.00	0.22	0.22	0.01	0.23	0.23
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	3255	290	1757	3234	309
Grp Volume(v), veh/h	6	3	62	68	5	32	5	143	148	10	117	122
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1793	1757	1752	1790
Q Serve(g_s), s	0.1	0.0	0.9	0.9	0.1	0.5	0.1	1.7	1.7	0.1	1.3	1.4
Cycle Q Clear(g_c), s	0.1	0.0	0.9	0.9	0.1	0.5	0.1	1.7	1.7	0.1	1.3	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		0.17
Lane Grp Cap(c), veh/h	9	123	105	80	198	168	7	389	398	14	396	405
V/C Ratio(X)	0.70	0.02	0.59	0.85	0.03	0.19	0.69	0.37	0.37	0.71	0.30	0.30
Avail Cap(c_a), veh/h	217	1138	967	433	1365	1160	217	1081	1106	217	1081	1104
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.1	10.6	11.0	11.5	9.7	9.9	12.1	8.0	8.0	12.0	7.8	7.8
Incr Delay (d2), s/veh	69.0	0.1	5.3	21.3	0.1	0.5	77.6	0.6	0.6	48.4	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.5	0.9	0.0	0.2	0.2	0.9	0.9	0.3	0.7	0.7
LnGrp Delay(d),s/veh	81.1	10.7	16.3	32.8	9.8	10.4	89.7	8.6	8.6	60.4	8.2	8.2
LnGrp LOS	F	B	B	C	A	B	F	A	A	E	A	A
Approach Vol, veh/h		71			105			296			249	
Approach Delay, s/veh		21.5			24.9			10.0			10.3	
Approach LOS		C			C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.2	9.4	5.1	5.6	4.1	9.5	4.1	6.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	15.0	6.0	15.0	3.0	15.0	3.0	18.0
Max Q Clear Time (g_c+I1), s	2.1	3.7	2.9	2.9	2.1	3.4	2.1	2.5
Green Ext Time (p_c), s	0.0	1.7	0.0	0.2	0.0	1.7	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	13.4
HCM 2010 LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	11	11	5	363	125	4
Future Volume (veh/h)	11	11	5	363	125	4
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	11	11	5	363	125	4
Adj No. of Lanes	1	1	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	31	27	11	1758	892	28
Arrive On Green	0.02	0.02	0.00	0.50	0.26	0.26
Sat Flow, veh/h	1757	1568	1757	3597	3559	111
Grp Volume(v), veh/h	11	11	5	363	63	66
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1752	1752	1825
Q Serve(g_s), s	0.1	0.1	0.0	1.0	0.5	0.5
Cycle Q Clear(g_c), s	0.1	0.1	0.0	1.0	0.5	0.5
Prop In Lane	1.00	1.00	1.00			0.06
Lane Grp Cap(c), veh/h	31	27	11	1758	451	469
V/C Ratio(X)	0.36	0.40	0.47	0.21	0.14	0.14
Avail Cap(c_a), veh/h	1584	1414	317	4635	1580	1646
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.1	8.1	8.3	2.3	4.8	4.8
Incr Delay (d2), s/veh	7.0	9.3	29.5	0.1	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.1	0.5	0.2	0.2
LnGrp Delay(d),s/veh	15.0	17.4	37.7	2.4	4.9	4.9
LnGrp LOS	B	B	D	A	A	A
Approach Vol, veh/h	22			368	129	
Approach Delay, s/veh	16.2			2.8	4.9	
Approach LOS	B			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		12.3		4.3	4.1	8.3		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		22.0		15.0	3.0	15.0		
Max Q Clear Time (g_c+I1), s		3.0		2.1	2.0	2.5		
Green Ext Time (p_c), s		2.1		0.0	0.0	1.8		

Intersection Summary	
HCM 2010 Ctrl Delay	3.9
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	33	19	75	20	29	31	83	261	96	35	0
Future Volume (veh/h)	21	33	19	75	20	29	31	83	261	96	35	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	21	33	19	75	20	29	31	83	261	96	35	0
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	28	120	102	90	185	157	40	452	404	119	1060	0
Arrive On Green	0.02	0.07	0.07	0.05	0.10	0.10	0.02	0.26	0.26	0.07	0.30	0.00
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	1752	1568	1757	3597	0
Grp Volume(v), veh/h	21	33	19	75	20	29	31	83	261	96	35	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1568	1757	1752	0
Q Serve(g_s), s	0.3	0.5	0.3	1.2	0.3	0.5	0.5	1.1	4.2	1.5	0.2	0.0
Cycle Q Clear(g_c), s	0.3	0.5	0.3	1.2	0.3	0.5	0.5	1.1	4.2	1.5	0.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	28	120	102	90	185	157	40	452	404	119	1060	0
V/C Ratio(X)	0.74	0.28	0.19	0.83	0.11	0.18	0.77	0.18	0.65	0.81	0.03	0.00
Avail Cap(c_a), veh/h	184	966	821	429	1223	1040	184	917	821	429	2324	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	14.0	12.8	12.7	13.5	11.7	11.8	13.9	8.3	9.5	13.2	7.0	0.0
Incr Delay (d2), s/veh	31.1	1.2	0.9	17.4	0.3	0.6	26.0	0.2	1.7	12.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.3	0.2	1.0	0.2	0.2	0.5	0.5	2.0	1.1	0.1	0.0
LnGrp Delay(d),s/veh	45.2	14.0	13.5	30.9	12.0	12.4	39.9	8.5	11.2	25.3	7.1	0.0
LnGrp LOS	D	B	B	C	B	B	D	A	B	C	A	
Approach Vol, veh/h		73			124			375			131	
Approach Delay, s/veh		22.8			23.5			13.0			20.5	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.9	11.4	5.5	5.9	4.7	12.7	4.5	6.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	15.0	7.0	15.0	3.0	19.0	3.0	19.0
Max Q Clear Time (g_c+I1), s	3.5	6.2	3.2	2.5	2.5	2.2	2.3	2.5
Green Ext Time (p_c), s	0.1	1.1	0.1	0.2	0.0	1.5	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	17.2
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	16.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	61	107	10	68	5	20	155	272	140	9	28	14
Future Vol, veh/h	61	107	10	68	5	20	155	272	140	9	28	14
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	61	107	10	68	5	20	155	272	140	9	28	14
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11	9.9	19.7	8.9
HCM LOS	B	A	C	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	27%	34%	73%	18%
Vol Thru, %	48%	60%	5%	55%
Vol Right, %	25%	6%	22%	27%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	567	178	93	51
LT Vol	155	61	68	9
Through Vol	272	107	5	28
RT Vol	140	10	20	14
Lane Flow Rate	567	178	93	51
Geometry Grp	1	1	1	1
Degree of Util (X)	0.734	0.283	0.151	0.077
Departure Headway (Hd)	4.663	5.718	5.86	5.401
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	765	632	615	665
Service Time	2.76	3.725	3.871	3.422
HCM Lane V/C Ratio	0.741	0.282	0.151	0.077
HCM Control Delay	19.7	11	9.9	8.9
HCM Lane LOS	C	B	A	A
HCM 95th-tile Q	6.6	1.2	0.5	0.2

Intersection	
Intersection Delay, s/veh	42.9
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	247	8	5	337	173	35	411	20	26	83	10
Future Vol, veh/h	15	247	8	5	337	173	35	411	20	26	83	10
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	15	247	8	5	337	173	35	411	20	26	83	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	20.1	56.7	48.1	14.6
HCM LOS	C	F	E	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	6%	1%	22%
Vol Thru, %	88%	91%	65%	70%
Vol Right, %	4%	3%	34%	8%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	466	270	515	119
LT Vol	35	15	5	26
Through Vol	411	247	337	83
RT Vol	20	8	173	10
Lane Flow Rate	466	270	515	119
Geometry Grp	1	1	1	1
Degree of Util (X)	0.913	0.566	0.964	0.278
Departure Headway (Hd)	7.054	7.552	6.739	8.415
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	513	475	536	430
Service Time	5.126	5.643	4.81	6.415
HCM Lane V/C Ratio	0.908	0.568	0.961	0.277
HCM Control Delay	48.1	20.1	56.7	14.6
HCM Lane LOS	E	C	F	B
HCM 95th-tile Q	10.7	3.4	12.7	1.1

Intersection	
Intersection Delay, s/veh	16.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	281	245	5	1	271	176	10	2	4	14	4	71
Future Vol, veh/h	281	245	5	1	271	176	10	2	4	14	4	71
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	4	4	4	4	4	4	3	3	3	3	3	3
Mvmt Flow	281	245	5	1	271	176	10	2	4	14	4	71
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	19.3	13.9	9.6	9.8
HCM LOS	C	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	62%	53%	0%	16%
Vol Thru, %	12%	46%	60%	4%
Vol Right, %	25%	1%	39%	80%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	16	531	448	89
LT Vol	10	281	1	14
Through Vol	2	245	271	4
RT Vol	4	5	176	71
Lane Flow Rate	16	531	448	89
Geometry Grp	1	1	1	1
Degree of Util (X)	0.029	0.715	0.577	0.143
Departure Headway (Hd)	6.425	4.848	4.636	5.793
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	560	738	771	623
Service Time	4.43	2.93	2.717	3.795
HCM Lane V/C Ratio	0.029	0.72	0.581	0.143
HCM Control Delay	9.6	19.3	13.9	9.8
HCM Lane LOS	A	C	B	A
HCM 95th-tile Q	0.1	6.1	3.7	0.5

Intersection	
Intersection Delay, s/veh	173.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	83	125	6	39	122	1	95	784	96	1	127	105
Future Vol, veh/h	83	125	6	39	122	1	95	784	96	1	127	105
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	6	6	6	8	8	8	3	3	3	3	3	3
Mvmt Flow	83	125	6	39	122	1	95	784	96	1	127	105
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	16.9	15.4	272.5	14.6
HCM LOS	C	C	F	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	39%	24%	0%
Vol Thru, %	80%	58%	75%	55%
Vol Right, %	10%	3%	1%	45%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	975	214	162	233
LT Vol	95	83	39	1
Through Vol	784	125	122	127
RT Vol	96	6	1	105
Lane Flow Rate	975	214	162	233
Geometry Grp	1	1	1	1
Degree of Util (X)	1.552	0.415	0.322	0.4
Departure Headway (Hd)	5.732	8.2	8.431	7.017
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	634	443	429	517
Service Time	3.777	6.2	6.431	5.017
HCM Lane V/C Ratio	1.538	0.483	0.378	0.451
HCM Control Delay	272.5	16.9	15.4	14.6
HCM Lane LOS	F	C	C	B
HCM 95th-tile Q	50.2	2	1.4	1.9

Intersection	
Intersection Delay, s/veh	45.2
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	443	2	14	8	1	1	45	575	2	0	108	55
Future Vol, veh/h	443	2	14	8	1	1	45	575	2	0	108	55
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	443	2	14	8	1	1	45	575	2	0	108	55
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	32.5	11	63.8	12.3
HCM LOS	D	B	F	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	97%	80%	0%
Vol Thru, %	92%	0%	10%	66%
Vol Right, %	0%	3%	10%	34%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	622	459	10	163
LT Vol	45	443	8	0
Through Vol	575	2	1	108
RT Vol	2	14	1	55
Lane Flow Rate	622	459	10	163
Geometry Grp	1	1	1	1
Degree of Util (X)	1.012	0.819	0.021	0.293
Departure Headway (Hd)	5.86	6.424	7.791	6.61
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	616	560	462	548
Service Time	3.956	4.519	5.791	4.61
HCM Lane V/C Ratio	1.01	0.82	0.022	0.297
HCM Control Delay	63.8	32.5	11	12.3
HCM Lane LOS	F	D	B	B
HCM 95th-tile Q	15.6	8.2	0.1	1.2

Intersection	
Intersection Delay, s/veh	84.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	141	0	239	0	360	484	52	72	0
Future Vol, veh/h	0	0	0	141	0	239	0	360	484	52	72	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	0	141	0	239	0	360	484	52	72	0
Number of Lanes	0	1	0	0	1	0	0	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	0	18.5	125.6	10.8
HCM LOS	-	C	F	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	0%	0%	37%	100%	0%
Vol Thru, %	43%	100%	0%	0%	100%
Vol Right, %	57%	0%	63%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	844	0	380	52	72
LT Vol	0	0	141	52	0
Through Vol	360	0	0	0	72
RT Vol	484	0	239	0	0
Lane Flow Rate	844	0	380	52	72
Geometry Grp	5	2	2	7	7
Degree of Util (X)	1.208	0	0.609	0.103	0.133
Departure Headway (Hd)	5.151	7.606	6.232	7.46	6.947
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	709	0	585	484	519
Service Time	3.156	5.606	4.232	5.16	4.647
HCM Lane V/C Ratio	1.19	0	0.65	0.107	0.139
HCM Control Delay	125.6	10.6	18.5	11	10.7
HCM Lane LOS	F	N	C	B	B
HCM 95th-tile Q	29	0	4.1	0.3	0.5

Intersection	
Intersection Delay, s/veh	12.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1	0	0	0	102	0	451	33	18	293	0
Future Vol, veh/h	0	1	0	0	0	102	0	451	33	18	293	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	20	20	20	5	5	5	6	6	6
Mvmt Flow	0	1	0	0	0	102	0	451	33	18	293	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9	9.5	14.7	11.3
HCM LOS	A	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	6%
Vol Thru, %	93%	100%	0%	94%
Vol Right, %	7%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	484	1	102	311
LT Vol	0	0	0	18
Through Vol	451	1	0	293
RT Vol	33	0	102	0
Lane Flow Rate	484	1	102	311
Geometry Grp	1	1	1	1
Degree of Util (X)	0.615	0.002	0.153	0.416
Departure Headway (Hd)	4.574	6.03	5.402	4.816
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	784	597	658	743
Service Time	2.623	4.03	3.483	2.872
HCM Lane V/C Ratio	0.617	0.002	0.155	0.419
HCM Control Delay	14.7	9	9.5	11.3
HCM Lane LOS	B	A	A	B
HCM 95th-tile Q	4.3	0	0.5	2.1

Intersection	
Intersection Delay, s/veh	36.2
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	158	206	65	5	140	23	73	434	24	20	105	28
Future Vol, veh/h	158	206	65	5	140	23	73	434	24	20	105	28
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	3	3	3
Mvmt Flow	158	206	65	5	140	23	73	434	24	20	105	28
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	32.8	14.5	52.2	13.9
HCM LOS	D	B	F	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	37%	3%	13%
Vol Thru, %	82%	48%	83%	69%
Vol Right, %	5%	15%	14%	18%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	531	429	168	153
LT Vol	73	158	5	20
Through Vol	434	206	140	105
RT Vol	24	65	23	28
Lane Flow Rate	531	429	168	153
Geometry Grp	1	1	1	1
Degree of Util (X)	0.949	0.811	0.349	0.316
Departure Headway (Hd)	6.557	6.808	7.488	7.43
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	558	536	480	483
Service Time	4.557	4.808	5.52	5.472
HCM Lane V/C Ratio	0.952	0.8	0.35	0.317
HCM Control Delay	52.2	32.8	14.5	13.9
HCM Lane LOS	F	D	B	B
HCM 95th-tile Q	12.3	7.9	1.5	1.3

Intersection	
Int Delay, s/veh	2.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	67	124	903	53	75	447
Future Vol, veh/h	67	124	903	53	75	447
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	70	0	-	-	85	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	4	4	3	3	3	3
Mvmt Flow	67	124	903	53	75	447

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1304	478	0	0	956	0
Stage 1	930	-	-	-	-	-
Stage 2	374	-	-	-	-	-
Critical Hdwy	6.88	6.98	-	-	4.16	-
Critical Hdwy Stg 1	5.88	-	-	-	-	-
Critical Hdwy Stg 2	5.88	-	-	-	-	-
Follow-up Hdwy	3.54	3.34	-	-	2.23	-
Pot Cap-1 Maneuver	149	528	-	-	709	-
Stage 1	340	-	-	-	-	-
Stage 2	660	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	133	528	-	-	709	-
Mov Cap-2 Maneuver	251	-	-	-	-	-
Stage 1	340	-	-	-	-	-
Stage 2	590	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.6	0	1.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	251	528	709	-
HCM Lane V/C Ratio	-	-	0.267	0.235	0.106	-
HCM Control Delay (s)	-	-	24.5	13.9	10.7	-
HCM Lane LOS	-	-	C	B	B	-
HCM 95th %tile Q(veh)	-	-	1	0.9	0.4	-

Intersection	
Int Delay, s/veh	4.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	165	28	67	289	61	89
Future Vol, veh/h	165	28	67	289	61	89
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	4	4	4	4
Mvmt Flow	165	28	67	289	61	89

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	423	212	0	0	356	0
Stage 1	212	-	-	-	-	-
Stage 2	211	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.14	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.236	-
Pot Cap-1 Maneuver	586	826	-	-	1192	-
Stage 1	821	-	-	-	-	-
Stage 2	822	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	554	826	-	-	1192	-
Mov Cap-2 Maneuver	554	-	-	-	-	-
Stage 1	821	-	-	-	-	-
Stage 2	778	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.2	0	3.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	582	1192	-
HCM Lane V/C Ratio	-	-	0.332	0.051	-
HCM Control Delay (s)	-	-	14.2	8.2	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	1.4	0.2	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	27	683	912	34	10	93
Future Vol, veh/h	27	683	912	34	10	93
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	190	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	6	6	6	6	3	3
Mvmt Flow	27	683	912	34	10	93

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	946	0	-	0	1666	929
Stage 1	-	-	-	-	929	-
Stage 2	-	-	-	-	737	-
Critical Hdwy	4.16	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.254	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	709	-	-	-	106	323
Stage 1	-	-	-	-	383	-
Stage 2	-	-	-	-	472	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	709	-	-	-	102	323
Mov Cap-2 Maneuver	-	-	-	-	102	-
Stage 1	-	-	-	-	383	-
Stage 2	-	-	-	-	454	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	26.7
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	709	-	-	-	267
HCM Lane V/C Ratio	0.038	-	-	-	0.386
HCM Control Delay (s)	10.3	-	-	-	26.7
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	1.7

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	1	0	3	1	6	0	457	1	1	90	1
Future Vol, veh/h	3	1	0	3	1	6	0	457	1	1	90	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	3	1	0	3	1	6	0	457	1	1	90	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	554	551	91	551	551	458	91	0	0	458	0	0
Stage 1	93	93	-	458	458	-	-	-	-	-	-	-
Stage 2	461	458	-	93	93	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	441	441	964	444	441	601	1498	-	-	1098	-	-
Stage 1	912	816	-	581	565	-	-	-	-	-	-	-
Stage 2	579	565	-	912	816	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	436	441	964	443	441	601	1498	-	-	1098	-	-
Mov Cap-2 Maneuver	436	441	-	443	441	-	-	-	-	-	-	-
Stage 1	912	815	-	581	565	-	-	-	-	-	-	-
Stage 2	572	565	-	910	815	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.3	12	0	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1498	-	-	437	526	1098	-	-
HCM Lane V/C Ratio	-	-	-	0.009	0.019	0.001	-	-
HCM Control Delay (s)	0	-	-	13.3	12	8.3	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	732	3	33	700	3	1	0	126	2	0	5
Future Vol, veh/h	11	732	3	33	700	3	1	0	126	2	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	80	-	90	200	-	-	-	-	200	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	3	6	3	3	6	3	3	3	3	3	3	3
Mvmt Flow	11	732	3	33	700	3	1	0	126	2	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	703	0	0	732	0	0	1524	1523	732	1522	1522	702
Stage 1	-	-	-	-	-	-	754	754	-	768	768	-
Stage 2	-	-	-	-	-	-	770	769	-	754	754	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	890	-	-	868	-	-	96	118	420	96	118	436
Stage 1	-	-	-	-	-	-	400	416	-	393	409	-
Stage 2	-	-	-	-	-	-	392	409	-	400	416	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	890	-	-	868	-	-	91	112	420	65	112	436
Mov Cap-2 Maneuver	-	-	-	-	-	-	91	112	-	65	112	-
Stage 1	-	-	-	-	-	-	395	411	-	388	393	-
Stage 2	-	-	-	-	-	-	373	393	-	277	411	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.4	17.4	27.6
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	91	420	890	-	-	868	-	-	166
HCM Lane V/C Ratio	0.011	0.3	0.012	-	-	0.038	-	-	0.042
HCM Control Delay (s)	45	17.2	9.1	-	-	9.3	-	-	27.6
HCM Lane LOS	E	C	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0	1.2	0	-	-	0.1	-	-	0.1

Intersection	
Int Delay, s/veh	7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	123	1	0	2	3	32
Future Vol, veh/h	123	1	0	2	3	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	123	1	0	2	3	32

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	21	19	35	0	-	0
Stage 1	19	-	-	-	-	-
Stage 2	2	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	993	1056	1570	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	1019	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	993	1056	1570	-	-	-
Mov Cap-2 Maneuver	993	-	-	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	1019	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1570	-	993	-	-
HCM Lane V/C Ratio	-	-	0.125	-	-
HCM Control Delay (s)	0	-	9.1	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	246	6	1	586	0	4	0	1	0	0	5
Future Vol, veh/h	1	246	6	1	586	0	4	0	1	0	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	1	246	6	1	586	0	4	0	1	0	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	586	0	0	252	0	0	842	839	249	840	842	586
Stage 1	-	-	-	-	-	-	251	251	-	588	588	-
Stage 2	-	-	-	-	-	-	591	588	-	252	254	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	984	-	-	1307	-	-	283	301	787	284	300	508
Stage 1	-	-	-	-	-	-	751	697	-	493	494	-
Stage 2	-	-	-	-	-	-	492	494	-	750	695	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	984	-	-	1307	-	-	280	300	787	283	299	508
Mov Cap-2 Maneuver	-	-	-	-	-	-	280	300	-	283	299	-
Stage 1	-	-	-	-	-	-	750	696	-	493	494	-
Stage 2	-	-	-	-	-	-	487	494	-	748	694	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	16.4	12.2
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	321	984	-	-	1307	-	-	508
HCM Lane V/C Ratio	0.016	0.001	-	-	0.001	-	-	0.01
HCM Control Delay (s)	16.4	8.7	0	-	7.8	0	-	12.2
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	9.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	456	2	1	0	0	214
Future Vol, veh/h	456	2	1	0	0	214
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	456	2	1	0	0	214

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	109	107	214	0	-	0
Stage 1	107	-	-	-	-	-
Stage 2	2	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	886	944	1350	-	-	-
Stage 1	915	-	-	-	-	-
Stage 2	1019	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	885	944	1350	-	-	-
Mov Cap-2 Maneuver	885	-	-	-	-	-
Stage 1	915	-	-	-	-	-
Stage 2	1018	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.3	7.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1350	-	885	-	-
HCM Lane V/C Ratio	0.001	-	0.518	-	-
HCM Control Delay (s)	7.7	0	13.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	3	-	-

Intersection	
Int Delay, s/veh	11.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	638	71	331	634	36	375
Future Vol, veh/h	638	71	331	634	36	375
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	300	250	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	638	71	331	634	36	375

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	638	0	1934	638
Stage 1	-	-	-	-	638	-
Stage 2	-	-	-	-	1296	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	941	-	72	475
Stage 1	-	-	-	-	524	-
Stage 2	-	-	-	-	255	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	941	-	47	475
Mov Cap-2 Maneuver	-	-	-	-	47	-
Stage 1	-	-	-	-	524	-
Stage 2	-	-	-	-	165	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.7	49.9
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	47	475	-	-	941	-
HCM Lane V/C Ratio	0.766	0.789	-	-	0.352	-
HCM Control Delay (s)	199.7	35.5	-	-	10.9	-
HCM Lane LOS	F	E	-	-	B	-
HCM 95th %tile Q(veh)	3.1	7.2	-	-	1.6	-

Intersection	
Int Delay, s/veh	56.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	305	7	33	832	224	426
Future Vol, veh/h	305	7	33	832	224	426
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Free
Storage Length	0	-	-	-	-	90
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	305	7	33	832	224	426

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1122	224	224	0	-	0
Stage 1	224	-	-	-	-	-
Stage 2	898	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	~ 227	813	1339	-	-	0
Stage 1	811	-	-	-	-	0
Stage 2	396	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	~ 217	813	1339	-	-	-
Mov Cap-2 Maneuver	~ 217	-	-	-	-	-
Stage 1	811	-	-	-	-	-
Stage 2	378	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	251.5	0.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	1339	-	221	-
HCM Lane V/C Ratio	0.025	-	1.412	-
HCM Control Delay (s)	7.8	0	251.5	-
HCM Lane LOS	A	A	F	-
HCM 95th %tile Q(veh)	0.1	-	17.9	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	96.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	267	411	31	9	632	0	95	58	19	0	2	55
Future Vol, veh/h	267	411	31	9	632	0	95	58	19	0	2	55
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	350	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3	3	8	3	3	8	3
Mvmt Flow	267	411	31	9	632	0	95	58	19	0	2	55

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	632	0	0	442	0	0	1640	1611	427	1649	1626	632
Stage 1	-	-	-	-	-	-	961	961	-	650	650	-
Stage 2	-	-	-	-	-	-	679	650	-	999	976	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.58	6.23	7.13	6.58	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.58	-	6.13	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.58	-	6.13	5.58	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.072	3.327	3.527	4.072	3.327
Pot Cap-1 Maneuver	946	-	-	1113	-	-	~ 80	101	625	79	99	479
Stage 1	-	-	-	-	-	-	307	327	-	456	456	-
Stage 2	-	-	-	-	-	-	440	456	-	292	322	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	946	-	-	1113	-	-	~ 54	72	625	21	70	479
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 54	72	-	21	70	-
Stage 1	-	-	-	-	-	-	220	235	-	327	452	-
Stage 2	-	-	-	-	-	-	385	452	-	153	231	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.9	0.1	$ 862	15.6
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	66	946	-	-	1113	-	-	398
HCM Lane V/C Ratio	2.606	0.282	-	-	0.008	-	-	0.143
HCM Control Delay (s)	$ 862	10.3	-	-	8.3	-	-	15.6
HCM Lane LOS	F	B	-	-	A	-	-	C
HCM 95th %tile Q(veh)	17	1.2	-	-	0	-	-	0.5

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	76	126	0	0	166	7	6	95	0	0	28	16
Future Vol, veh/h	76	126	0	0	166	7	6	95	0	0	28	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	8	8	8	10	10	10	8	8	8	8	8	8
Mvmt Flow	76	126	0	0	166	7	6	95	0	0	28	16

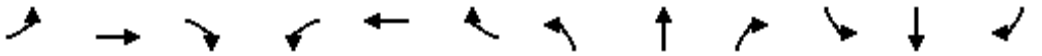
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	173	0	0	126	0	0	470	451	126	496	448	170
Stage 1	-	-	-	-	-	-	278	278	-	170	170	-
Stage 2	-	-	-	-	-	-	192	173	-	326	278	-
Critical Hdwy	4.18	-	-	4.2	-	-	7.18	6.58	6.28	7.18	6.58	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Follow-up Hdwy	2.272	-	-	2.29	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	1368	-	-	1412	-	-	494	495	909	475	497	859
Stage 1	-	-	-	-	-	-	716	670	-	818	747	-
Stage 2	-	-	-	-	-	-	796	744	-	674	670	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1368	-	-	1412	-	-	442	465	909	383	467	859
Mov Cap-2 Maneuver	-	-	-	-	-	-	442	465	-	383	467	-
Stage 1	-	-	-	-	-	-	673	630	-	769	747	-
Stage 2	-	-	-	-	-	-	752	744	-	538	630	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.9	0	14.9	12
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	464	1368	-	-	1412	-	-	560
HCM Lane V/C Ratio	0.218	0.056	-	-	-	-	-	0.079
HCM Control Delay (s)	14.9	7.8	0	-	0	-	-	12
HCM Lane LOS	B	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0.8	0.2	-	-	0	-	-	0.3

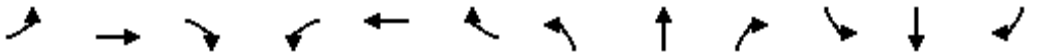
Existing Plus Jackson Township

Alternative 2 PM



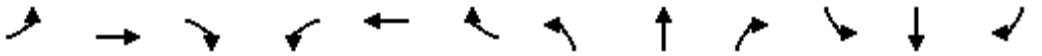
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	718	0	685	0	0	0	0	1596	498	0	1705	784
Future Volume (vph)	718	0	685	0	0	0	0	1596	498	0	1705	784
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	4.0		4.0	4.0
Lane Util. Factor	0.97		0.88					0.91	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3367		2733					4988	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3367		2733					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	718	0	685	0	0	0	0	1596	498	0	1705	784
RTOR Reduction (vph)	0	0	16	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	718	0	669	0	0	0	0	1596	498	0	1705	784
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	14.9		14.9					20.1	43.0		20.1	43.0
Effective Green, g (s)	14.9		14.9					20.1	43.0		20.1	43.0
Actuated g/C Ratio	0.35		0.35					0.47	1.00		0.47	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	1166		947					2331	1553		2331	1553
v/s Ratio Prot								0.32			c0.34	
v/s Ratio Perm	0.21		c0.24						0.32			0.50
v/c Ratio	0.62		0.71					0.68	0.32		0.73	0.50
Uniform Delay, d1	11.7		12.2					9.0	0.0		9.3	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	1.0		2.4					0.8	0.5		1.2	1.2
Delay (s)	12.6		14.6					9.8	0.5		10.5	1.2
Level of Service	B		B					A	A		B	A
Approach Delay (s)		13.6			0.0			7.6			7.5	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	43.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



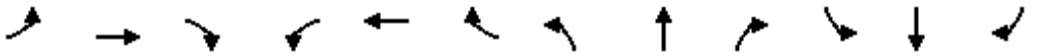
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	662	121	284	518	782	248	1059	170	887	1469	150
Future Volume (vph)	250	662	121	284	518	782	248	1059	170	887	1469	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		0.97	0.95	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	3391		3367	3471	2733	3367	4988	1553	3367	4988	1553
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	3391		3367	3471	2733	3367	4988	1553	3367	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	250	662	121	284	518	782	248	1059	170	887	1469	150
RTOR Reduction (vph)	0	19	0	0	0	616	0	0	132	0	0	92
Lane Group Flow (vph)	250	764	0	284	518	166	248	1059	38	887	1469	58
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	8.0	18.0		7.0	17.0	17.0	8.0	18.0	18.0	21.0	31.0	31.0
Effective Green, g (s)	8.0	18.0		7.0	17.0	17.0	8.0	18.0	18.0	21.0	31.0	31.0
Actuated g/C Ratio	0.10	0.22		0.09	0.21	0.21	0.10	0.22	0.22	0.26	0.39	0.39
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	336	762		294	737	580	336	1122	349	883	1932	601
v/s Ratio Prot	0.07	c0.23		c0.08	0.15		0.07	c0.21		c0.26	0.29	
v/s Ratio Perm						0.06			0.02			0.04
v/c Ratio	0.74	1.00		0.97	0.70	0.29	0.74	0.94	0.11	1.00	0.76	0.10
Uniform Delay, d1	35.0	31.0		36.4	29.2	26.4	35.0	30.5	24.6	29.5	21.3	15.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.6	33.4		42.8	3.0	0.3	8.2	15.2	0.1	31.4	1.8	0.1
Delay (s)	43.6	64.4		79.2	32.2	26.7	43.2	45.7	24.8	60.9	23.1	15.7
Level of Service	D	E		E	C	C	D	D	C	E	C	B
Approach Delay (s)		59.4			37.9			42.9			36.0	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	41.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	89.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	97	842	704	12	973	19	322	3	3	14	11	86
Future Volume (vph)	97	842	704	12	973	19	322	3	3	14	11	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.97	1.00
Satd. Flow (prot)	1736	3471	1553	1736	3471	1553	1618	1623	1524		1794	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.97	1.00
Satd. Flow (perm)	1736	3471	1553	1736	3471	1553	1618	1623	1524		1794	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	97	842	704	12	973	19	322	3	3	14	11	86
RTOR Reduction (vph)	0	0	223	0	0	11	0	0	2	0	0	80
Lane Group Flow (vph)	97	842	481	12	973	8	161	164	1	0	25	6
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4	2	3	8		2	2		6	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	5.7	32.0	46.5	0.7	27.0	27.0	14.5	14.5	14.5		4.8	4.8
Effective Green, g (s)	5.7	32.0	46.5	0.7	27.0	27.0	14.5	14.5	14.5		4.8	4.8
Actuated g/C Ratio	0.08	0.47	0.68	0.01	0.40	0.40	0.21	0.21	0.21		0.07	0.07
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	145	1633	1153	17	1378	616	345	346	324		126	110
v/s Ratio Prot	c0.06	0.24	c0.09	0.01	c0.28		0.10	0.10			c0.01	
v/s Ratio Perm			0.22			0.00			0.00			0.00
v/c Ratio	0.67	0.52	0.42	0.71	0.71	0.01	0.47	0.47	0.00		0.20	0.06
Uniform Delay, d1	30.2	12.6	4.8	33.5	17.2	12.4	23.4	23.4	21.1		29.8	29.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	11.1	0.3	0.2	84.0	1.7	0.0	1.0	1.0	0.0		0.8	0.2
Delay (s)	41.3	12.9	5.0	117.5	18.8	12.4	24.4	24.4	21.1		30.6	29.7
Level of Service	D	B	A	F	B	B	C	C	C		C	C
Approach Delay (s)		11.2			19.9			24.4			29.9	
Approach LOS		B			B			C			C	

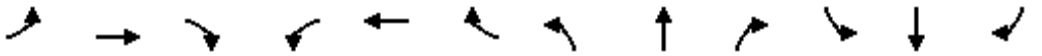
Intersection Summary			
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	68.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	451	229	167	530	94	435	161	362	125	87	37
Future Volume (vph)	38	451	229	167	530	94	435	161	362	125	87	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		0.95	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85		0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00		0.98	
Satd. Flow (prot)	1752	3505	1568	1752	3426		1665	1713	1568		3343	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00		0.98	
Satd. Flow (perm)	1752	3505	1568	1752	3426		1665	1713	1568		3343	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	38	451	229	167	530	94	435	161	362	125	87	37
RTOR Reduction (vph)	0	0	176	0	16	0	0	0	275	0	19	0
Lane Group Flow (vph)	38	451	53	167	608	0	296	300	87	0	230	0
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4						2			
Actuated Green, G (s)	2.8	15.3	15.3	9.1	21.6		16.0	16.0	16.0		9.8	
Effective Green, g (s)	2.8	15.3	15.3	9.1	21.6		16.0	16.0	16.0		9.8	
Actuated g/C Ratio	0.04	0.23	0.23	0.14	0.33		0.24	0.24	0.24		0.15	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	74	810	362	240	1117		402	414	378		494	
v/s Ratio Prot	0.02	0.13		c0.10	c0.18		c0.18	0.18			c0.07	
v/s Ratio Perm			0.03						0.06			
v/c Ratio	0.51	0.56	0.15	0.70	0.54		0.74	0.72	0.23		0.47	
Uniform Delay, d1	31.0	22.5	20.3	27.2	18.3		23.2	23.1	20.2		25.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	5.9	0.8	0.2	8.5	0.5		6.9	6.2	0.3		0.7	
Delay (s)	36.9	23.3	20.4	35.7	18.8		30.0	29.3	20.5		26.5	
Level of Service	D	C	C	D	B		C	C	C		C	
Approach Delay (s)		23.1			22.4			26.2			26.5	
Approach LOS		C			C			C			C	

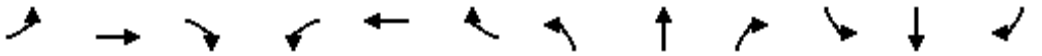
Intersection Summary			
HCM 2000 Control Delay	24.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	66.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	58.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



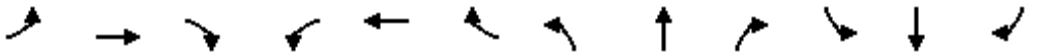
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	642	773	218	546	40	309	160	312	36	80	31
Future Volume (vph)	34	642	773	218	546	40	309	160	312	36	80	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	3.9	3.9	5.5	4.0	4.0	4.3	4.3		5.1	5.1	5.1
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.90		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1568	3400	3505	1568	3367	3127		1752	3505	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	3505	1568	3400	3505	1568	3367	3127		1752	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	34	642	773	218	546	40	309	160	312	36	80	31
RTOR Reduction (vph)	0	0	462	0	0	21	0	263	0	0	0	29
Lane Group Flow (vph)	34	642	311	218	546	19	309	209	0	36	80	2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	3%	3%	3%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		8	8		4	4	
Permitted Phases			6			2						4
Actuated Green, G (s)	2.2	27.7	27.7	7.3	32.7	32.7	10.9	10.9		4.1	4.1	4.1
Effective Green, g (s)	2.2	27.7	27.7	7.3	32.7	32.7	10.9	10.9		4.1	4.1	4.1
Actuated g/C Ratio	0.03	0.40	0.40	0.11	0.48	0.48	0.16	0.16		0.06	0.06	0.06
Clearance Time (s)	5.5	3.9	3.9	5.5	4.0	4.0	4.3	4.3		5.1	5.1	5.1
Vehicle Extension (s)	1.0	4.9	4.9	1.0	4.1	4.1	2.0	2.0		1.0	1.0	1.0
Lane Grp Cap (vph)	56	1411	631	360	1665	745	533	495		104	208	93
v/s Ratio Prot	0.02	0.18		c0.06	c0.16		c0.09	0.07		0.02	c0.02	
v/s Ratio Perm			c0.20			0.01						0.00
v/c Ratio	0.61	0.45	0.49	0.61	0.33	0.03	0.58	0.42		0.35	0.38	0.02
Uniform Delay, d1	32.9	15.0	15.3	29.4	11.2	9.6	26.8	26.1		31.1	31.1	30.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	12.1	0.5	1.2	2.0	0.2	0.0	1.0	0.2		0.7	0.4	0.0
Delay (s)	45.0	15.5	16.5	31.3	11.4	9.6	27.8	26.3		31.8	31.6	30.5
Level of Service	D	B	B	C	B	A	C	C		C	C	C
Approach Delay (s)		16.7			16.7			26.9			31.4	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	19.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	68.8	Sum of lost time (s)	22.9
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	863	0	208	0	656	963	0	941	598
Future Volume (vph)	0	0	0	863	0	208	0	656	963	0	941	598
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.6		4.6		3.5	4.0		5.1	4.0
Lane Util. Factor				0.97		0.88		0.91	1.00		0.91	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3367		2733		4988	1553		4988	1553
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3367		2733		4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	863	0	208	0	656	963	0	941	598
RTOR Reduction (vph)	0	0	0	0	0	130	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	863	0	78	0	656	963	0	941	598
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type				Prot		Perm		NA	Free		NA	Free
Protected Phases				4				6			2	
Permitted Phases						4			Free			Free
Actuated Green, G (s)				11.8		11.8		11.7	31.6		10.1	31.6
Effective Green, g (s)				11.8		11.8		11.7	31.6		10.1	31.6
Actuated g/C Ratio				0.37		0.37		0.37	1.00		0.32	1.00
Clearance Time (s)				4.6		4.6		3.5			5.1	
Vehicle Extension (s)				1.0		1.0		1.0			1.0	
Lane Grp Cap (vph)				1257		1020		1846	1553		1594	1553
v/s Ratio Prot				0.26				0.13			0.19	
v/s Ratio Perm						0.03			c0.62			0.39
v/c Ratio				0.69		0.08		0.36	0.62		0.59	0.39
Uniform Delay, d1				8.3		6.4		7.2	0.0		9.0	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				1.3		0.0		0.0	1.9		0.4	0.7
Delay (s)				9.6		6.4		7.3	1.9		9.4	0.7
Level of Service				A		A		A	A		A	A
Approach Delay (s)		0.0			9.0			4.1			6.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	31.6	Sum of lost time (s)	9.7
Intersection Capacity Utilization	50.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	480	0	800	0	0	0	0	1138	806	0	1388	413
Future Volume (vph)	480	0	800	0	0	0	0	1138	806	0	1388	413
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4		6.4					5.1	4.0		4.6	4.0
Lane Util. Factor	0.97		0.88					0.91	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3367		2733					4988	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3367		2733					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	480	0	800	0	0	0	0	1138	806	0	1388	413
RTOR Reduction (vph)	0	0	30	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	480	0	770	0	0	0	0	1138	806	0	1388	413
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	14.6		14.6					15.1	41.2		15.6	41.2
Effective Green, g (s)	14.6		14.6					15.1	41.2		15.6	41.2
Actuated g/C Ratio	0.35		0.35					0.37	1.00		0.38	1.00
Clearance Time (s)	6.4		6.4					5.1			4.6	
Vehicle Extension (s)	1.0		1.0					1.0			1.0	
Lane Grp Cap (vph)	1193		968					1828	1553		1888	1553
v/s Ratio Prot								0.23			c0.28	
v/s Ratio Perm	0.14		c0.28						0.52			0.27
v/c Ratio	0.40		0.80					0.62	0.52		0.74	0.27
Uniform Delay, d1	10.0		12.0					10.7	0.0		11.0	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1		4.3					0.5	1.2		1.3	0.4
Delay (s)	10.1		16.3					11.2	1.2		12.3	0.4
Level of Service	B		B					B	A		B	A
Approach Delay (s)		13.9			0.0			7.1			9.6	
Approach LOS		B			A			A			A	

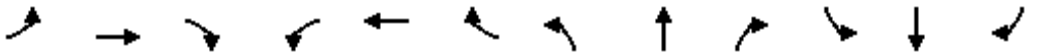
Intersection Summary			
HCM 2000 Control Delay	9.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	41.2	Sum of lost time (s)	11.5
Intersection Capacity Utilization	64.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	1	171	189	15	326	342
Future Volume (vph)	1	171	189	15	326	342
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1752	1568	1845	1568	1752	1845
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1752	1568	1845	1568	1752	1845
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1	171	189	15	326	342
RTOR Reduction (vph)	0	160	0	10	0	0
Lane Group Flow (vph)	1	11	189	5	326	342
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		3		2		
Actuated Green, G (s)	2.4	2.4	11.4	11.4	10.8	26.2
Effective Green, g (s)	2.4	2.4	11.4	11.4	10.8	26.2
Actuated g/C Ratio	0.07	0.07	0.31	0.31	0.30	0.72
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	114	102	574	488	516	1320
v/s Ratio Prot	0.00		c0.10		c0.19	0.19
v/s Ratio Perm		c0.01		0.00		
v/c Ratio	0.01	0.11	0.33	0.01	0.63	0.26
Uniform Delay, d1	16.0	16.1	9.7	8.7	11.2	1.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0	0.5	0.3	0.0	2.5	0.1
Delay (s)	16.0	16.6	10.0	8.7	13.7	1.9
Level of Service	B	B	B	A	B	A
Approach Delay (s)	16.6		9.9			7.7
Approach LOS	B		A			A

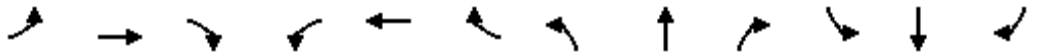
Intersection Summary			
HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	36.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	41.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



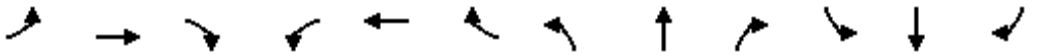
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	280	0	193	0	856	1030	0	611	411
Future Volume (vph)	0	0	0	280	0	193	0	856	1030	0	611	411
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.9	4.9			4.8	4.0		4.8	4.0
Lane Util. Factor				0.95	0.95			0.95	1.00		0.95	1.00
Frt				1.00	0.87			1.00	0.85		1.00	0.85
Flt Protected				0.95	0.99			1.00	1.00		1.00	1.00
Satd. Flow (prot)				1649	1501			3471	1553		3471	1553
Flt Permitted				0.95	0.99			1.00	1.00		1.00	1.00
Satd. Flow (perm)				1649	1501			3471	1553		3471	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	280	0	193	0	856	1030	0	611	411
RTOR Reduction (vph)	0	0	0	0	118	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	249	106	0	0	856	1030	0	611	411
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type				Perm	NA			NA	Free		NA	Free
Protected Phases					8			2			6	
Permitted Phases				8					Free			Free
Actuated Green, G (s)				9.2	9.2			13.7	32.6		13.7	32.6
Effective Green, g (s)				9.2	9.2			13.7	32.6		13.7	32.6
Actuated g/C Ratio				0.28	0.28			0.42	1.00		0.42	1.00
Clearance Time (s)				4.9	4.9			4.8			4.8	
Vehicle Extension (s)				1.0	1.0			1.0			1.0	
Lane Grp Cap (vph)				465	423			1458	1553		1458	1553
v/s Ratio Prot								0.25			0.18	
v/s Ratio Perm				0.15	0.07				c0.66			0.26
v/c Ratio				0.54	0.25			0.59	0.66		0.42	0.26
Uniform Delay, d1				9.9	9.0			7.3	0.0		6.6	0.0
Progression Factor				1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2				0.6	0.1			0.4	2.2		0.1	0.4
Delay (s)				10.5	9.2			7.7	2.2		6.7	0.4
Level of Service				B	A			A	A		A	A
Approach Delay (s)		0.0			9.9			4.7			4.2	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	32.6	Sum of lost time (s)	9.7
Intersection Capacity Utilization	45.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



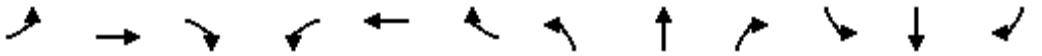
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	411	0	470	0	0	0	0	1476	855	0	656	236
Future Volume (vph)	411	0	470	0	0	0	0	1476	855	0	656	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	5.1					4.9	4.0		4.8	4.0
Lane Util. Factor	0.95	0.91	0.95					0.91	1.00		0.95	1.00
Frt	1.00	0.90	0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95	0.98	1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	1649	1477	1475					4988	1553		3471	1553
Flt Permitted	0.95	0.98	1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	1649	1477	1475					4988	1553		3471	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	411	0	470	0	0	0	0	1476	855	0	656	236
RTOR Reduction (vph)	0	105	105	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	304	190	177	0	0	0	0	1476	855	0	656	236
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA	Perm					NA	Free		NA	Free
Protected Phases		4						2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	9.3	9.3	9.3					13.5	32.8		13.6	32.8
Effective Green, g (s)	9.3	9.3	9.3					13.5	32.8		13.6	32.8
Actuated g/C Ratio	0.28	0.28	0.28					0.41	1.00		0.41	1.00
Clearance Time (s)	5.1	5.1	5.1					4.9			4.8	
Vehicle Extension (s)	1.0	1.0	1.0					1.0			1.0	
Lane Grp Cap (vph)	467	418	418					2052	1553		1439	1553
v/s Ratio Prot								0.30			0.19	
v/s Ratio Perm	0.18	0.13	0.12						c0.55			0.15
v/c Ratio	0.65	0.46	0.42					0.72	0.55		0.46	0.15
Uniform Delay, d1	10.3	9.7	9.6					8.1	0.0		6.9	0.0
Progression Factor	1.00	1.00	1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	2.5	0.3	0.3					1.0	1.4		0.1	0.2
Delay (s)	12.8	10.0	9.8					9.1	1.4		7.0	0.2
Level of Service	B	A	A					A	A		A	A
Approach Delay (s)		10.9			0.0			6.3			5.2	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	32.8	Sum of lost time (s)	10.0
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



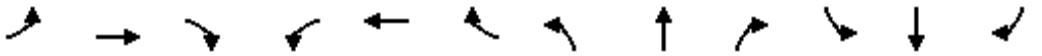
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	538	0	272	0	1461	1843	0	752	506
Future Volume (vph)	0	0	0	538	0	272	0	1461	1843	0	752	506
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.8		6.8		4.6	4.0		4.6	4.0
Lane Util. Factor				0.97		1.00		0.91	1.00		0.95	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3400		1568		5036	1568		3505	1568
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3400		1568		5036	1568		3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	538	0	272	0	1461	1843	0	752	506
RTOR Reduction (vph)	0	0	0	0	0	33	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	538	0	239	0	1461	1843	0	752	506
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				Perm		Perm		NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases				8		8			Free			Free
Actuated Green, G (s)				8.2		8.2		13.7	33.3		13.7	33.3
Effective Green, g (s)				8.2		8.2		13.7	33.3		13.7	33.3
Actuated g/C Ratio				0.25		0.25		0.41	1.00		0.41	1.00
Clearance Time (s)				6.8		6.8		4.6			4.6	
Vehicle Extension (s)				1.0		1.0		1.0			1.0	
Lane Grp Cap (vph)				837		386		2071	1568		1441	1568
v/s Ratio Prot								0.29			0.21	
v/s Ratio Perm				0.16		0.15			c1.18			0.32
v/c Ratio				0.64		0.62		0.71	1.18		0.52	0.32
Uniform Delay, d1				11.2		11.2		8.1	16.6		7.3	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				1.3		2.1		0.9	86.0		0.2	0.5
Delay (s)				12.5		13.2		9.0	102.6		7.5	0.5
Level of Service				B		B		A	F		A	A
Approach Delay (s)		0.0			12.8			61.2			4.7	
Approach LOS		A			B			E			A	

Intersection Summary			
HCM 2000 Control Delay	40.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.79		
Actuated Cycle Length (s)	33.3	Sum of lost time (s)	11.4
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



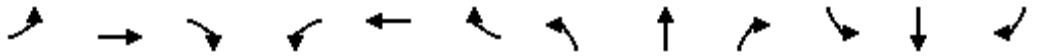
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	570	121	453	0	0	943	0	2450	8	0	1152	136
Future Volume (vph)	570	121	453	0	0	943	0	2450	8	0	1152	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0		4.0			4.0	4.0
Lane Util. Factor	0.91	0.86	0.91			0.88		*0.75			0.95	1.00
Frt	1.00	0.95	0.85			0.85		1.00			1.00	0.85
Flt Protected	0.95	0.98	1.00			1.00		1.00			1.00	1.00
Satd. Flow (prot)	1595	2951	1427			2733		5531			3505	1568
Flt Permitted	0.95	0.98	1.00			1.00		1.00			1.00	1.00
Satd. Flow (perm)	1595	2951	1427			2733		5531			3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	570	121	453	0	0	943	0	2450	8	0	1152	136
RTOR Reduction (vph)	0	36	122	0	0	32	0	1	0	0	0	33
Lane Group Flow (vph)	296	545	145	0	0	911	0	2457	0	0	1152	103
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Turn Type	Split	NA	Perm			Prot		NA			NA	Perm
Protected Phases	4	4				1		2			6	
Permitted Phases			4									6
Actuated Green, G (s)	21.0	21.0	21.0			35.0		52.0			91.0	91.0
Effective Green, g (s)	21.0	21.0	21.0			35.0		52.0			91.0	91.0
Actuated g/C Ratio	0.18	0.18	0.18			0.29		0.43			0.76	0.76
Clearance Time (s)	4.0	4.0	4.0			4.0		4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	279	516	249			797		2396			2657	1189
v/s Ratio Prot	c0.19	0.18				c0.33		c0.44			0.33	
v/s Ratio Perm			0.10									0.07
v/c Ratio	1.06	1.06	0.58			1.14		1.03			0.43	0.09
Uniform Delay, d1	49.5	49.5	45.5			42.5		34.0			5.2	3.8
Progression Factor	1.00	1.00	1.00			1.00		1.00			1.00	1.00
Incremental Delay, d2	70.9	55.1	3.4			79.1		25.3			0.1	0.0
Delay (s)	120.4	104.6	48.9			121.6		59.3			5.3	3.8
Level of Service	F	F	D			F		E			A	A
Approach Delay (s)		95.7			121.6			59.3			5.2	
Approach LOS		F			F			E			A	

Intersection Summary			
HCM 2000 Control Delay	64.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



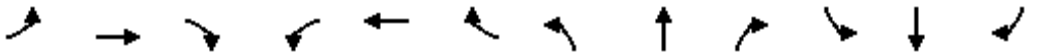
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	408	0	396	0	3014	544	0	1260	1094
Future Volume (vph)	0	0	0	408	0	396	0	3014	544	0	1260	1094
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.5		3.5		4.8	4.0		5.1	4.0
Lane Util. Factor				0.97		0.88		0.91	1.00		0.91	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3303		2682		4988	1553		4988	1553
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3303		2682		4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	408	0	396	0	3014	544	0	1260	1094
RTOR Reduction (vph)	0	0	0	0	0	35	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	408	0	361	0	3014	544	0	1260	1094
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	4%	4%	4%	4%	4%	4%
Turn Type				Perm		Perm		NA	Free		NA	Free
Protected Phases								6			2	
Permitted Phases				8		8			Free			Free
Actuated Green, G (s)				8.8		8.8		34.4	51.5		34.1	51.5
Effective Green, g (s)				8.8		8.8		34.4	51.5		34.1	51.5
Actuated g/C Ratio				0.17		0.17		0.67	1.00		0.66	1.00
Clearance Time (s)				3.5		3.5		4.8			5.1	
Vehicle Extension (s)				1.0		1.0		1.0			1.0	
Lane Grp Cap (vph)				564		458		3331	1553		3302	1553
v/s Ratio Prot								c0.60			0.25	
v/s Ratio Perm				0.12		0.13			0.35			c0.70
v/c Ratio				0.72		0.79		0.90	0.35		0.38	0.70
Uniform Delay, d1				20.2		20.5		7.2	0.0		3.9	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				3.9		8.1		3.9	0.6		0.0	2.7
Delay (s)				24.1		28.6		11.0	0.6		4.0	2.7
Level of Service				C		C		B	A		A	A
Approach Delay (s)		0.0			26.3			9.4			3.4	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	51.5	Sum of lost time (s)	8.6
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



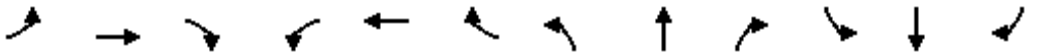
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1289	0	314	0	0	0	0	2268	369	0	1238	429
Future Volume (vph)	1289	0	314	0	0	0	0	2268	369	0	1238	429
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		3.5					4.8	4.0		5.1	4.0
Lane Util. Factor	0.94		0.88					0.86	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	4894		2733					6285	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	4894		2733					6285	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1289	0	314	0	0	0	0	2268	369	0	1238	429
RTOR Reduction (vph)	0	0	48	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	1289	0	266	0	0	0	0	2268	369	0	1238	429
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								6			2	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	14.2		14.2					20.8	43.3		20.5	43.3
Effective Green, g (s)	14.2		14.2					20.8	43.3		20.5	43.3
Actuated g/C Ratio	0.33		0.33					0.48	1.00		0.47	1.00
Clearance Time (s)	3.5		3.5					4.8			5.1	
Vehicle Extension (s)	1.0		1.0					1.0			1.0	
Lane Grp Cap (vph)	1604		896					3019	1553		2361	1553
v/s Ratio Prot								c0.36			0.25	
v/s Ratio Perm	c0.26		0.10						0.24			0.28
v/c Ratio	0.80		0.30					0.75	0.24		0.52	0.28
Uniform Delay, d1	13.3		10.8					9.1	0.0		8.0	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	2.8		0.1					1.0	0.4		0.1	0.4
Delay (s)	16.1		10.9					10.1	0.4		8.1	0.4
Level of Service	B		B					B	A		A	A
Approach Delay (s)		15.1			0.0			8.7			6.1	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	43.3	Sum of lost time (s)	8.6
Intersection Capacity Utilization	64.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



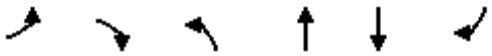
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	185	299	9	2	300	6	7	15	2	5	21	559
Future Volume (vph)	185	299	9	2	300	6	7	15	2	5	21	559
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.9	6.9	5.5	6.0			6.1			6.2	5.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00			0.99			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (prot)	1703	1792	1524	1719	1804			1798			1810	1553
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (perm)	1703	1792	1524	1719	1804			1798			1810	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	185	299	9	2	300	6	7	15	2	5	21	559
RTOR Reduction (vph)	0	0	5	0	1	0	0	2	0	0	0	325
Lane Group Flow (vph)	185	299	4	2	305	0	0	22	0	0	26	234
Heavy Vehicles (%)	6%	6%	6%	5%	5%	5%	3%	3%	3%	4%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	pm+ov
Protected Phases	1	6		5	2		8	8		4	4	1
Permitted Phases			6									4
Actuated Green, G (s)	6.2	20.2	20.2	0.3	15.2			0.3			0.7	6.9
Effective Green, g (s)	6.2	20.2	20.2	0.3	15.2			0.3			0.7	6.9
Actuated g/C Ratio	0.13	0.44	0.44	0.01	0.33			0.01			0.02	0.15
Clearance Time (s)	5.5	6.9	6.9	5.5	6.0			6.1			6.2	5.5
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0			1.0			1.0	1.0
Lane Grp Cap (vph)	228	783	666	11	593			11			27	231
v/s Ratio Prot	0.11	0.17		0.00	c0.17			c0.01			0.01	c0.14
v/s Ratio Perm			0.00									0.02
v/c Ratio	0.81	0.38	0.01	0.18	0.51			2.00			0.96	1.01
Uniform Delay, d1	19.4	8.8	7.3	22.8	12.5			23.0			22.7	19.7
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	18.4	0.1	0.0	2.9	0.3			670.4			155.6	62.7
Delay (s)	37.8	8.9	7.3	25.7	12.8			693.3			178.3	82.3
Level of Service	D	A	A	C	B			F			F	F
Approach Delay (s)		19.7			12.9			693.3			86.6	
Approach LOS		B			B			F			F	

Intersection Summary			
HCM 2000 Control Delay	57.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	46.2	Sum of lost time (s)	24.7
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



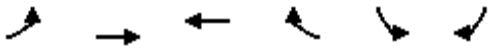
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	309	39	189	598	166	1985	0	0	1373	68
Future Volume (vph)	0	0	309	39	189	598	166	1985	0	0	1373	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.6		6.2	6.2	4.6	5.0			5.3	5.3
Lane Util. Factor			1.00		1.00	0.88	0.97	0.91			0.86	1.00
Frt			0.86		1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected			1.00		0.99	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)			1596		1777	2682	3303	4893			6166	1524
Flt Permitted			1.00		0.99	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)			1596		1777	2682	3303	4893			6166	1524
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	309	39	189	598	166	1985	0	0	1373	68
RTOR Reduction (vph)	0	0	255	0	0	84	0	0	0	0	0	44
Lane Group Flow (vph)	0	0	54	0	228	514	166	1985	0	0	1373	24
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type			Over	Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases			1	4	4		1	6			2	
Permitted Phases						4						2
Actuated Green, G (s)			11.3		14.6	14.6	11.3	38.7			22.5	22.5
Effective Green, g (s)			11.3		14.6	14.6	11.3	38.7			22.5	22.5
Actuated g/C Ratio			0.18		0.23	0.23	0.18	0.60			0.35	0.35
Clearance Time (s)			4.6		6.2	6.2	4.6	5.0			5.3	5.3
Vehicle Extension (s)			3.0		3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)			279		402	607	578	2935			2150	531
v/s Ratio Prot			0.03		0.13		0.05	c0.41			0.22	
v/s Ratio Perm						c0.19						0.02
v/c Ratio			0.19		0.57	0.85	0.29	0.68			0.64	0.04
Uniform Delay, d1			22.7		22.1	23.9	23.1	8.7			17.6	13.9
Progression Factor			1.00		1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2			0.3		1.8	10.6	0.3	0.6			0.6	0.0
Delay (s)			23.1		24.0	34.5	23.4	9.3			18.2	13.9
Level of Service			C		C	C	C	A			B	B
Approach Delay (s)		23.1			31.6			10.4			18.0	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	64.5	Sum of lost time (s)	16.1
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



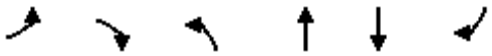
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1519	62	0	0	226	808
Future Volume (vph)	1519	62	0	0	226	808
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5			4.7	4.0
Lane Util. Factor	0.97	0.91			0.95	1.00
Frt	1.00	0.85			1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00
Satd. Flow (prot)	3310	1386			3406	1524
Flt Permitted	0.95	1.00			1.00	1.00
Satd. Flow (perm)	3310	1386			3406	1524
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1519	62	0	0	226	808
RTOR Reduction (vph)	1	24	0	0	0	0
Lane Group Flow (vph)	1524	32	0	0	226	808
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%
Turn Type	Prot	Perm			NA	Free
Protected Phases	4				2	
Permitted Phases		4				Free
Actuated Green, G (s)	19.2	19.2			5.7	33.1
Effective Green, g (s)	19.2	19.2			5.7	33.1
Actuated g/C Ratio	0.58	0.58			0.17	1.00
Clearance Time (s)	3.5	3.5			4.7	
Vehicle Extension (s)	1.5	1.5			1.0	
Lane Grp Cap (vph)	1920	803			586	1524
v/s Ratio Prot	c0.46				0.07	
v/s Ratio Perm		0.02				c0.53
v/c Ratio	0.79	0.04			0.39	0.53
Uniform Delay, d1	5.4	3.0			12.1	0.0
Progression Factor	1.00	1.00			1.00	1.00
Incremental Delay, d2	2.2	0.0			0.2	1.3
Delay (s)	7.6	3.0			12.3	1.3
Level of Service	A	A			B	A
Approach Delay (s)	7.4			0.0	3.7	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	6.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	33.1	Sum of lost time (s)	8.2
Intersection Capacity Utilization	57.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



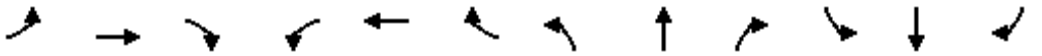
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	211	411	302	79	93	229
Future Volume (vph)	211	411	302	79	93	229
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1671	3343	3343	1495	1752	1568
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1671	3343	3343	1495	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	211	411	302	79	93	229
RTOR Reduction (vph)	0	0	0	59	0	180
Lane Group Flow (vph)	211	411	302	20	93	49
Heavy Vehicles (%)	8%	8%	8%	8%	3%	3%
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	7.4	20.7	9.3	9.3	7.9	7.9
Effective Green, g (s)	7.4	20.7	9.3	9.3	7.9	7.9
Actuated g/C Ratio	0.20	0.57	0.25	0.25	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	337	1890	849	379	378	338
v/s Ratio Prot	c0.13	0.12	c0.09		c0.05	
v/s Ratio Perm				0.01		0.03
v/c Ratio	0.63	0.22	0.36	0.05	0.25	0.15
Uniform Delay, d1	13.3	3.9	11.2	10.3	11.9	11.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.6	0.1	0.3	0.1	0.3	0.2
Delay (s)	16.9	4.0	11.5	10.4	12.2	11.8
Level of Service	B	A	B	B	B	B
Approach Delay (s)		8.4	11.2		11.9	
Approach LOS		A	B		B	

Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	36.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	35.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	281	27	3	367	479	38
Future Volume (vph)	281	27	3	367	479	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3367	1553	1719	3438	3343	1495
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3367	1553	1719	3438	3343	1495
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	281	27	3	367	479	38
RTOR Reduction (vph)	0	27	0	0	0	29
Lane Group Flow (vph)	281	0	3	367	479	9
Heavy Vehicles (%)	4%	4%	5%	5%	8%	8%
Turn Type	Prot	Over	Prot	NA	NA	Over
Protected Phases	4	5	5	2	6	4
Permitted Phases						
Actuated Green, G (s)	8.4	0.6	0.6	17.7	13.1	8.4
Effective Green, g (s)	8.4	0.6	0.6	17.7	13.1	8.4
Actuated g/C Ratio	0.25	0.02	0.02	0.52	0.38	0.25
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	829	27	30	1784	1284	368
v/s Ratio Prot	c0.08	0.00	0.00	c0.11	c0.14	0.01
v/s Ratio Perm						
v/c Ratio	0.34	0.02	0.10	0.21	0.37	0.03
Uniform Delay, d1	10.6	16.5	16.5	4.4	7.5	9.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.3	1.5	0.1	0.2	0.0
Delay (s)	10.8	16.7	17.9	4.5	7.7	9.8
Level of Service	B	B	B	A	A	A
Approach Delay (s)	11.3			4.6	7.9	
Approach LOS	B			A	A	

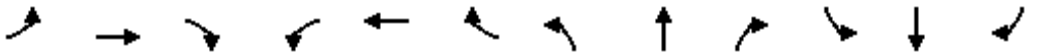
Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	34.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	27.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	925	0	731	0	0	0	0	2165	627	0	1888	1108
Future Volume (vph)	925	0	731	0	0	0	0	2165	627	0	1888	1108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	4.0		4.0	4.0
Lane Util. Factor	0.97		0.88					0.86	1.00		0.86	0.86
Frt	1.00		0.85					1.00	0.85		0.97	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3400		2760					6346	1568		4626	1348
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3400		2760					6346	1568		4626	1348
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	925	0	731	0	0	0	0	2165	627	0	1888	1108
RTOR Reduction (vph)	0	0	14	0	0	0	0	0	0	0	60	0
Lane Group Flow (vph)	925	0	717	0	0	0	0	2165	627	0	2260	676
Turn Type	Prot		Perm					NA	Free		NA	Free
Protected Phases	4							2			6	
Permitted Phases			4						Free			Free
Actuated Green, G (s)	17.0		17.0					30.0	55.0		30.0	55.0
Effective Green, g (s)	17.0		17.0					30.0	55.0		30.0	55.0
Actuated g/C Ratio	0.31		0.31					0.55	1.00		0.55	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	1050		853					3461	1568		2523	1348
v/s Ratio Prot	c0.27							0.34			c0.49	
v/s Ratio Perm			0.26						0.40			0.50
v/c Ratio	0.88		0.84					0.63	0.40		0.90	0.50
Uniform Delay, d1	18.0		17.7					8.6	0.0		11.1	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	8.8		7.5					0.4	0.8		4.6	1.3
Delay (s)	26.8		25.2					9.0	0.8		15.7	1.3
Level of Service	C		C					A	A		B	A
Approach Delay (s)		26.1			0.0			7.1			12.5	
Approach LOS		C			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	342	0	1365	0	2499	596	0	2731	762
Future Volume (vph)	0	0	0	342	0	1365	0	2499	596	0	2731	762
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0		4.0		4.0	4.0		4.0	4.0
Lane Util. Factor				0.97		0.76		0.86	0.86		0.81	0.81
Frt				1.00		0.85		1.00	0.85		0.99	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3400		3575		4742	1348		5931	1270
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3400		3575		4742	1348		5931	1270
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	342	0	1365	0	2499	596	0	2731	762
RTOR Reduction (vph)	0	0	0	0	0	9	0	3	0	0	9	0
Lane Group Flow (vph)	0	0	0	342	0	1356	0	2556	536	0	2867	617
Turn Type				Prot		Perm		NA	Free		NA	Free
Protected Phases				8				2			6	
Permitted Phases						8			Free			Free
Actuated Green, G (s)				29.0		29.0		43.0	80.0		43.0	80.0
Effective Green, g (s)				29.0		29.0		43.0	80.0		43.0	80.0
Actuated g/C Ratio				0.36		0.36		0.54	1.00		0.54	1.00
Clearance Time (s)				4.0		4.0		4.0			4.0	
Vehicle Extension (s)				3.0		3.0		3.0			3.0	
Lane Grp Cap (vph)				1232		1295		2548	1348		3187	1270
v/s Ratio Prot				0.10				c0.54			0.48	
v/s Ratio Perm						c0.38			0.40			0.49
v/c Ratio				0.28		1.05		1.00	0.40		0.90	0.49
Uniform Delay, d1				18.1		25.5		18.5	0.0		16.6	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				0.1		38.3		18.6	0.9		3.8	1.3
Delay (s)				18.2		63.8		37.1	0.9		20.4	1.3
Level of Service				B		E		D	A		C	A
Approach Delay (s)		0.0			54.7			30.8			17.0	
Approach LOS		A			D			C			B	

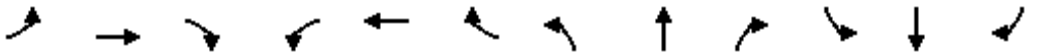
Intersection Summary			
HCM 2000 Control Delay	29.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	704	226	192	937	428	267
Future Volume (vph)	704	226	192	937	428	267
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3154	1411	1577	3154	3060	1411
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3154	1411	1577	3154	3060	1411
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	704	226	192	937	428	267
RTOR Reduction (vph)	0	157	0	0	0	198
Lane Group Flow (vph)	704	69	192	937	428	69
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	15.0	15.0	9.5	28.5	12.7	12.7
Effective Green, g (s)	15.0	15.0	9.5	28.5	12.7	12.7
Actuated g/C Ratio	0.30	0.30	0.19	0.58	0.26	0.26
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	961	430	304	1827	789	364
v/s Ratio Prot	c0.22		c0.12	0.30	c0.14	
v/s Ratio Perm		0.05				0.05
v/c Ratio	0.73	0.16	0.63	0.51	0.54	0.19
Uniform Delay, d1	15.3	12.5	18.2	6.2	15.7	14.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.9	0.2	4.2	0.2	0.8	0.3
Delay (s)	18.2	12.7	22.5	6.4	16.5	14.5
Level of Service	B	B	C	A	B	B
Approach Delay (s)	16.9			9.2	15.7	
Approach LOS	B			A	B	

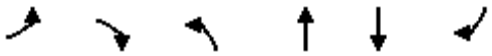
Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	49.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	309	274	1	0	395	24	0	0	0	26	0	247
Future Volume (vph)	309	274	1	0	395	24	0	0	0	26	0	247
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0					4.0	4.0	4.0
Lane Util. Factor	1.00	0.95			0.95					0.95	0.95	1.00
Frt	1.00	1.00			0.99					1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00					0.95	0.95	1.00
Satd. Flow (prot)	1736	3469			3441					1665	1665	1568
Flt Permitted	0.95	1.00			1.00					0.95	0.95	1.00
Satd. Flow (perm)	1736	3469			3441					1665	1665	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	309	274	1	0	395	24	0	0	0	26	0	247
RTOR Reduction (vph)	0	0	0	0	6	0	0	0	0	0	0	215
Lane Group Flow (vph)	309	275	0	0	413	0	0	0	0	13	13	32
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA					Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases												6
Actuated Green, G (s)	15.1	31.0			11.9					7.2	7.2	7.2
Effective Green, g (s)	15.1	31.0			11.9					7.2	7.2	7.2
Actuated g/C Ratio	0.27	0.56			0.21					0.13	0.13	0.13
Clearance Time (s)	4.0	4.0			4.0					4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0					3.0	3.0	3.0
Lane Grp Cap (vph)	469	1927			733					214	214	202
v/s Ratio Prot	c0.18	0.08			c0.12					0.01	0.01	
v/s Ratio Perm												c0.02
v/c Ratio	0.66	0.14			0.56					0.06	0.06	0.16
Uniform Delay, d1	18.1	6.0			19.6					21.3	21.3	21.6
Progression Factor	1.00	1.00			1.00					1.00	1.00	1.00
Incremental Delay, d2	3.3	0.0			1.0					0.1	0.1	0.4
Delay (s)	21.4	6.0			20.6					21.5	21.5	22.0
Level of Service	C	A			C					C	C	C
Approach Delay (s)		14.2			20.6			0.0			21.9	
Approach LOS		B			C			A			C	

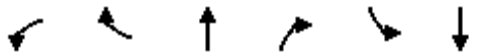
Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	55.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	42.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	103	47	22	424	809	285
Future Volume (vph)	103	47	22	424	809	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frt	0.96		1.00	1.00	0.96	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1708		1752	1845	1780	
Flt Permitted	0.97		0.95	1.00	1.00	
Satd. Flow (perm)	1708		1752	1845	1780	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	103	47	22	424	809	285
RTOR Reduction (vph)	19	0	0	0	12	0
Lane Group Flow (vph)	131	0	22	424	1082	0
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	11.4		1.4	60.6	55.2	
Effective Green, g (s)	11.4		1.4	60.6	55.2	
Actuated g/C Ratio	0.14		0.02	0.76	0.69	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	243		30	1397	1228	
v/s Ratio Prot	c0.08		c0.01	0.23	c0.61	
v/s Ratio Perm						
v/c Ratio	0.54		0.73	0.30	0.88	
Uniform Delay, d1	31.9		39.1	3.1	9.8	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	2.3		63.0	0.1	7.7	
Delay (s)	34.2		102.1	3.2	17.5	
Level of Service	C		F	A	B	
Approach Delay (s)	34.2			8.1	17.5	
Approach LOS	C			A	B	

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	85	20	288	82	18	439
Future Volume (vph)	85	20	288	82	18	439
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	1.00
Frt	1.00	0.85	0.97		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	1568	3388		1752	1845
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	1568	3388		1752	1845
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	85	20	288	82	18	439
RTOR Reduction (vph)	0	18	38	0	0	0
Lane Group Flow (vph)	85	2	332	0	18	439
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		8				
Actuated Green, G (s)	4.4	4.4	19.9		0.5	24.4
Effective Green, g (s)	4.4	4.4	19.9		0.5	24.4
Actuated g/C Ratio	0.12	0.12	0.54		0.01	0.66
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	209	187	1832		23	1223
v/s Ratio Prot	c0.05		0.10		0.01	c0.24
v/s Ratio Perm		0.00				
v/c Ratio	0.41	0.01	0.18		0.78	0.36
Uniform Delay, d1	15.0	14.3	4.3		18.1	2.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.3	0.0	0.0		93.8	0.2
Delay (s)	16.3	14.3	4.4		111.9	2.9
Level of Service	B	B	A		F	A
Approach Delay (s)	15.9		4.4			7.2
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	36.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	34.5%	ICU Level of Service	A
Analysis Period (min)	15		

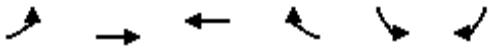
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	143	35	561	74	37	567
Future Volume (vph)	143	35	561	74	37	567
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	1.00
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	1568	3444		1752	1845
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	1568	3444		1752	1845
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	143	35	561	74	37	567
RTOR Reduction (vph)	0	29	16	0	0	0
Lane Group Flow (vph)	143	6	619	0	37	567
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		8				
Actuated Green, G (s)	7.0	7.0	21.6		0.5	26.1
Effective Green, g (s)	7.0	7.0	21.6		0.5	26.1
Actuated g/C Ratio	0.17	0.17	0.53		0.01	0.64
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	298	267	1809		21	1171
v/s Ratio Prot	c0.08		0.18		0.02	c0.31
v/s Ratio Perm		0.00				
v/c Ratio	0.48	0.02	0.34		1.76	0.48
Uniform Delay, d1	15.4	14.2	5.6		20.3	4.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.2	0.0	0.1		483.4	0.3
Delay (s)	16.6	14.2	5.8		503.7	4.3
Level of Service	B	B	A		F	A
Approach Delay (s)	16.2		5.8			34.9
Approach LOS	B		A			C

Intersection Summary			
HCM 2000 Control Delay	19.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	41.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		

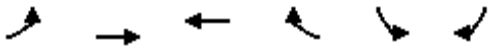
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	609	622	770	64	150	624
Future Volume (vph)	609	622	770	64	150	624
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	0.95	0.91		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3400	3505	4978		1752	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3400	3505	4978		1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	609	622	770	64	150	624
RTOR Reduction (vph)	0	0	12	0	0	443
Lane Group Flow (vph)	609	622	822	0	150	181
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	14.9	33.5	14.6		12.9	12.9
Effective Green, g (s)	14.9	33.5	14.6		12.9	12.9
Actuated g/C Ratio	0.27	0.62	0.27		0.24	0.24
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	931	2158	1336		415	371
v/s Ratio Prot	c0.18	0.18	c0.17		0.09	
v/s Ratio Perm						c0.12
v/c Ratio	0.65	0.29	0.62		0.36	0.49
Uniform Delay, d1	17.5	4.9	17.4		17.3	17.9
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.7	0.1	0.8		0.5	1.0
Delay (s)	19.1	5.0	18.3		17.9	18.9
Level of Service	B	A	B		B	B
Approach Delay (s)		12.0	18.3		18.7	
Approach LOS		B	B		B	

Intersection Summary			
HCM 2000 Control Delay	15.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	54.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		

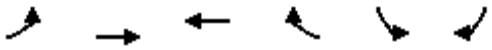
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	196	504	450	125	240	140
Future Volume (vph)	196	504	450	125	240	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3400	3505	3505	1568	3400	1568
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3400	3505	3505	1568	3400	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	196	504	450	125	240	140
RTOR Reduction (vph)	0	0	0	88	0	107
Lane Group Flow (vph)	196	504	450	37	240	33
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	6.1	21.4	11.3	11.3	8.9	8.9
Effective Green, g (s)	6.1	21.4	11.3	11.3	8.9	8.9
Actuated g/C Ratio	0.16	0.56	0.30	0.30	0.23	0.23
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	541	1958	1034	462	790	364
v/s Ratio Prot	c0.06	0.14	c0.13		c0.07	
v/s Ratio Perm				0.02		0.02
v/c Ratio	0.36	0.26	0.44	0.08	0.30	0.09
Uniform Delay, d1	14.4	4.4	10.9	9.7	12.1	11.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.1	0.3	0.1	0.2	0.1
Delay (s)	14.8	4.4	11.2	9.8	12.4	11.6
Level of Service	B	A	B	A	B	B
Approach Delay (s)		7.3	10.9		12.1	
Approach LOS		A	B		B	

Intersection Summary			
HCM 2000 Control Delay	9.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	38.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	34.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	76	670	540	59	19	42
Future Volume (vph)	76	670	540	59	19	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3453		1752	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3453		1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	76	670	540	59	19	42
RTOR Reduction (vph)	0	0	18	0	0	33
Lane Group Flow (vph)	76	670	581	0	19	9
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	1.5	16.3	10.8		6.2	6.2
Effective Green, g (s)	1.5	16.3	10.8		6.2	6.2
Actuated g/C Ratio	0.05	0.53	0.35		0.20	0.20
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	86	1873	1222		356	318
v/s Ratio Prot	c0.04	0.19	c0.17		c0.01	
v/s Ratio Perm						0.01
v/c Ratio	0.88	0.36	0.48		0.05	0.03
Uniform Delay, d1	14.4	4.1	7.6		9.8	9.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	59.9	0.1	0.3		0.1	0.0
Delay (s)	74.3	4.2	7.9		9.8	9.8
Level of Service	E	A	A		A	A
Approach Delay (s)		11.3	7.9		9.8	
Approach LOS		B	A		A	

Intersection Summary			
HCM 2000 Control Delay	9.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	30.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	34.4%	ICU Level of Service	A
Analysis Period (min)	15		

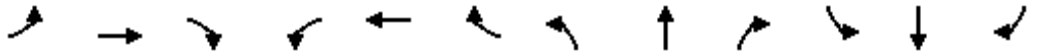
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	132	0	0	130	0
Future Volume (vph)	0	132	0	0	130	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	
Lane Util. Factor		1.00			0.97	
Frt		0.85			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		1568			3400	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		1568			3400	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	132	0	0	130	0
RTOR Reduction (vph)	0	116	0	0	0	0
Lane Group Flow (vph)	0	16	0	0	130	0
Turn Type		Perm	Prot		Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)		3.3			15.9	
Effective Green, g (s)		3.3			15.9	
Actuated g/C Ratio		0.12			0.58	
Clearance Time (s)		4.0			4.0	
Vehicle Extension (s)		3.0			3.0	
Lane Grp Cap (vph)		190			1987	
v/s Ratio Prot					c0.04	
v/s Ratio Perm		c0.01				
v/c Ratio		0.08			0.07	
Uniform Delay, d1		10.6			2.4	
Progression Factor		1.00			1.00	
Incremental Delay, d2		0.2			0.0	
Delay (s)		10.8			2.5	
Level of Service		B			A	
Approach Delay (s)	10.8			0.0	2.5	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	6.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.09		
Actuated Cycle Length (s)	27.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	11.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	0	484	592	252	648	0	1644	669	0	2049	358
Future Volume (veh/h)	200	0	484	592	252	648	0	1644	669	0	2049	358
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1827	1827	1827	0	1827	1827	0	1827	1827
Adj Flow Rate, veh/h	200	0	484	474	341	699	0	1644	0	0	2049	358
Adj No. of Lanes	0	1	2	2	1	3	0	3	1	0	4	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	0	4	4	0	4	4
Cap, veh/h	383	0	602	844	443	1130	0	1712	533	0	2157	533
Arrive On Green	0.22	0.00	0.22	0.24	0.24	0.24	0.00	0.34	0.00	0.00	0.34	0.34
Sat Flow, veh/h	1757	0	2760	3480	1827	4659	0	5152	1553	0	6540	1553
Grp Volume(v), veh/h	200	0	484	474	341	699	0	1644	0	0	2049	358
Grp Sat Flow(s),veh/h/ln	1757	0	1380	1740	1827	1553	0	1663	1553	0	1571	1553
Q Serve(g_s), s	6.1	0.0	10.2	7.3	10.6	8.2	0.0	19.8	0.0	0.0	19.4	12.0
Cycle Q Clear(g_c), s	6.1	0.0	10.2	7.3	10.6	8.2	0.0	19.8	0.0	0.0	19.4	12.0
Prop In Lane	1.00		1.00	1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	383	0	602	844	443	1130	0	1712	533	0	2157	533
V/C Ratio(X)	0.52	0.00	0.80	0.56	0.77	0.62	0.00	0.96	0.00	0.00	0.95	0.67
Avail Cap(c_a), veh/h	459	0	722	910	478	1218	0	1712	533	0	2157	533
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	21.1	0.0	22.7	20.3	21.6	20.6	0.0	19.7	0.0	0.0	19.6	17.1
Incr Delay (d2), s/veh	1.1	0.0	5.6	0.7	7.0	0.9	0.0	13.5	0.0	0.0	10.1	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	4.3	3.6	6.2	3.6	0.0	11.1	0.0	0.0	9.9	5.6
LnGrp Delay(d),s/veh	22.2	0.0	28.3	21.0	28.6	21.5	0.0	33.2	0.0	0.0	29.6	20.4
LnGrp LOS	C		C	C	C	C		C			C	C
Approach Vol, veh/h		684			1514			1644			2407	
Approach Delay, s/veh		26.5			22.9			33.2			28.3	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		25.0		17.3		25.0		18.8
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		21.0		16.0		21.0		16.0
Max Q Clear Time (g_c+I1), s		21.8		12.2		21.4		12.6
Green Ext Time (p_c), s		0.0		1.2		0.0		2.2

Intersection Summary	
HCM 2010 Ctrl Delay	28.1
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	204	28	167	17	42	24	139	872	6	14	1422	391
Future Volume (veh/h)	204	28	167	17	42	24	139	872	6	14	1422	391
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1827	1900	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	224	0	167	17	42	24	139	872	6	14	1422	391
Adj No. of Lanes	2	0	1	0	1	0	2	3	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	4	4	4	4	4	4
Cap, veh/h	513	0	229	22	55	31	201	1273	9	528	1711	766
Arrive On Green	0.15	0.00	0.15	0.06	0.06	0.06	0.06	0.25	0.25	0.30	0.49	0.49
Sat Flow, veh/h	3514	0	1568	353	871	498	3375	5111	35	1740	3471	1553
Grp Volume(v), veh/h	224	0	167	83	0	0	139	567	311	14	1422	391
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1721	0	0	1688	1663	1821	1740	1736	1553
Q Serve(g_s), s	3.9	0.0	6.8	3.2	0.0	0.0	2.7	10.4	10.4	0.4	23.6	11.4
Cycle Q Clear(g_c), s	3.9	0.0	6.8	3.2	0.0	0.0	2.7	10.4	10.4	0.4	23.6	11.4
Prop In Lane	1.00		1.00	0.20		0.29	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	513	0	229	108	0	0	201	828	454	528	1711	766
V/C Ratio(X)	0.44	0.00	0.73	0.77	0.00	0.00	0.69	0.68	0.69	0.03	0.83	0.51
Avail Cap(c_a), veh/h	838	0	374	411	0	0	201	1884	1032	528	1967	880
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.1	0.0	27.4	30.9	0.0	0.0	30.9	22.8	22.8	16.4	14.6	11.5
Incr Delay (d2), s/veh	0.6	0.0	4.4	10.8	0.0	0.0	9.6	1.0	1.8	0.0	2.8	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	3.2	1.8	0.0	0.0	1.5	4.8	5.4	0.2	11.7	5.0
LnGrp Delay(d),s/veh	26.7	0.0	31.8	41.8	0.0	0.0	40.5	23.8	24.6	16.4	17.4	12.0
LnGrp LOS	C		C	D			D	C	C	B	B	B
Approach Vol, veh/h		391			83			1017			1827	
Approach Delay, s/veh		28.9			41.8			26.3			16.3	
Approach LOS		C			D			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	24.3	20.7		13.8	8.0	37.1		8.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	38.0		16.0	4.0	38.0		16.0
Max Q Clear Time (g_c+I1), s	2.4	12.4		8.8	4.7	25.6		5.2
Green Ext Time (p_c), s	1.3	4.3		1.0	0.0	7.5		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	21.5
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	307	110	132	549	226	120	601	111	148	1163	269
Future Volume (veh/h)	154	307	110	132	549	226	120	601	111	148	1163	269
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	154	307	110	132	549	226	120	601	111	148	1163	269
Adj No. of Lanes	1	2	0	1	2	1	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	171	563	198	167	766	343	198	1035	191	237	1267	567
Arrive On Green	0.10	0.22	0.22	0.09	0.22	0.22	0.06	0.35	0.35	0.07	0.37	0.37
Sat Flow, veh/h	1757	2545	894	1757	3505	1568	3375	2928	540	3375	3471	1553
Grp Volume(v), veh/h	154	210	207	132	549	226	120	356	356	148	1163	269
Grp Sat Flow(s),veh/h/ln	1757	1752	1687	1757	1752	1568	1688	1736	1732	1688	1736	1553
Q Serve(g_s), s	5.3	6.5	6.7	4.5	8.9	8.1	2.1	10.2	10.3	2.6	19.7	8.2
Cycle Q Clear(g_c), s	5.3	6.5	6.7	4.5	8.9	8.1	2.1	10.2	10.3	2.6	19.7	8.2
Prop In Lane	1.00		0.53	1.00		1.00	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	171	388	373	167	766	343	198	613	612	237	1267	567
V/C Ratio(X)	0.90	0.54	0.56	0.79	0.72	0.66	0.61	0.58	0.58	0.62	0.92	0.47
Avail Cap(c_a), veh/h	171	456	439	171	912	408	220	613	612	329	1299	581
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.4	21.2	21.3	27.2	22.3	21.9	28.2	16.2	16.2	27.8	18.6	15.0
Incr Delay (d2), s/veh	41.1	1.2	1.3	21.3	2.2	3.0	4.0	1.4	1.4	2.7	10.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	3.3	3.2	3.2	4.5	3.7	1.1	5.1	5.1	1.3	11.2	3.5
LnGrp Delay(d),s/veh	68.5	22.4	22.6	48.6	24.5	24.9	32.2	17.5	17.6	30.5	29.0	15.6
LnGrp LOS	E	C	C	D	C	C	C	B	B	C	C	B
Approach Vol, veh/h		571			907			832			1580	
Approach Delay, s/veh		34.9			28.1			19.7			26.8	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	25.7	9.8	17.6	7.6	26.4	10.0	17.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	21.0	6.0	16.0	4.0	23.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	4.6	12.3	6.5	8.7	4.1	21.7	7.3	10.9
Green Ext Time (p_c), s	0.1	6.2	0.0	3.3	0.0	0.8	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	26.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	486	286	148	220	89	94	803	193	49	299	3
Future Volume (veh/h)	26	486	286	148	220	89	94	803	193	49	299	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1900	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	26	486	286	148	220	89	94	803	193	49	299	3
Adj No. of Lanes	1	1	2	1	2	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	40	533	797	180	906	355	119	977	437	67	884	9
Arrive On Green	0.02	0.30	0.30	0.11	0.38	0.38	0.07	0.28	0.28	0.04	0.25	0.25
Sat Flow, veh/h	1707	1792	2682	1707	2392	938	1757	3505	1568	1757	3555	36
Grp Volume(v), veh/h	26	486	286	148	155	154	94	803	193	49	147	155
Grp Sat Flow(s),veh/h/ln	1707	1792	1341	1707	1703	1627	1757	1752	1568	1757	1752	1838
Q Serve(g_s), s	0.9	14.9	4.8	4.8	3.5	3.7	3.0	12.2	5.8	1.6	3.9	3.9
Cycle Q Clear(g_c), s	0.9	14.9	4.8	4.8	3.5	3.7	3.0	12.2	5.8	1.6	3.9	3.9
Prop In Lane	1.00		1.00	1.00		0.58	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	40	533	797	180	645	616	119	977	437	67	436	457
V/C Ratio(X)	0.64	0.91	0.36	0.82	0.24	0.25	0.79	0.82	0.44	0.74	0.34	0.34
Avail Cap(c_a), veh/h	120	535	800	180	645	616	123	1046	468	123	523	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.6	19.3	15.7	25.0	12.1	12.1	26.1	19.2	16.9	27.1	17.6	17.6
Incr Delay (d2), s/veh	15.8	20.0	0.3	25.5	0.2	0.2	27.2	5.1	0.7	14.5	0.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	10.2	1.8	3.5	1.7	1.7	2.4	6.6	2.6	1.0	1.9	2.0
LnGrp Delay(d),s/veh	43.4	39.3	16.0	50.5	12.3	12.4	53.4	24.3	17.6	41.7	18.0	18.0
LnGrp LOS	D	D	B	D	B	B	D	C	B	D	B	B
Approach Vol, veh/h		798			457			1090			351	
Approach Delay, s/veh		31.1			24.7			25.6			21.3	
Approach LOS		C			C			C			C	

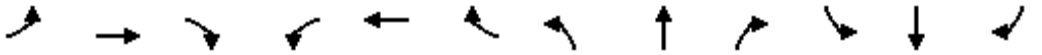
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	19.9	10.0	20.9	7.9	18.2	5.3	25.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	17.0	6.0	17.0	4.0	17.0	4.0	19.0
Max Q Clear Time (g_c+I1), s	3.6	14.2	6.8	16.9	5.0	5.9	2.9	5.7
Green Ext Time (p_c), s	0.0	1.7	0.0	0.0	0.0	4.7	0.0	4.1

Intersection Summary	
HCM 2010 Ctrl Delay	26.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	250	195	99	320	64	158	579	156	43	796	150
Future Volume (veh/h)	97	250	195	99	320	64	158	579	156	43	796	150
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	97	250	195	99	320	64	158	579	156	43	796	150
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	123	706	316	125	593	117	200	1297	580	63	1024	458
Arrive On Green	0.07	0.20	0.20	0.07	0.20	0.20	0.11	0.37	0.37	0.04	0.29	0.29
Sat Flow, veh/h	1757	3505	1568	1757	2919	577	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	97	250	195	99	191	193	158	579	156	43	796	150
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1743	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	2.7	3.1	5.7	2.8	4.8	5.0	4.4	6.2	3.5	1.2	10.4	3.7
Cycle Q Clear(g_c), s	2.7	3.1	5.7	2.8	4.8	5.0	4.4	6.2	3.5	1.2	10.4	3.7
Prop In Lane	1.00		1.00	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	123	706	316	125	356	354	200	1297	580	63	1024	458
V/C Ratio(X)	0.79	0.35	0.62	0.79	0.54	0.55	0.79	0.45	0.27	0.68	0.78	0.33
Avail Cap(c_a), veh/h	176	1125	503	176	562	559	247	1297	580	176	1125	503
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.8	17.1	18.1	22.8	17.8	17.8	21.5	11.8	11.0	23.7	16.2	13.8
Incr Delay (d2), s/veh	14.1	0.3	2.0	14.6	1.3	1.3	12.9	0.2	0.2	12.1	3.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	1.5	2.6	1.8	2.5	2.5	2.8	3.0	1.5	0.8	5.4	1.6
LnGrp Delay(d),s/veh	37.0	17.4	20.1	37.4	19.0	19.1	34.4	12.1	11.2	35.8	19.4	14.2
LnGrp LOS	D	B	C	D	B	B	C	B	B	D	B	B
Approach Vol, veh/h		542			483			893			989	
Approach Delay, s/veh		21.9			22.8			15.9			19.3	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.8	22.5	7.6	14.1	9.7	18.6	7.5	14.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	18.0	5.0	16.0	7.0	16.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	3.2	8.2	4.8	7.7	6.4	12.4	4.7	7.0
Green Ext Time (p_c), s	0.0	5.6	0.0	2.4	0.0	2.2	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	19.3
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	344	116	124	410	67	123	368	95	87	842	133
Future Volume (veh/h)	81	344	116	124	410	67	123	368	95	87	842	133
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	81	344	116	124	410	67	123	368	95	87	842	133
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	102	669	299	157	780	349	157	1178	527	110	1085	485
Arrive On Green	0.06	0.19	0.19	0.09	0.22	0.22	0.09	0.34	0.34	0.06	0.31	0.31
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	81	344	116	124	410	67	123	368	95	87	842	133
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1568	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	2.3	4.4	3.2	3.4	5.1	1.7	3.4	3.9	2.1	2.4	10.9	3.2
Cycle Q Clear(g_c), s	2.3	4.4	3.2	3.4	5.1	1.7	3.4	3.9	2.1	2.4	10.9	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	102	669	299	157	780	349	157	1178	527	110	1085	485
V/C Ratio(X)	0.80	0.51	0.39	0.79	0.53	0.19	0.78	0.31	0.18	0.79	0.78	0.27
Avail Cap(c_a), veh/h	176	1124	503	176	1124	503	211	1194	534	211	1194	534
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.2	18.1	17.6	22.2	17.1	15.8	22.2	12.3	11.7	23.1	15.6	13.0
Incr Delay (d2), s/veh	13.0	0.6	0.8	18.9	0.6	0.3	12.7	0.1	0.2	11.8	3.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	2.2	1.5	2.5	2.5	0.8	2.2	1.9	1.0	1.5	5.7	1.4
LnGrp Delay(d),s/veh	36.2	18.7	18.5	41.2	17.6	16.0	35.0	12.4	11.9	34.8	18.6	13.3
LnGrp LOS	D	B	B	D	B	B	C	B	B	C	B	B
Approach Vol, veh/h		541			601			586			1062	
Approach Delay, s/veh		21.3			22.3			17.1			19.3	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.1	20.8	8.5	13.5	8.5	19.4	6.9	15.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	17.0	5.0	16.0	6.0	17.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	4.4	5.9	5.4	6.4	5.4	12.9	4.3	7.1
Green Ext Time (p_c), s	0.0	5.3	0.0	3.1	0.0	2.6	0.0	3.0

Intersection Summary	
HCM 2010 Ctrl Delay	19.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	422	490	108	220	417	773	85	1596	135	449	1791	401
Future Volume (veh/h)	422	490	108	220	417	773	85	1596	135	449	1791	401
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	422	490	108	220	417	773	85	1596	135	449	1791	401
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	417	1075	481	267	920	647	126	1617	503	506	2178	678
Arrive On Green	0.12	0.31	0.31	0.08	0.26	0.26	0.04	0.32	0.32	0.15	0.44	0.44
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	422	490	108	220	417	773	85	1596	135	449	1791	401
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	17.7	16.3	7.4	9.2	14.4	38.0	3.6	46.0	9.3	18.9	45.7	28.4
Cycle Q Clear(g_c), s	17.7	16.3	7.4	9.2	14.4	38.0	3.6	46.0	9.3	18.9	45.7	28.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	417	1075	481	267	920	647	126	1617	503	506	2178	678
V/C Ratio(X)	1.01	0.46	0.22	0.82	0.45	1.19	0.67	0.99	0.27	0.89	0.82	0.59
Avail Cap(c_a), veh/h	417	1075	481	372	920	647	145	1617	503	642	2344	730
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.5	40.4	37.4	65.7	44.6	42.5	68.8	48.6	36.2	60.3	35.8	31.0
Incr Delay (d2), s/veh	47.2	0.1	0.1	7.2	0.1	102.4	6.7	19.3	0.1	10.4	2.1	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.0	7.9	3.2	4.6	7.0	44.1	1.8	24.0	4.0	9.5	21.3	12.3
LnGrp Delay(d),s/veh	110.7	40.5	37.4	72.9	44.8	144.9	75.5	67.9	36.3	70.7	37.9	31.6
LnGrp LOS	F	D	D	E	D	F	E	E	D	E	D	C
Approach Vol, veh/h		1020			1410			1816			2641	
Approach Delay, s/veh		69.2			104.0			65.9			42.5	
Approach LOS		E			F			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	68.0	23.2	42.6	27.2	51.7	16.8	49.0
Change Period (Y+Rc), s	5.5	4.8	5.5	* 4.6	5.5	* 4.8	5.5	4.6
Max Green Setting (Gmax), s	6.2	68.0	17.7	* 38	27.5	* 47	15.8	39.6
Max Q Clear Time (g_c+I1), s	5.6	47.7	19.7	40.0	20.9	48.0	11.2	18.3
Green Ext Time (p_c), s	0.0	8.1	0.0	0.0	0.8	0.0	0.1	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	65.2
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	0	1	51	0	94	0	1559	19	132	1863	4
Future Volume (veh/h)	1	0	1	51	0	94	0	1559	19	132	1863	4
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	1	0	1	51	0	94	0	1559	19	132	1863	4
Adj No. of Lanes	0	1	0	1	0	2	1	3	1	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	2	0	2	106	0	190	3	2188	681	168	3251	7
Arrive On Green	0.00	0.00	0.00	0.06	0.00	0.06	0.00	0.44	0.44	0.10	0.63	0.63
Sat Flow, veh/h	828	0	828	1757	0	3136	1740	4988	1553	1740	5139	11
Grp Volume(v), veh/h	2	0	0	51	0	94	0	1559	19	132	1205	662
Grp Sat Flow(s),veh/h/ln	1657	0	0	1757	0	1568	1740	1663	1553	1740	1663	1825
Q Serve(g_s), s	0.1	0.0	0.0	1.5	0.0	1.5	0.0	13.4	0.4	3.9	10.9	10.9
Cycle Q Clear(g_c), s	0.1	0.0	0.0	1.5	0.0	1.5	0.0	13.4	0.4	3.9	10.9	10.9
Prop In Lane	0.50		0.50	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	3	0	0	106	0	190	3	2188	681	168	2103	1154
V/C Ratio(X)	0.63	0.00	0.00	0.48	0.00	0.50	0.00	0.71	0.03	0.79	0.57	0.57
Avail Cap(c_a), veh/h	95	0	0	402	0	718	100	2399	747	296	2103	1154
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.1	0.0	0.0	23.8	0.0	23.8	0.0	12.0	8.4	23.1	5.5	5.5
Incr Delay (d2), s/veh	58.0	0.0	0.0	1.2	0.0	0.7	0.0	1.6	0.1	3.1	0.9	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.7	0.0	0.7	0.0	6.4	0.2	2.0	5.1	5.8
LnGrp Delay(d),s/veh	84.1	0.0	0.0	25.1	0.0	24.6	0.0	13.6	8.4	26.2	6.4	7.1
LnGrp LOS	F			C		C		B	A	C	A	A
Approach Vol, veh/h		2			145			1578			1999	
Approach Delay, s/veh		84.1			24.8			13.5			7.9	
Approach LOS		F			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	38.1		5.6	10.2	28.0		8.7
Change Period (Y+Rc), s	* 4.6	5.0		5.5	* 5.1	* 5		5.5
Max Green Setting (Gmax), s	* 3	31.4		3.0	* 8.9	* 25		12.0
Max Q Clear Time (g_c+I1), s	0.0	12.9		2.1	5.9	15.4		3.5
Green Ext Time (p_c), s	0.0	18.3		0.0	0.0	7.6		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	11.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	260	23	187	125	343	9	1183	143	660	1217	39
Future Volume (veh/h)	88	260	23	187	125	343	9	1183	143	660	1217	39
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1845	1845	1845	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	88	260	23	187	125	343	9	1183	143	660	1217	39
Adj No. of Lanes	2	2	1	2	2	1	2	3	0	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	141	729	326	242	838	375	22	1295	157	716	2446	78
Arrive On Green	0.04	0.21	0.21	0.07	0.24	0.24	0.01	0.29	0.29	0.21	0.49	0.49
Sat Flow, veh/h	3375	3471	1553	3408	3505	1568	3375	4511	545	3375	4965	159
Grp Volume(v), veh/h	88	260	23	187	125	343	9	872	454	660	815	441
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1704	1752	1568	1688	1663	1731	1688	1663	1799
Q Serve(g_s), s	2.6	6.4	1.2	5.4	2.8	21.3	0.3	25.4	25.4	19.2	16.5	16.5
Cycle Q Clear(g_c), s	2.6	6.4	1.2	5.4	2.8	21.3	0.3	25.4	25.4	19.2	16.5	16.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.31	1.00		0.09
Lane Grp Cap(c), veh/h	141	729	326	242	838	375	22	955	497	716	1638	886
V/C Ratio(X)	0.63	0.36	0.07	0.77	0.15	0.91	0.40	0.91	0.91	0.92	0.50	0.50
Avail Cap(c_a), veh/h	158	1006	450	242	1096	490	101	1013	527	728	1638	886
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	33.8	31.7	45.7	30.0	37.1	49.5	34.5	34.5	38.6	17.1	17.1
Incr Delay (d2), s/veh	3.8	0.1	0.0	13.1	0.0	16.2	4.3	11.4	19.1	16.6	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	3.1	0.5	3.0	1.4	10.9	0.1	13.1	14.7	10.5	7.5	8.1
LnGrp Delay(d),s/veh	51.0	33.9	31.7	58.9	30.1	53.3	53.8	45.9	53.6	55.2	17.1	17.2
LnGrp LOS	D	C	C	E	C	D	D	D	D	E	B	B
Approach Vol, veh/h		371			655			1335			1916	
Approach Delay, s/veh		37.8			50.4			48.6			30.3	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	54.6	9.7	29.6	26.7	34.0	12.6	26.7
Change Period (Y+Rc), s	5.5	5.3	5.5	* 5.7	5.5	* 5.3	5.5	* 5.7
Max Green Setting (Gmax), s	3.0	49.0	4.7	* 31	21.6	* 31	7.1	* 29
Max Q Clear Time (g_c+I1), s	2.3	18.5	4.6	23.3	21.2	27.4	7.4	8.4
Green Ext Time (p_c), s	0.0	4.0	0.0	0.6	0.1	1.4	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	39.7
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	13	34	1284	23	79	1347
Future Volume (veh/h)	13	34	1284	23	79	1347
Number	3	18	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1827	1900	1827	1827
Adj Flow Rate, veh/h	13	34	1284	23	79	1347
Adj No. of Lanes	1	1	3	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	4	4	4	4
Cap, veh/h	57	51	2028	36	94	2139
Arrive On Green	0.03	0.03	0.40	0.40	0.05	0.62
Sat Flow, veh/h	1757	1568	5210	90	1740	3563
Grp Volume(v), veh/h	13	34	846	461	79	1347
Grp Sat Flow(s),veh/h/ln	1757	1568	1663	1811	1740	1736
Q Serve(g_s), s	0.2	0.6	6.0	6.0	1.3	7.1
Cycle Q Clear(g_c), s	0.2	0.6	6.0	6.0	1.3	7.1
Prop In Lane	1.00	1.00		0.05	1.00	
Lane Grp Cap(c), veh/h	57	51	1337	728	94	2139
V/C Ratio(X)	0.23	0.67	0.63	0.63	0.84	0.63
Avail Cap(c_a), veh/h	210	187	2177	1185	433	3692
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.8	14.0	7.0	7.0	13.7	3.5
Incr Delay (d2), s/veh	0.7	5.4	0.2	0.3	7.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.3	2.7	3.0	0.8	3.2
LnGrp Delay(d),s/veh	14.6	19.5	7.2	7.4	21.1	3.6
LnGrp LOS	B	B	A	A	C	A
Approach Vol, veh/h	47		1307			1426
Approach Delay, s/veh	18.1		7.3			4.6
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		22.9			6.3	16.6		6.5
Change Period (Y+Rc), s		4.8			* 4.7	4.8		5.5
Max Green Setting (Gmax), s		31.2			* 7.3	19.2		3.5
Max Q Clear Time (g_c+I1), s		9.1			3.3	8.0		2.6
Green Ext Time (p_c), s		4.4			0.0	3.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	6.1
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	587	55	43	307	394	33	940	85	343	865	93
Future Volume (veh/h)	130	587	55	43	307	394	33	940	85	343	865	93
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1792	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	130	587	55	43	307	394	33	940	85	343	865	93
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	4	4	4	4	4	4
Cap, veh/h	154	565	53	54	529	450	41	922	413	333	1498	670
Arrive On Green	0.09	0.35	0.35	0.03	0.30	0.30	0.02	0.27	0.27	0.19	0.43	0.43
Sat Flow, veh/h	1707	1614	151	1707	1792	1524	1740	3471	1553	1740	3471	1553
Grp Volume(v), veh/h	130	0	642	43	307	394	33	940	85	343	865	93
Grp Sat Flow(s),veh/h/ln	1707	0	1766	1707	1792	1524	1740	1736	1553	1740	1736	1553
Q Serve(g_s), s	9.4	0.0	43.7	3.1	18.2	30.7	2.4	33.2	5.3	23.9	23.6	4.5
Cycle Q Clear(g_c), s	9.4	0.0	43.7	3.1	18.2	30.7	2.4	33.2	5.3	23.9	23.6	4.5
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	154	0	617	54	529	450	41	922	413	333	1498	670
V/C Ratio(X)	0.84	0.00	1.04	0.79	0.58	0.88	0.80	1.02	0.21	1.03	0.58	0.14
Avail Cap(c_a), veh/h	205	0	617	59	529	450	93	922	413	333	1498	670
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.0	0.0	40.6	60.1	37.5	41.9	60.7	45.9	35.6	50.5	26.9	21.5
Incr Delay (d2), s/veh	16.6	0.0	47.0	43.7	1.1	16.8	12.1	34.6	0.1	57.5	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	0.0	29.3	2.1	9.2	15.0	1.3	20.3	2.3	16.8	11.4	1.9
LnGrp Delay(d),s/veh	72.6	0.0	87.6	103.8	38.5	58.7	72.8	80.5	35.7	108.0	27.3	21.5
LnGrp LOS	E		F	F	D	E	E	F	D	F	C	C
Approach Vol, veh/h		772			744			1058			1301	
Approach Delay, s/veh		85.1			53.0			76.7			48.2	
Approach LOS		F			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.3	42.3	7.7	58.7	9.5	49.1	28.4	38.0
Change Period (Y+Rc), s	5.0	* 5.4	* 4.7	4.8	5.5	* 5.4	4.5	4.8
Max Green Setting (Gmax), s	15.0	* 33	* 6.7	50.2	4.3	* 44	23.9	33.2
Max Q Clear Time (g_c+I1), s	11.4	32.7	4.4	25.6	5.1	45.7	25.9	35.2
Green Ext Time (p_c), s	0.0	0.2	0.0	3.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	64.2
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	351	132	69	1	31	18	120	648	6	30	761	219
Future Volume (veh/h)	351	132	69	1	31	18	120	648	6	30	761	219
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1827	1827	1900	1845	1827	1827
Adj Flow Rate, veh/h	351	132	69	1	31	18	120	648	6	30	761	219
Adj No. of Lanes	1	1	1	1	1	0	1	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	3	4	4
Cap, veh/h	404	549	467	3	70	40	152	1141	11	35	931	417
Arrive On Green	0.23	0.30	0.30	0.00	0.06	0.06	0.09	0.32	0.32	0.02	0.27	0.27
Sat Flow, veh/h	1757	1845	1568	1757	1096	636	1740	3524	33	1757	3471	1553
Grp Volume(v), veh/h	351	132	69	1	0	49	120	319	335	30	761	219
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1732	1740	1736	1821	1757	1736	1553
Q Serve(g_s), s	11.1	3.1	1.9	0.0	0.0	1.6	3.9	8.8	8.8	1.0	11.8	6.9
Cycle Q Clear(g_c), s	11.1	3.1	1.9	0.0	0.0	1.6	3.9	8.8	8.8	1.0	11.8	6.9
Prop In Lane	1.00		1.00	1.00		0.37	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	404	549	467	3	0	110	152	562	590	35	931	417
V/C Ratio(X)	0.87	0.24	0.15	0.33	0.00	0.45	0.79	0.57	0.57	0.86	0.82	0.53
Avail Cap(c_a), veh/h	564	881	749	101	0	382	224	750	787	113	1320	590
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.3	15.3	14.9	28.7	0.0	26.0	25.8	16.1	16.1	28.1	19.8	18.0
Incr Delay (d2), s/veh	7.9	0.1	0.1	21.5	0.0	1.0	6.1	0.3	0.3	19.4	1.9	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	1.6	0.8	0.0	0.0	0.8	2.1	4.2	4.4	0.7	5.8	3.0
LnGrp Delay(d),s/veh	29.3	15.4	14.9	50.2	0.0	27.0	31.8	16.5	16.5	47.5	21.6	18.3
LnGrp LOS	C	B	B	D		C	C	B	B	D	C	B
Approach Vol, veh/h		552			50			774			1010	
Approach Delay, s/veh		24.1			27.5			18.8			21.7	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	20.3	18.7	9.0	6.4	23.5	5.2	22.5
Change Period (Y+Rc), s	* 4.6	4.8	5.5	* 5.3	* 5.3	4.8	* 5.2	* 5.3
Max Green Setting (Gmax), s	* 7.4	21.9	18.5	* 13	* 3.7	24.9	* 3.3	* 28
Max Q Clear Time (g_c+I1), s	5.9	13.8	13.1	3.6	3.0	10.8	2.0	5.1
Green Ext Time (p_c), s	0.0	1.6	0.2	0.2	0.0	1.8	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	21.5
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	291	153	42	286	102	61	484	1	44	788	75
Future Volume (veh/h)	116	291	153	42	286	102	61	484	1	44	788	75
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1845	1845	1845	1827	1827	1845	1845	1827	1827
Adj Flow Rate, veh/h	116	291	153	42	286	102	61	484	1	44	788	75
Adj No. of Lanes	0	1	1	1	1	1	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	3	3	4	4
Cap, veh/h	114	287	346	272	285	243	68	786	675	57	781	664
Arrive On Green	0.22	0.22	0.22	0.15	0.15	0.15	0.04	0.43	0.43	0.03	0.43	0.43
Sat Flow, veh/h	518	1300	1568	1757	1845	1568	1740	1827	1568	1757	1827	1553
Grp Volume(v), veh/h	407	0	153	42	286	102	61	484	1	44	788	75
Grp Sat Flow(s),veh/h/ln	1819	0	1568	1757	1845	1568	1740	1827	1568	1757	1827	1553
Q Serve(g_s), s	33.1	0.0	12.6	3.1	23.2	8.8	5.2	30.8	0.1	3.7	64.1	4.4
Cycle Q Clear(g_c), s	33.1	0.0	12.6	3.1	23.2	8.8	5.2	30.8	0.1	3.7	64.1	4.4
Prop In Lane	0.29		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	401	0	346	272	285	243	68	786	675	57	781	664
V/C Ratio(X)	1.01	0.00	0.44	0.15	1.00	0.42	0.89	0.62	0.00	0.78	1.01	0.11
Avail Cap(c_a), veh/h	401	0	346	272	285	243	68	786	675	102	781	664
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.5	0.0	50.5	54.9	63.4	57.3	71.7	33.1	24.3	72.1	43.0	25.8
Incr Delay (d2), s/veh	48.5	0.0	0.3	0.3	53.9	1.2	70.6	1.1	0.0	20.1	34.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.0	0.0	5.5	1.5	16.1	3.9	3.9	15.7	0.0	2.1	39.8	1.9
LnGrp Delay(d),s/veh	107.0	0.0	50.8	55.2	117.3	58.5	142.3	34.2	24.3	92.1	77.5	25.9
LnGrp LOS	F		D	E	F	E	F	C	C	F	F	C
Approach Vol, veh/h		560			430			546			907	
Approach Delay, s/veh		91.7			97.3			46.2			73.9	
Approach LOS		F			F			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.6	69.2		30.0	10.1	69.7		40.2
Change Period (Y+Rc), s	* 4.7	5.1		6.8	* 5.3	5.1		7.1
Max Green Setting (Gmax), s	* 5.9	64.1		23.2	* 8.7	60.7		33.1
Max Q Clear Time (g_c+I1), s	7.2	66.1		25.2	5.7	32.8		35.1
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	1.4		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		75.9
HCM 2010 LOS		E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	249	296	125	419	10	107	449	40	19	842	122
Future Volume (veh/h)	90	249	296	125	419	10	107	449	40	19	842	122
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1827	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	90	249	296	125	419	10	107	449	40	19	842	122
Adj No. of Lanes	1	2	0	1	2	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	115	361	323	145	777	348	136	1309	116	23	1064	154
Arrive On Green	0.07	0.21	0.21	0.08	0.22	0.22	0.08	0.41	0.41	0.01	0.35	0.35
Sat Flow, veh/h	1740	1736	1553	1740	3471	1553	1740	3226	286	1740	3044	441
Grp Volume(v), veh/h	90	249	296	125	419	10	107	241	248	19	480	484
Grp Sat Flow(s),veh/h/ln	1740	1736	1553	1740	1736	1553	1740	1736	1776	1740	1736	1749
Q Serve(g_s), s	3.7	9.6	13.5	5.1	7.7	0.4	4.4	6.9	7.0	0.8	17.9	17.9
Cycle Q Clear(g_c), s	3.7	9.6	13.5	5.1	7.7	0.4	4.4	6.9	7.0	0.8	17.9	17.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		0.25
Lane Grp Cap(c), veh/h	115	361	323	145	777	348	136	705	721	23	606	611
V/C Ratio(X)	0.79	0.69	0.92	0.86	0.54	0.03	0.79	0.34	0.34	0.83	0.79	0.79
Avail Cap(c_a), veh/h	166	361	323	145	777	348	195	729	746	72	616	621
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.2	26.4	28.0	32.7	24.7	21.9	32.7	14.8	14.8	35.5	21.1	21.1
Incr Delay (d2), s/veh	8.2	10.3	32.7	36.9	2.7	0.2	7.7	1.3	1.3	23.4	10.2	10.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	5.6	8.7	3.9	4.0	0.2	2.4	3.5	3.6	0.5	10.2	10.3
LnGrp Delay(d),s/veh	41.4	36.7	60.7	69.5	27.4	22.0	40.3	16.1	16.1	58.9	31.3	31.2
LnGrp LOS	D	D	E	E	C	C	D	B	B	E	C	C
Approach Vol, veh/h		635			554			596			983	
Approach Delay, s/veh		48.6			36.8			20.5			31.8	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	30.4	9.8	21.4	6.4	34.5	11.0	20.2
Change Period (Y+Rc), s	* 4.9	* 5.2	* 5.1	* 5.2	5.5	* 5.2	5.0	* 5.2
Max Green Setting (Gmax), s	* 8.1	* 26	* 6.9	* 14	3.0	* 30	6.0	* 15
Max Q Clear Time (g_c+I1), s	6.4	19.9	5.7	9.7	2.8	9.0	7.1	15.5
Green Ext Time (p_c), s	0.0	5.3	0.0	3.5	0.0	18.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	34.2
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	235	646	118	303	27	254	492	58	53	1089	100
Future Volume (veh/h)	64	235	646	118	303	27	254	492	58	53	1089	100
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	64	235	646	118	303	27	254	492	58	53	1089	100
Adj No. of Lanes	2	2	1	2	2	1	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	110	1133	507	147	1170	524	273	1172	138	93	1115	499
Arrive On Green	0.03	0.32	0.32	0.04	0.33	0.33	0.08	0.37	0.37	0.03	0.32	0.32
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	3130	368	3375	3471	1553
Grp Volume(v), veh/h	64	235	646	118	303	27	254	272	278	53	1089	100
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1736	1762	1688	1736	1553
Q Serve(g_s), s	1.8	4.6	30.8	3.3	6.0	1.1	7.1	11.1	11.2	1.5	29.6	4.5
Cycle Q Clear(g_c), s	1.8	4.6	30.8	3.3	6.0	1.1	7.1	11.1	11.2	1.5	29.6	4.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	110	1133	507	147	1170	524	273	650	660	93	1115	499
V/C Ratio(X)	0.58	0.21	1.27	0.80	0.26	0.05	0.93	0.42	0.42	0.57	0.98	0.20
Avail Cap(c_a), veh/h	154	1133	507	147	1170	524	273	650	660	149	1115	499
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.5	23.4	32.2	45.2	23.1	21.5	43.5	22.1	22.1	45.8	32.0	23.5
Incr Delay (d2), s/veh	1.8	0.4	138.4	25.2	0.4	0.1	36.1	1.4	1.4	2.0	21.8	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.3	32.8	2.1	3.0	0.5	4.7	5.5	5.7	0.7	17.4	2.0
LnGrp Delay(d),s/veh	47.3	23.8	170.6	70.4	23.5	21.6	79.6	23.5	23.5	47.8	53.8	24.1
LnGrp LOS	D	C	F	E	C	C	E	C	C	D	D	C
Approach Vol, veh/h		945			448			804			1242	
Approach Delay, s/veh		125.8			35.8			41.2			51.2	
Approach LOS		F			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	36.1	8.6	37.4	8.1	41.2	9.6	36.4
Change Period (Y+Rc), s	5.5	* 5.5	5.5	5.6	5.5	* 5.5	5.5	* 5.6
Max Green Setting (Gmax), s	7.7	* 31	4.3	30.4	4.2	* 34	4.1	* 31
Max Q Clear Time (g_c+I1), s	9.1	31.6	3.8	8.0	3.5	13.2	5.3	32.8
Green Ext Time (p_c), s	0.0	0.0	0.0	15.5	0.0	17.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	67.3
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	688	134	70	703	5	32	30	29	4	32	23
Future Volume (veh/h)	14	688	134	70	703	5	32	30	29	4	32	23
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	14	688	134	70	703	5	32	30	29	4	32	23
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	24	978	832	87	1045	888	49	85	82	8	60	43
Arrive On Green	0.01	0.55	0.55	0.05	0.58	0.58	0.03	0.10	0.10	0.00	0.06	0.06
Sat Flow, veh/h	1707	1792	1524	1707	1792	1524	1757	863	834	1757	999	718
Grp Volume(v), veh/h	14	688	134	70	703	5	32	0	59	4	0	55
Grp Sat Flow(s),veh/h/ln	1707	1792	1524	1707	1792	1524	1757	0	1697	1757	0	1718
Q Serve(g_s), s	0.5	16.8	2.6	2.4	16.0	0.1	1.1	0.0	1.9	0.1	0.0	1.8
Cycle Q Clear(g_c), s	0.5	16.8	2.6	2.4	16.0	0.1	1.1	0.0	1.9	0.1	0.0	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.49	1.00		0.42
Lane Grp Cap(c), veh/h	24	978	832	87	1045	888	49	0	167	8	0	103
V/C Ratio(X)	0.59	0.70	0.16	0.80	0.67	0.01	0.66	0.00	0.35	0.53	0.00	0.53
Avail Cap(c_a), veh/h	115	1231	1046	187	1306	1110	119	0	601	119	0	609
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.1	9.9	6.7	27.8	8.5	5.2	28.5	0.0	25.0	29.5	0.0	27.1
Incr Delay (d2), s/veh	14.8	1.9	0.2	10.9	1.5	0.0	9.9	0.0	1.1	33.9	0.0	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	8.7	1.1	1.4	8.2	0.0	0.6	0.0	1.0	0.1	0.0	1.0
LnGrp Delay(d),s/veh	43.9	11.8	6.9	38.8	9.9	5.2	38.4	0.0	26.1	63.3	0.0	30.9
LnGrp LOS	D	B	A	D	A	A	D		C	E		C
Approach Vol, veh/h		836			778			91			59	
Approach Delay, s/veh		11.6			12.5			30.4			33.1	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	38.8	6.0	8.0	4.3	41.0	3.8	10.2
Change Period (Y+Rc), s	3.5	6.4	4.4	* 4.4	3.5	6.4	3.5	4.4
Max Green Setting (Gmax), s	6.5	40.7	4.0	* 21	4.0	43.2	4.0	21.0
Max Q Clear Time (g_c+I1), s	4.4	18.8	3.1	3.8	2.5	18.0	2.1	3.9
Green Ext Time (p_c), s	0.0	13.6	0.0	0.3	0.0	14.9	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	13.7
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	257	161	78	137	130	131	273	45	102	354	36
Future Volume (veh/h)	35	257	161	78	137	130	131	273	45	102	354	36
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	35	257	161	78	137	130	131	273	45	102	354	36
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	41	375	227	97	365	319	168	480	408	129	440	374
Arrive On Green	0.02	0.18	0.18	0.06	0.21	0.21	0.10	0.26	0.26	0.07	0.24	0.24
Sat Flow, veh/h	1757	2100	1272	1757	1772	1551	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	35	213	205	78	135	132	131	273	45	102	354	36
Grp Sat Flow(s),veh/h/ln	1757	1752	1620	1757	1752	1571	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	0.9	5.2	5.4	2.0	3.0	3.3	3.3	5.9	1.0	2.6	8.2	0.8
Cycle Q Clear(g_c), s	0.9	5.2	5.4	2.0	3.0	3.3	3.3	5.9	1.0	2.6	8.2	0.8
Prop In Lane	1.00		0.79	1.00		0.99	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	41	313	290	97	361	323	168	480	408	129	440	374
V/C Ratio(X)	0.85	0.68	0.71	0.81	0.38	0.41	0.78	0.57	0.11	0.79	0.80	0.10
Avail Cap(c_a), veh/h	255	1154	1067	154	1039	931	378	1255	1067	212	1085	922
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.2	17.5	17.6	21.3	15.6	15.7	20.1	14.6	12.8	20.8	16.3	13.5
Incr Delay (d2), s/veh	15.5	1.0	1.2	6.5	0.2	0.3	3.0	0.4	0.0	4.1	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.6	2.5	1.1	1.5	1.5	1.7	3.0	0.4	1.4	4.3	0.4
LnGrp Delay(d),s/veh	37.7	18.5	18.8	27.8	15.8	16.0	23.1	15.0	12.9	24.8	17.7	13.6
LnGrp LOS	D	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		453			345			449			492	
Approach Delay, s/veh		20.1			18.6			17.2			18.9	
Approach LOS		C			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	14.2	9.8	15.3	7.5	12.9	8.8	16.3
Change Period (Y+Rc), s	* 5.2	4.8	5.5	* 4.4	5.0	* 4.8	5.5	* 4.4
Max Green Setting (Gmax), s	* 6.6	27.0	9.8	* 27	4.0	* 30	5.5	* 31
Max Q Clear Time (g_c+I1), s	2.9	5.3	5.3	10.2	4.0	7.4	4.6	7.9
Green Ext Time (p_c), s	0.0	0.7	0.0	0.6	0.0	0.7	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	18.7
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	31	17	460	44	424	48	1133	206	404	1245	59
Future Volume (veh/h)	73	31	17	460	44	424	48	1133	206	404	1245	59
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	73	31	17	460	44	424	48	1133	206	404	1245	59
Adj No. of Lanes	1	1	0	2	1	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	95	61	33	961	520	442	60	1367	426	456	1851	88
Arrive On Green	0.05	0.05	0.05	0.28	0.28	0.28	0.03	0.27	0.27	0.14	0.38	0.38
Sat Flow, veh/h	1757	1121	615	3408	1845	1568	1740	4988	1553	3375	4880	231
Grp Volume(v), veh/h	73	0	48	460	44	424	48	1133	206	404	848	456
Grp Sat Flow(s),veh/h/ln	1757	0	1736	1704	1845	1568	1740	1663	1553	1688	1663	1786
Q Serve(g_s), s	3.5	0.0	2.3	9.5	1.5	22.7	2.3	18.2	9.5	10.0	18.1	18.1
Cycle Q Clear(g_c), s	3.5	0.0	2.3	9.5	1.5	22.7	2.3	18.2	9.5	10.0	18.1	18.1
Prop In Lane	1.00		0.35	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	95	0	94	961	520	442	60	1367	426	456	1261	677
V/C Ratio(X)	0.77	0.00	0.51	0.48	0.08	0.96	0.80	0.83	0.48	0.89	0.67	0.67
Avail Cap(c_a), veh/h	95	0	94	961	520	442	139	1652	514	456	1305	701
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.7	0.0	39.2	25.4	22.5	30.1	40.8	29.0	25.9	36.2	22.0	22.0
Incr Delay (d2), s/veh	28.5	0.0	2.0	0.1	0.0	32.2	8.6	2.6	0.3	18.0	1.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	1.1	4.5	0.8	13.7	1.3	8.6	4.1	5.8	8.4	9.2
LnGrp Delay(d),s/veh	68.2	0.0	41.2	25.5	22.5	62.2	49.4	31.6	26.2	54.1	23.1	23.9
LnGrp LOS	E		D	C	C	E	D	C	C	D	C	C
Approach Vol, veh/h		121			928			1387			1708	
Approach Delay, s/veh		57.5			42.1			31.4			30.6	
Approach LOS		E			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	37.5		10.1	17.0	28.5		29.5
Change Period (Y+Rc), s	* 5.1	* 5.2		5.5	5.5	* 5.2		5.5
Max Green Setting (Gmax), s	* 6.8	* 33		4.6	11.5	* 28		24.0
Max Q Clear Time (g_c+I1), s	4.3	20.1		5.5	12.0	20.2		24.7
Green Ext Time (p_c), s	0.0	3.8		0.0	0.0	3.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	34.3
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

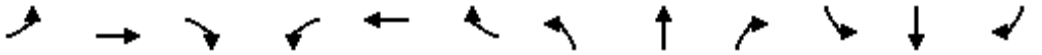
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	94	411	289	124	16	224	757	110	3	1487	199
Future Volume (veh/h)	156	94	411	289	124	16	224	757	110	3	1487	199
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	156	94	411	289	124	16	224	757	110	3	1487	199
Adj No. of Lanes	2	2	0	2	2	0	2	3	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	206	404	361	301	809	103	254	2532	788	8	1509	675
Arrive On Green	0.06	0.23	0.23	0.09	0.26	0.26	0.08	0.51	0.51	0.00	0.43	0.43
Sat Flow, veh/h	3408	1752	1568	3408	3129	397	3375	4988	1553	3375	3471	1553
Grp Volume(v), veh/h	156	94	411	289	69	71	224	757	110	3	1487	199
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1775	1688	1663	1553	1688	1736	1553
Q Serve(g_s), s	5.9	5.7	30.0	11.0	3.9	4.0	8.6	11.5	4.9	0.1	55.2	10.8
Cycle Q Clear(g_c), s	5.9	5.7	30.0	11.0	3.9	4.0	8.6	11.5	4.9	0.1	55.2	10.8
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	206	404	361	301	453	459	254	2532	788	8	1509	675
V/C Ratio(X)	0.76	0.23	1.14	0.96	0.15	0.16	0.88	0.30	0.14	0.38	0.99	0.29
Avail Cap(c_a), veh/h	223	404	361	301	453	459	254	2532	788	78	1509	675
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.2	40.7	50.1	59.1	37.3	37.3	59.6	18.6	17.0	64.8	36.4	23.9
Incr Delay (d2), s/veh	11.2	0.1	90.2	40.7	0.1	0.1	27.3	0.0	0.0	10.4	19.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	2.8	22.0	6.9	1.9	2.0	4.9	5.3	2.1	0.1	30.6	4.6
LnGrp Delay(d),s/veh	71.5	40.8	140.3	99.9	37.3	37.4	86.9	18.6	17.0	75.3	56.0	23.9
LnGrp LOS	E	D	F	F	D	D	F	B	B	E	E	C
Approach Vol, veh/h		661			429			1091			1689	
Approach Delay, s/veh		109.9			79.5			32.5			52.3	
Approach LOS		F			E			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.3	62.2	13.4	39.3	5.8	71.7	17.0	35.7
Change Period (Y+Rc), s	5.5	* 5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	9.8	* 57	8.5	* 33	3.0	* 63	11.5	* 30
Max Q Clear Time (g_c+I1), s	10.6	57.2	7.9	6.0	2.1	13.5	13.0	32.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.8	0.0	4.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	59.6
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	561	69	41	535	324	42	567	38	400	1582	175
Future Volume (veh/h)	156	561	69	41	535	324	42	567	38	400	1582	175
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1845	1845	1792	1792	1845	1845	1900	1827	1845	1827
Adj Flow Rate, veh/h	156	561	69	41	535	324	42	567	38	400	1582	0
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	3	3	6	6	3	3	3	4	3	4
Cap, veh/h	154	603	527	52	502	427	51	793	53	415	1556	689
Arrive On Green	0.09	0.34	0.34	0.03	0.28	0.28	0.03	0.24	0.24	0.24	0.44	0.00
Sat Flow, veh/h	1707	1792	1568	1757	1792	1524	1757	3335	223	1740	3505	1553
Grp Volume(v), veh/h	156	561	69	41	535	324	42	298	307	400	1582	0
Grp Sat Flow(s),veh/h/ln	1707	1792	1568	1757	1792	1524	1757	1752	1805	1740	1752	1553
Q Serve(g_s), s	11.7	39.3	4.0	3.0	36.4	25.3	3.1	20.3	20.3	29.6	57.7	0.0
Cycle Q Clear(g_c), s	11.7	39.3	4.0	3.0	36.4	25.3	3.1	20.3	20.3	29.6	57.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	154	603	527	52	502	427	51	417	429	415	1556	689
V/C Ratio(X)	1.02	0.93	0.13	0.78	1.07	0.76	0.82	0.71	0.72	0.96	1.02	0.00
Avail Cap(c_a), veh/h	154	608	532	54	502	427	51	417	429	415	1556	689
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	59.2	41.7	29.9	62.6	46.8	42.8	62.8	45.5	45.5	48.9	36.2	0.0
Incr Delay (d2), s/veh	76.7	20.6	0.0	50.8	58.9	7.0	60.3	5.7	5.6	34.6	27.1	0.0
Initial Q Delay(d3),s/veh	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	22.9	1.7	2.2	26.2	11.5	2.4	10.5	10.8	18.2	33.7	0.0
LnGrp Delay(d),s/veh	136.0	62.3	30.0	113.4	105.7	49.8	123.0	51.2	51.2	83.6	63.3	0.0
LnGrp LOS	F	E	C	F	F	D	F	D	D	F	F	
Approach Vol, veh/h		786			900			647			1982	
Approach Delay, s/veh		74.1			85.9			55.9			67.4	
Approach LOS		E			F			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	62.8	16.0	42.0	36.0	36.0	8.7	49.3
Change Period (Y+Rc), s	* 5.4	5.1	* 4.3	5.6	5.0	5.1	* 4.8	* 5.6
Max Green Setting (Gmax), s	* 3.8	57.7	* 12	36.4	31.0	30.9	* 4	* 44
Max Q Clear Time (g_c+I1), s	5.1	59.7	13.7	38.4	31.6	22.3	5.0	41.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	70.7
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

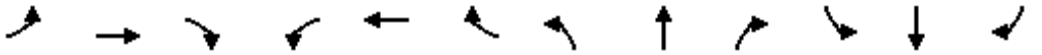
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	318	33	32	274	12	30	626	42	9	1635	49
Future Volume (veh/h)	14	318	33	32	274	12	30	626	42	9	1635	49
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	14	318	33	32	274	12	30	626	42	9	1635	49
Adj No. of Lanes	2	1	0	2	1	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	33	380	39	62	420	18	36	1720	115	12	1744	52
Arrive On Green	0.01	0.23	0.23	0.02	0.24	0.24	0.02	0.52	0.52	0.01	0.50	0.50
Sat Flow, veh/h	3408	1644	171	3408	1754	77	1757	3334	223	1757	3475	104
Grp Volume(v), veh/h	14	0	351	32	0	286	30	329	339	9	822	862
Grp Sat Flow(s),veh/h/ln	1704	0	1815	1704	0	1831	1757	1752	1805	1757	1752	1826
Q Serve(g_s), s	0.4	0.0	17.1	0.9	0.0	13.1	1.6	10.4	10.4	0.5	40.9	41.3
Cycle Q Clear(g_c), s	0.4	0.0	17.1	0.9	0.0	13.1	1.6	10.4	10.4	0.5	40.9	41.3
Prop In Lane	1.00		0.09	1.00		0.04	1.00		0.12	1.00		0.06
Lane Grp Cap(c), veh/h	33	0	419	62	0	438	36	904	931	12	879	916
V/C Ratio(X)	0.42	0.00	0.84	0.52	0.00	0.65	0.82	0.36	0.36	0.77	0.94	0.94
Avail Cap(c_a), veh/h	114	0	629	114	0	635	62	948	976	62	948	988
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.7	0.0	34.0	45.2	0.0	31.8	45.3	13.4	13.4	46.0	21.7	21.8
Incr Delay (d2), s/veh	8.2	0.0	6.3	6.5	0.0	1.7	34.5	0.2	0.2	66.3	14.8	15.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	9.3	0.5	0.0	6.8	1.1	5.1	5.2	0.4	23.3	24.4
LnGrp Delay(d),s/veh	53.9	0.0	40.3	51.7	0.0	33.5	79.7	13.6	13.6	112.3	36.5	37.0
LnGrp LOS	D		D	D		C	E	B	B	F	D	D
Approach Vol, veh/h		365			318			698			1693	
Approach Delay, s/veh		40.8			35.3			16.5			37.2	
Approach LOS		D			D			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.4	51.6	7.2	26.6	6.1	52.9	6.4	27.4
Change Period (Y+Rc), s	5.5	5.0	5.5	* 5.2	5.5	5.0	5.5	* 5.2
Max Green Setting (Gmax), s	3.3	50.2	3.1	* 32	3.3	50.2	3.1	* 32
Max Q Clear Time (g_c+I1), s	3.6	43.3	2.9	19.1	2.5	12.4	2.4	15.1
Green Ext Time (p_c), s	0.0	3.3	0.0	2.3	0.0	5.3	0.0	2.6

Intersection Summary	
HCM 2010 Ctrl Delay	32.7
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	134	212	50	244	37	42	484	46	93	1480	131
Future Volume (veh/h)	108	134	212	50	244	37	42	484	46	93	1480	131
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1838	1900	1845	1799	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	108	134	212	50	244	37	42	484	46	93	1480	131
Adj No. of Lanes	2	1	0	2	1	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	4	4	3	6	6	3	3	3	3	3	3
Cap, veh/h	160	148	234	89	320	48	53	1474	140	119	1609	141
Arrive On Green	0.05	0.23	0.23	0.03	0.21	0.21	0.03	0.46	0.46	0.07	0.49	0.49
Sat Flow, veh/h	3408	642	1016	3408	1527	232	1757	3236	307	1757	3260	287
Grp Volume(v), veh/h	108	0	346	50	0	281	42	261	269	93	791	820
Grp Sat Flow(s),veh/h/ln	1704	0	1658	1704	0	1758	1757	1752	1791	1757	1752	1794
Q Serve(g_s), s	3.0	0.0	19.4	1.4	0.0	14.4	2.3	9.1	9.2	5.0	39.9	40.8
Cycle Q Clear(g_c), s	3.0	0.0	19.4	1.4	0.0	14.4	2.3	9.1	9.2	5.0	39.9	40.8
Prop In Lane	1.00		0.61	1.00		0.13	1.00		0.17	1.00		0.16
Lane Grp Cap(c), veh/h	160	0	382	89	0	368	53	798	816	119	865	885
V/C Ratio(X)	0.67	0.00	0.91	0.56	0.00	0.76	0.80	0.33	0.33	0.78	0.92	0.93
Avail Cap(c_a), veh/h	160	0	552	128	0	569	68	798	816	229	909	931
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.9	0.0	35.9	46.1	0.0	35.6	46.2	16.7	16.7	43.9	22.4	22.6
Incr Delay (d2), s/veh	10.6	0.0	11.3	5.5	0.0	1.2	37.9	0.2	0.2	10.4	13.3	14.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	10.0	0.7	0.0	7.2	1.7	4.5	4.6	2.8	22.3	23.6
LnGrp Delay(d),s/veh	55.6	0.0	47.1	51.6	0.0	36.9	84.1	16.9	16.9	54.4	35.7	37.1
LnGrp LOS	E		D	D		D	F	B	B	D	D	D
Approach Vol, veh/h		454			331			572			1704	
Approach Delay, s/veh		49.1			39.1			21.9			37.4	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	48.7	10.0	25.0	8.4	52.4	8.0	27.1
Change Period (Y+Rc), s	5.5	* 5.1	5.5	* 5	5.5	* 5.1	5.5	* 5
Max Green Setting (Gmax), s	12.5	* 41	4.5	* 31	3.7	* 50	3.6	* 32
Max Q Clear Time (g_c+I1), s	7.0	11.2	5.0	16.4	4.3	42.8	3.4	21.4
Green Ext Time (p_c), s	0.1	14.2	0.0	0.7	0.0	4.4	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	36.4
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	118	84	122	167	80	41	372	36	223	1228	223
Future Volume (veh/h)	114	118	84	122	167	80	41	372	36	223	1228	223
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1827	1843	1900	1845	1845	1900
Adj Flow Rate, veh/h	114	118	84	122	167	80	41	372	36	223	1228	223
Adj No. of Lanes	2	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	3	3	3	3	3
Cap, veh/h	185	145	103	153	209	100	50	1148	111	262	1405	253
Arrive On Green	0.05	0.14	0.14	0.09	0.18	0.18	0.03	0.36	0.36	0.15	0.47	0.47
Sat Flow, veh/h	3408	1004	715	1757	1180	565	1740	3228	311	1757	2968	535
Grp Volume(v), veh/h	114	0	202	122	0	247	41	201	207	223	721	730
Grp Sat Flow(s),veh/h/ln	1704	0	1719	1757	0	1745	1740	1751	1788	1757	1752	1750
Q Serve(g_s), s	2.6	0.0	9.1	5.5	0.0	10.9	1.9	6.7	6.8	9.9	29.5	30.1
Cycle Q Clear(g_c), s	2.6	0.0	9.1	5.5	0.0	10.9	1.9	6.7	6.8	9.9	29.5	30.1
Prop In Lane	1.00		0.42	1.00		0.32	1.00		0.17	1.00		0.31
Lane Grp Cap(c), veh/h	185	0	249	153	0	310	50	623	636	262	830	828
V/C Ratio(X)	0.62	0.00	0.81	0.80	0.00	0.80	0.81	0.32	0.33	0.85	0.87	0.88
Avail Cap(c_a), veh/h	315	0	665	171	0	691	76	623	636	384	906	905
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.0	0.0	33.2	35.9	0.0	31.6	38.7	18.8	18.8	33.2	18.9	19.0
Incr Delay (d2), s/veh	3.3	0.0	2.4	18.3	0.0	1.8	19.2	0.3	0.3	8.0	8.6	9.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	4.5	3.4	0.0	5.4	1.2	3.3	3.4	5.4	16.2	16.6
LnGrp Delay(d),s/veh	40.4	0.0	35.6	54.1	0.0	33.4	57.9	19.1	19.1	41.2	27.5	28.5
LnGrp LOS	D		D	D		C	E	B	B	D	C	C
Approach Vol, veh/h		316			369			449			1674	
Approach Delay, s/veh		37.3			40.2			22.6			29.8	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	33.6	9.8	19.6	7.6	43.0	12.5	17.0
Change Period (Y+Rc), s	* 5.1	5.1	5.5	* 5.4	* 5.3	5.1	5.5	* 5.4
Max Green Setting (Gmax), s	* 18	27.6	7.4	* 32	* 3.5	41.4	7.8	* 31
Max Q Clear Time (g_c+I1), s	11.9	8.8	4.6	12.9	3.9	32.1	7.5	11.1
Green Ext Time (p_c), s	0.1	9.5	0.1	0.5	0.0	5.8	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	30.8
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	329	710	3	620	683	89	2	217	411	110	386	213
Future Volume (veh/h)	329	710	3	620	683	89	2	217	411	110	386	213
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1793	1900	1845	1792	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	329	710	3	620	683	89	2	217	411	110	386	213
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	6	6	3	6	3	3	3	3	3	3	3
Cap, veh/h	354	764	3	544	1115	513	2	165	312	89	377	208
Arrive On Green	0.20	0.22	0.22	0.31	0.33	0.33	0.00	0.29	0.29	0.05	0.34	0.34
Sat Flow, veh/h	1757	3478	15	1757	3406	1568	1757	571	1082	1757	1119	617
Grp Volume(v), veh/h	329	348	365	620	683	89	2	0	628	110	0	599
Grp Sat Flow(s),veh/h/ln	1757	1703	1790	1757	1703	1568	1757	0	1654	1757	0	1736
Q Serve(g_s), s	25.5	27.8	27.8	43.0	23.4	5.6	0.2	0.0	40.0	7.0	0.0	46.8
Cycle Q Clear(g_c), s	25.5	27.8	27.8	43.0	23.4	5.6	0.2	0.0	40.0	7.0	0.0	46.8
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.65	1.00		0.36
Lane Grp Cap(c), veh/h	354	374	393	544	1115	513	2	0	476	89	0	585
V/C Ratio(X)	0.93	0.93	0.93	1.14	0.61	0.17	0.99	0.00	1.32	1.24	0.00	1.02
Avail Cap(c_a), veh/h	392	387	407	544	1115	513	25	0	476	89	0	585
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.5	53.1	53.2	47.9	39.3	33.3	69.4	0.0	49.4	65.9	0.0	46.0
Incr Delay (d2), s/veh	26.8	28.6	27.7	83.3	1.2	0.2	288.8	0.0	157.6	174.3	0.0	43.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.1	16.1	16.8	33.3	11.2	2.5	0.2	0.0	39.0	7.7	0.0	29.3
LnGrp Delay(d),s/veh	81.3	81.8	80.9	131.3	40.5	33.5	358.2	0.0	207.1	240.2	0.0	89.3
LnGrp LOS	F	F	F	F	D	C	F		F	F		F
Approach Vol, veh/h		1042			1392			630			709	
Approach Delay, s/veh		81.3			80.5			207.6			112.7	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	47.0	36.9	4.2	50.8	32.0	51.9	11.0	44.0
Change Period (Y+Rc), s	4.0	6.4	4.0	4.0	4.0	6.4	4.0	4.0
Max Green Setting (Gmax), s	43.0	31.6	2.0	45.0	31.0	43.6	7.0	40.0
Max Q Clear Time (g_c+I1), s	45.0	29.8	2.2	48.8	27.5	25.4	9.0	42.0
Green Ext Time (p_c), s	0.0	0.7	0.0	0.0	0.5	9.8	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		108.0
HCM 2010 LOS		F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	826	44	259	27	77	110	294	1379	17	146	594	391
Future Volume (veh/h)	826	44	259	27	77	110	294	1379	17	146	594	391
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1900	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	857	0	259	27	77	110	294	1379	17	146	594	0
Adj No. of Lanes	2	0	1	0	1	1	1	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	955	0	426	35	100	116	329	1550	19	179	1072	334
Arrive On Green	0.27	0.00	0.27	0.07	0.07	0.07	0.19	0.31	0.31	0.10	0.21	0.00
Sat Flow, veh/h	3480	0	1553	473	1348	1568	1740	5078	63	1740	4988	1553
Grp Volume(v), veh/h	857	0	259	104	0	110	294	903	493	146	594	0
Grp Sat Flow(s),veh/h/ln	1740	0	1553	1821	0	1568	1740	1663	1816	1740	1663	1553
Q Serve(g_s), s	19.5	0.0	11.9	4.6	0.0	5.7	13.5	21.3	21.3	6.8	8.7	0.0
Cycle Q Clear(g_c), s	19.5	0.0	11.9	4.6	0.0	5.7	13.5	21.3	21.3	6.8	8.7	0.0
Prop In Lane	1.00		1.00	0.26		1.00	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	955	0	426	135	0	116	329	1015	554	179	1072	334
V/C Ratio(X)	0.90	0.00	0.61	0.77	0.00	0.94	0.89	0.89	0.89	0.82	0.55	0.00
Avail Cap(c_a), veh/h	1144	0	510	135	0	116	345	1133	619	193	1232	384
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	28.7	0.0	26.0	37.3	0.0	37.9	32.5	27.2	27.2	36.1	28.7	0.0
Incr Delay (d2), s/veh	7.6	0.0	0.6	21.2	0.0	65.4	22.5	7.8	13.0	20.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.3	0.0	5.2	3.1	0.0	4.6	8.5	10.9	12.7	4.2	4.0	0.0
LnGrp Delay(d),s/veh	36.3	0.0	26.6	58.5	0.0	103.3	55.0	35.0	40.2	56.1	28.9	0.0
LnGrp LOS	D		C	E		F	D	C	D	E	C	
Approach Vol, veh/h		1116			214			1690			740	
Approach Delay, s/veh		34.1			81.5			40.0			34.3	
Approach LOS		C			F			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	20.3	22.5		11.6	12.8	29.9		27.8
Change Period (Y+Rc), s	* 4.7	4.8		5.5	* 4.4	* 4.8		5.3
Max Green Setting (Gmax), s	* 16	20.3		6.1	* 9.1	* 28		27.0
Max Q Clear Time (g_c+I1), s	15.5	10.7		7.7	8.8	23.3		21.5
Green Ext Time (p_c), s	0.0	2.5		0.0	0.0	1.8		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	39.5
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	434	145	31	65	102	715	56	1316	25	310	1037	260
Future Volume (veh/h)	434	145	31	65	102	715	56	1316	25	310	1037	260
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	434	145	31	65	102	715	56	1316	25	310	1037	260
Adj No. of Lanes	2	3	0	2	1	2	2	3	0	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	470	1394	283	112	417	1042	97	1450	28	361	1946	606
Arrive On Green	0.14	0.33	0.33	0.03	0.23	0.23	0.03	0.31	0.31	0.11	0.39	0.39
Sat Flow, veh/h	3408	4199	852	3514	1845	3136	3408	4691	89	3408	5036	1568
Grp Volume(v), veh/h	434	114	62	65	102	715	56	828	513	310	1037	260
Grp Sat Flow(s),veh/h/ln	1704	1679	1694	1757	1845	1568	1704	1476	1829	1704	1679	1568
Q Serve(g_s), s	12.7	2.4	2.5	1.8	4.6	19.9	1.6	27.2	27.2	9.0	16.1	12.3
Cycle Q Clear(g_c), s	12.7	2.4	2.5	1.8	4.6	19.9	1.6	27.2	27.2	9.0	16.1	12.3
Prop In Lane	1.00		0.50	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	470	1114	562	112	417	1042	97	912	565	361	1946	606
V/C Ratio(X)	0.92	0.10	0.11	0.58	0.24	0.69	0.57	0.91	0.91	0.86	0.53	0.43
Avail Cap(c_a), veh/h	470	1274	643	188	548	1265	176	983	609	361	1946	606
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.0	23.3	23.4	48.2	32.0	29.1	48.4	33.5	33.5	44.3	23.9	22.8
Incr Delay (d2), s/veh	23.7	0.0	0.0	1.7	0.1	0.8	2.0	10.9	16.0	17.4	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	1.1	1.2	0.9	2.3	8.7	0.8	12.4	16.2	5.1	7.4	5.4
LnGrp Delay(d),s/veh	66.7	23.3	23.4	49.9	32.1	29.9	50.4	44.4	49.5	61.8	24.1	22.9
LnGrp LOS	E	C	C	D	C	C	D	D	D	E	C	C
Approach Vol, veh/h		610			882			1397			1607	
Approach Delay, s/veh		54.2			31.6			46.5			31.2	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	44.6	19.4	28.5	16.2	36.8	8.7	39.2
Change Period (Y+Rc), s	5.5	5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	5.2	38.8	13.9	* 30	10.7	* 34	5.4	* 38
Max Q Clear Time (g_c+I1), s	3.6	18.1	14.7	21.9	11.0	29.2	3.8	4.5
Green Ext Time (p_c), s	0.0	4.0	0.0	0.9	0.0	2.0	0.0	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	39.1
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	311	103	44	69	49	159	17	784	31	71	986	51
Future Volume (veh/h)	311	103	44	69	49	159	17	784	31	71	986	51
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	229	218	44	59	63	159	17	784	31	71	986	51
Adj No. of Lanes	1	1	0	1	1	1	1	3	0	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	326	276	56	240	251	214	22	1109	44	134	1388	72
Arrive On Green	0.19	0.19	0.19	0.14	0.14	0.14	0.01	0.22	0.22	0.08	0.28	0.28
Sat Flow, veh/h	1757	1491	301	1757	1845	1568	1757	4971	196	1757	4904	253
Grp Volume(v), veh/h	229	0	262	59	63	159	17	529	286	71	675	362
Grp Sat Flow(s),veh/h/ln	1757	0	1792	1757	1845	1568	1757	1679	1810	1757	1679	1800
Q Serve(g_s), s	6.6	0.0	7.5	1.6	1.6	5.2	0.5	7.8	7.9	2.1	9.7	9.7
Cycle Q Clear(g_c), s	6.6	0.0	7.5	1.6	1.6	5.2	0.5	7.8	7.9	2.1	9.7	9.7
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.11	1.00		0.14
Lane Grp Cap(c), veh/h	326	0	332	240	251	214	22	749	404	134	950	509
V/C Ratio(X)	0.70	0.00	0.79	0.25	0.25	0.74	0.77	0.71	0.71	0.53	0.71	0.71
Avail Cap(c_a), veh/h	914	0	932	881	926	787	98	1210	653	170	1335	716
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.5	0.0	20.9	20.8	20.8	22.3	26.5	19.3	19.3	23.9	17.3	17.3
Incr Delay (d2), s/veh	1.0	0.0	1.6	0.2	0.2	1.9	18.9	0.5	0.9	1.2	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	3.9	0.8	0.9	2.4	0.4	3.6	4.0	1.1	4.6	4.9
LnGrp Delay(d),s/veh	21.6	0.0	22.5	21.0	21.0	24.3	45.4	19.7	20.2	25.1	17.7	18.1
LnGrp LOS	C		C	C	C	C	D	B	C	C	B	B
Approach Vol, veh/h		491			281			832			1108	
Approach Delay, s/veh		22.1			22.8			20.4			18.3	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.5	20.0		12.8	8.7	16.8		15.5
Change Period (Y+Rc), s	* 4.8	4.8		5.5	* 4.6	4.8		5.5
Max Green Setting (Gmax), s	* 3	21.4		27.0	* 5.2	19.4		28.0
Max Q Clear Time (g_c+I1), s	2.5	11.7		7.2	4.1	9.9		9.5
Green Ext Time (p_c), s	0.0	2.2		0.2	0.0	2.1		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	20.1
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	396	225	149	463	146	181	412	41	206	741	134
Future Volume (veh/h)	165	396	225	149	463	146	181	412	41	206	741	134
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	165	396	225	149	463	146	181	412	41	206	741	134
Adj No. of Lanes	2	3	0	2	3	1	2	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	258	673	314	243	987	307	283	1125	350	311	995	178
Arrive On Green	0.08	0.20	0.20	0.07	0.20	0.20	0.08	0.22	0.22	0.09	0.23	0.23
Sat Flow, veh/h	3408	3357	1568	3408	5036	1568	3408	5036	1568	3408	4296	770
Grp Volume(v), veh/h	165	396	225	149	463	146	181	412	41	206	578	297
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1679	1568	1704	1679	1709
Q Serve(g_s), s	2.5	5.8	7.3	2.3	4.4	4.5	2.8	3.7	1.1	3.2	8.6	8.8
Cycle Q Clear(g_c), s	2.5	5.8	7.3	2.3	4.4	4.5	2.8	3.7	1.1	3.2	8.6	8.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.45
Lane Grp Cap(c), veh/h	258	673	314	243	987	307	283	1125	350	311	777	396
V/C Ratio(X)	0.64	0.59	0.72	0.61	0.47	0.48	0.64	0.37	0.12	0.66	0.74	0.75
Avail Cap(c_a), veh/h	258	1736	811	321	2696	840	384	2696	840	346	1760	896
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	19.6	20.2	24.4	19.3	19.3	24.0	17.8	16.8	23.8	19.3	19.4
Incr Delay (d2), s/veh	4.1	0.3	1.1	0.9	0.1	0.4	0.9	0.1	0.1	2.8	0.5	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	2.7	3.2	1.1	2.0	2.0	1.3	1.7	0.5	1.6	4.1	4.3
LnGrp Delay(d),s/veh	28.4	19.9	21.4	25.4	19.4	19.7	24.9	17.9	16.8	26.6	19.8	20.5
LnGrp LOS	C	B	C	C	B	B	C	B	B	C	B	C
Approach Vol, veh/h		786			758			634			1081	
Approach Delay, s/veh		22.1			20.6			19.8			21.3	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	18.1	9.6	16.4	10.4	17.7	9.4	16.7
Change Period (Y+Rc), s	5.5	* 5.6	5.5	5.8	5.5	* 5.6	5.5	5.8
Max Green Setting (Gmax), s	6.1	* 28	4.1	29.0	5.5	* 29	5.1	28.0
Max Q Clear Time (g_c+I1), s	4.8	10.8	4.5	6.5	5.2	5.7	4.3	9.3
Green Ext Time (p_c), s	0.0	1.8	0.0	1.6	0.0	1.8	0.0	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	21.1
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	187	17	88	198	98	3	179	61	284	338	294
Future Volume (veh/h)	94	187	17	88	198	98	3	179	61	284	338	294
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	94	187	17	88	198	98	3	179	61	284	338	294
Adj No. of Lanes	1	2	0	1	1	1	1	1	0	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	120	551	50	111	286	243	4	248	85	418	569	484
Arrive On Green	0.07	0.17	0.17	0.06	0.16	0.16	0.00	0.19	0.19	0.12	0.31	0.31
Sat Flow, veh/h	1757	3253	293	1757	1845	1568	1757	1317	449	3408	1845	1568
Grp Volume(v), veh/h	94	100	104	88	198	98	3	0	240	284	338	294
Grp Sat Flow(s),veh/h/ln	1757	1752	1793	1757	1845	1568	1757	0	1765	1704	1845	1568
Q Serve(g_s), s	2.4	2.3	2.3	2.2	4.6	2.5	0.1	0.0	5.8	3.6	7.0	7.2
Cycle Q Clear(g_c), s	2.4	2.3	2.3	2.2	4.6	2.5	0.1	0.0	5.8	3.6	7.0	7.2
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	120	297	303	111	286	243	4	0	333	418	569	484
V/C Ratio(X)	0.79	0.34	0.34	0.79	0.69	0.40	0.70	0.00	0.72	0.68	0.59	0.61
Avail Cap(c_a), veh/h	759	1709	1748	358	1366	1161	117	0	1330	567	1562	1328
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.7	16.5	16.5	20.8	18.0	17.2	22.5	0.0	17.2	18.9	13.2	13.3
Incr Delay (d2), s/veh	4.2	0.2	0.2	4.8	1.1	0.4	54.6	0.0	1.1	0.7	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.1	1.1	1.2	2.4	1.1	0.1	0.0	2.9	1.7	3.5	3.1
LnGrp Delay(d),s/veh	24.9	16.8	16.8	25.6	19.1	17.6	77.1	0.0	18.3	19.7	13.6	13.7
LnGrp LOS	C	B	B	C	B	B	E		B	B	B	B
Approach Vol, veh/h		298			384			243			916	
Approach Delay, s/veh		19.3			20.2			19.0			15.5	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.6	11.9	5.6	19.0	7.9	12.5	11.0	13.6
Change Period (Y+Rc), s	5.5	* 4.9	5.5	* 5.1	* 5.1	* 4.9	5.5	* 5.1
Max Green Setting (Gmax), s	19.5	* 33	3.0	* 38	* 9.2	* 44	7.5	* 34
Max Q Clear Time (g_c+I1), s	4.4	6.6	2.1	9.2	4.2	4.3	5.6	7.8
Green Ext Time (p_c), s	0.1	0.4	0.0	0.7	0.0	0.4	0.1	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	17.6
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	332	527	90	182	200	383	46	1922	260	302	1042	207
Future Volume (veh/h)	332	527	90	182	200	383	46	1922	260	302	1042	207
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	332	527	90	182	200	383	46	1922	260	302	1042	207
Adj No. of Lanes	2	2	1	2	1	2	2	4	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	395	924	413	251	404	1007	82	2119	524	344	2068	644
Arrive On Green	0.12	0.26	0.26	0.07	0.22	0.22	0.02	0.34	0.34	0.10	0.41	0.41
Sat Flow, veh/h	3408	3505	1568	3514	1845	3136	3375	6285	1553	3375	4988	1553
Grp Volume(v), veh/h	332	527	90	182	200	383	46	1922	260	302	1042	207
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1757	1845	1568	1688	1571	1553	1688	1663	1553
Q Serve(g_s), s	9.4	12.8	4.4	5.0	9.3	9.3	1.3	28.7	13.1	8.7	15.2	8.8
Cycle Q Clear(g_c), s	9.4	12.8	4.4	5.0	9.3	9.3	1.3	28.7	13.1	8.7	15.2	8.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	395	924	413	251	404	1007	82	2119	524	344	2068	644
V/C Ratio(X)	0.84	0.57	0.22	0.72	0.49	0.38	0.56	0.91	0.50	0.88	0.50	0.32
Avail Cap(c_a), veh/h	399	1159	519	397	601	1341	182	2194	542	344	2068	644
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	31.4	28.3	44.7	33.6	25.8	47.4	31.1	25.9	43.5	21.3	19.4
Incr Delay (d2), s/veh	13.9	0.8	0.4	1.5	2.6	0.7	2.2	5.6	0.3	21.3	0.7	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	6.3	2.0	2.5	5.1	4.1	0.6	13.2	5.6	5.0	7.1	3.9
LnGrp Delay(d),s/veh	56.5	32.2	28.7	46.1	36.2	26.5	49.6	36.7	26.2	64.8	21.9	20.4
LnGrp LOS	E	C	C	D	D	C	D	D	C	E	C	C
Approach Vol, veh/h		949			765			2228			1551	
Approach Delay, s/veh		40.3			33.7			35.8			30.1	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	46.1	16.9	27.3	15.5	38.5	12.5	31.7
Change Period (Y+Rc), s	5.5	* 5.4	5.5	5.8	5.5	* 5.4	5.5	* 5.8
Max Green Setting (Gmax), s	5.3	* 39	11.5	32.0	10.0	* 34	11.1	* 33
Max Q Clear Time (g_c+I1), s	3.3	17.2	11.4	11.3	10.7	30.7	7.0	14.8
Green Ext Time (p_c), s	0.0	17.5	0.0	10.2	0.0	2.4	0.1	9.3

Intersection Summary	
HCM 2010 Ctrl Delay	34.7
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	369	457	244	179	277	236	193	1003	74	184	1198	138
Future Volume (veh/h)	369	457	244	179	277	236	193	1003	74	184	1198	138
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1827	1827	1827	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	369	457	244	179	277	236	193	1003	74	184	1198	138
Adj No. of Lanes	2	2	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	4	4	4	4	4	4
Cap, veh/h	400	1052	471	248	1277	398	230	1594	496	216	1572	490
Arrive On Green	0.12	0.30	0.30	0.07	0.26	0.26	0.07	0.32	0.32	0.06	0.32	0.32
Sat Flow, veh/h	3408	3505	1568	3375	4988	1553	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	369	457	244	179	277	236	193	1003	74	184	1198	138
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1688	1663	1553	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	10.1	9.8	12.1	4.9	4.1	12.5	5.3	16.1	3.2	5.1	20.3	6.3
Cycle Q Clear(g_c), s	10.1	9.8	12.1	4.9	4.1	12.5	5.3	16.1	3.2	5.1	20.3	6.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	400	1052	471	248	1277	398	230	1594	496	216	1572	490
V/C Ratio(X)	0.92	0.43	0.52	0.72	0.22	0.59	0.84	0.63	0.15	0.85	0.76	0.28
Avail Cap(c_a), veh/h	400	1147	513	364	1595	497	230	1627	507	216	1595	497
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.0	26.4	27.2	42.5	27.5	30.6	43.2	27.2	22.8	43.5	28.9	24.1
Incr Delay (d2), s/veh	26.3	0.6	1.8	1.5	0.3	4.8	21.8	1.1	0.3	25.3	2.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	4.8	5.4	2.3	1.9	5.9	3.2	7.5	1.4	3.1	9.7	2.8
LnGrp Delay(d),s/veh	67.3	27.0	29.0	44.0	27.8	35.4	65.0	28.3	23.1	68.8	31.5	24.8
LnGrp LOS	E	C	C	D	C	D	E	C	C	E	C	C
Approach Vol, veh/h		1070			692			1270			1520	
Approach Delay, s/veh		41.4			34.6			33.5			35.4	
Approach LOS		D			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	35.4	16.5	30.0	11.5	35.8	12.4	34.1
Change Period (Y+Rc), s	5.5	* 5.8	5.5	* 6	5.5	* 5.8	5.5	6.0
Max Green Setting (Gmax), s	6.4	* 30	11.0	* 30	6.0	* 31	10.1	30.7
Max Q Clear Time (g_c+I1), s	7.3	22.3	12.1	14.5	7.1	18.1	6.9	14.1
Green Ext Time (p_c), s	0.0	7.3	0.0	9.5	0.0	11.6	0.1	10.0

Intersection Summary	
HCM 2010 Ctrl Delay	36.2
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	199	15	519	13	24	66	229	1048	11	20	1365	137
Future Volume (veh/h)	199	15	519	13	24	66	229	1048	11	20	1365	137
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	199	15	519	13	24	66	229	1048	11	20	1365	137
Adj No. of Lanes	2	1	2	1	1	0	2	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	296	404	604	17	62	170	328	2153	23	24	1694	527
Arrive On Green	0.09	0.22	0.22	0.01	0.14	0.14	0.10	0.42	0.42	0.01	0.34	0.34
Sat Flow, veh/h	3408	1845	2760	1757	436	1198	3375	5089	53	1740	4988	1553
Grp Volume(v), veh/h	199	15	519	13	0	90	229	685	374	20	1365	137
Grp Sat Flow(s),veh/h/ln	1704	1845	1380	1757	0	1633	1688	1663	1817	1740	1663	1553
Q Serve(g_s), s	3.9	0.4	12.5	0.5	0.0	3.5	4.5	10.3	10.3	0.8	17.2	4.4
Cycle Q Clear(g_c), s	3.9	0.4	12.5	0.5	0.0	3.5	4.5	10.3	10.3	0.8	17.2	4.4
Prop In Lane	1.00		1.00	1.00		0.73	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	296	404	604	17	0	232	328	1407	769	24	1694	527
V/C Ratio(X)	0.67	0.04	0.86	0.77	0.00	0.39	0.70	0.49	0.49	0.83	0.81	0.26
Avail Cap(c_a), veh/h	962	906	1355	496	0	814	953	3110	1700	491	4622	1439
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.6	21.2	25.9	34.1	0.0	26.9	30.2	14.5	14.5	34.0	20.7	16.5
Incr Delay (d2), s/veh	1.0	0.0	1.4	23.5	0.0	0.4	1.0	0.1	0.2	22.6	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.2	4.9	0.4	0.0	1.6	2.1	4.7	5.1	0.5	7.9	1.9
LnGrp Delay(d),s/veh	31.6	21.2	27.4	57.6	0.0	27.3	31.2	14.6	14.7	56.6	21.1	16.6
LnGrp LOS	C	C	C	E		C	C	B	B	E	C	B
Approach Vol, veh/h		733			103			1288			1522	
Approach Delay, s/veh		28.4			31.1			17.6			21.1	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.2	29.5	11.5	15.9	6.5	35.2	6.2	21.2
Change Period (Y+Rc), s	5.5	6.0	5.5	* 6.1	5.5	* 6	5.5	* 6.1
Max Green Setting (Gmax), s	19.5	64.0	19.5	* 34	19.5	* 65	19.5	* 34
Max Q Clear Time (g_c+I1), s	6.5	19.2	5.9	5.5	2.8	12.3	2.5	14.5
Green Ext Time (p_c), s	0.3	4.3	0.2	0.6	0.0	4.3	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	21.6
HCM 2010 LOS	C

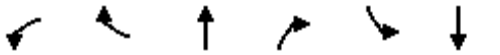
Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	161	282	44	47	115	111	700	51	284	1554	147
Future Volume (veh/h)	82	161	282	44	47	115	111	700	51	284	1554	147
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1759	1759	1759	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	82	161	282	44	47	115	111	700	51	284	1554	147
Adj No. of Lanes	2	2	0	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	8	8	8	4	4	4	4	4	4
Cap, veh/h	143	372	333	82	654	292	184	1543	480	381	1834	571
Arrive On Green	0.04	0.21	0.21	0.03	0.20	0.20	0.05	0.31	0.31	0.11	0.37	0.37
Sat Flow, veh/h	3408	1752	1568	3250	3343	1495	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	82	161	282	44	47	115	111	700	51	284	1554	147
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1625	1671	1495	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	1.5	5.2	11.2	0.9	0.7	4.3	2.1	7.3	1.5	5.3	18.5	4.3
Cycle Q Clear(g_c), s	1.5	5.2	11.2	0.9	0.7	4.3	2.1	7.3	1.5	5.3	18.5	4.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	143	372	333	82	654	292	184	1543	480	381	1834	571
V/C Ratio(X)	0.57	0.43	0.85	0.53	0.07	0.39	0.60	0.45	0.11	0.75	0.85	0.26
Avail Cap(c_a), veh/h	184	610	546	151	1137	509	188	1851	576	444	2229	694
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	22.1	24.5	31.1	21.2	22.7	29.9	17.9	15.9	27.8	18.8	14.3
Incr Delay (d2), s/veh	1.3	0.3	3.2	2.0	0.0	0.3	3.6	0.1	0.0	4.5	2.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	2.5	5.1	0.4	0.3	1.8	1.1	3.3	0.7	2.7	8.7	1.8
LnGrp Delay(d),s/veh	31.7	22.4	27.6	33.1	21.2	23.0	33.5	18.0	16.0	32.3	21.1	14.4
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	C	B
Approach Vol, veh/h		525			206			862			1985	
Approach Delay, s/veh		26.7			24.7			19.9			22.2	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	29.3	8.2	18.1	12.8	25.5	7.1	19.2
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	3.6	28.9	3.5	22.0	8.5	24.0	3.0	22.5
Max Q Clear Time (g_c+I1), s	4.1	20.5	3.5	6.3	7.3	9.3	2.9	13.2
Green Ext Time (p_c), s	0.0	3.3	0.0	0.6	0.1	4.0	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	22.5
HCM 2010 LOS	C



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	27	120	638	41	223	1606
Future Volume (veh/h)	27	120	638	41	223	1606
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1827	1827	1827	1827
Adj Flow Rate, veh/h	27	120	638	41	223	1606
Adj No. of Lanes	2	1	3	1	2	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	4	4	4	4
Cap, veh/h	341	157	1453	452	387	1999
Arrive On Green	0.10	0.10	0.29	0.29	0.11	0.58
Sat Flow, veh/h	3408	1568	5152	1553	3375	3563
Grp Volume(v), veh/h	27	120	638	41	223	1606
Grp Sat Flow(s),veh/h/ln	1704	1568	1663	1553	1688	1736
Q Serve(g_s), s	0.2	2.4	3.4	0.6	2.0	11.8
Cycle Q Clear(g_c), s	0.2	2.4	3.4	0.6	2.0	11.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	341	157	1453	452	387	1999
V/C Ratio(X)	0.08	0.76	0.44	0.09	0.58	0.80
Avail Cap(c_a), veh/h	515	237	3863	1203	1979	5313
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.2	14.2	9.3	8.4	13.6	5.4
Incr Delay (d2), s/veh	0.0	3.3	0.1	0.0	0.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.2	1.5	0.3	1.0	5.4
LnGrp Delay(d),s/veh	13.3	17.5	9.4	8.4	14.1	5.7
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	147		679			1829
Approach Delay, s/veh	16.7		9.3			6.7
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		23.7		8.7	9.2	14.4		
Change Period (Y+Rc), s		5.0		5.5	5.5	5.0		
Max Green Setting (Gmax), s		49.6		4.9	19.0	25.1		
Max Q Clear Time (g_c+I1), s		13.8		4.4	4.0	5.4		
Green Ext Time (p_c), s		4.2		0.0	0.3	4.1		

Intersection Summary	
HCM 2010 Ctrl Delay	8.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	4	0	10	5	57	1	526	43	101	1159	263
Future Volume (veh/h)	62	4	0	10	5	57	1	526	43	101	1159	263
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1900	1845	1845	1845	1827	1827	1827	1830	1900
Adj Flow Rate, veh/h	62	4	0	10	5	57	1	526	43	101	1159	263
Adj No. of Lanes	0	1	0	0	1	1	1	2	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	4	4	4	4	4
Cap, veh/h	79	5	0	59	30	78	3	1645	736	180	1534	345
Arrive On Green	0.05	0.05	0.00	0.05	0.05	0.05	0.00	0.47	0.47	0.05	0.54	0.54
Sat Flow, veh/h	1655	107	0	1190	595	1568	1757	3471	1553	3375	2822	635
Grp Volume(v), veh/h	66	0	0	15	0	57	1	526	43	101	711	711
Grp Sat Flow(s),veh/h/ln	1762	0	0	1785	0	1568	1757	1736	1553	1688	1739	1718
Q Serve(g_s), s	1.9	0.0	0.0	0.4	0.0	1.8	0.0	4.8	0.8	1.5	16.2	16.6
Cycle Q Clear(g_c), s	1.9	0.0	0.0	0.4	0.0	1.8	0.0	4.8	0.8	1.5	16.2	16.6
Prop In Lane	0.94		0.00	0.67		1.00	1.00		1.00	1.00		0.37
Lane Grp Cap(c), veh/h	84	0	0	89	0	78	3	1645	736	180	945	934
V/C Ratio(X)	0.78	0.00	0.00	0.17	0.00	0.73	0.29	0.32	0.06	0.56	0.75	0.76
Avail Cap(c_a), veh/h	548	0	0	625	0	549	102	2025	906	440	1170	1156
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.2	0.0	0.0	23.4	0.0	24.1	25.7	8.4	7.3	23.8	9.0	9.1
Incr Delay (d2), s/veh	14.5	0.0	0.0	0.9	0.0	12.3	41.7	0.1	0.0	2.7	2.2	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.0	0.2	0.0	1.1	0.1	2.3	0.3	0.8	8.3	8.3
LnGrp Delay(d),s/veh	38.7	0.0	0.0	24.3	0.0	36.4	67.3	8.5	7.4	26.5	11.2	11.5
LnGrp LOS	D			C		D	E	A	A	C	B	B
Approach Vol, veh/h		66			72			570			1523	
Approach Delay, s/veh		38.7			33.9			8.5			12.4	
Approach LOS		D			C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.0	33.0		8.0	7.6	29.4		6.5
Change Period (Y+Rc), s	4.0	5.0		* 5.4	* 4.9	5.0		4.0
Max Green Setting (Gmax), s	3.0	34.6		* 18	* 6.7	30.0		16.0
Max Q Clear Time (g_c+I1), s	2.0	18.6		3.8	3.5	6.8		3.9
Green Ext Time (p_c), s	0.0	9.4		0.1	0.1	11.6		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	12.9
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	166	411	9	68	283	124	5	266	66	356	710	79
Future Volume (veh/h)	166	411	9	68	283	124	5	266	66	356	710	79
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1792	1845	1845	1900	1827	1845	1845
Adj Flow Rate, veh/h	166	411	9	68	283	124	5	266	66	356	710	79
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	6	3	3	3	4	3	3
Cap, veh/h	204	507	431	73	369	651	7	356	88	396	872	923
Arrive On Green	0.12	0.27	0.27	0.04	0.20	0.20	0.00	0.25	0.25	0.23	0.47	0.47
Sat Flow, veh/h	1757	1845	1568	1757	1845	1524	1757	1428	354	1740	1845	1568
Grp Volume(v), veh/h	166	411	9	68	283	124	5	0	332	356	710	79
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1524	1757	0	1782	1740	1845	1568
Q Serve(g_s), s	8.9	20.1	0.4	3.7	14.0	4.9	0.3	0.0	16.6	19.2	31.8	2.1
Cycle Q Clear(g_c), s	8.9	20.1	0.4	3.7	14.0	4.9	0.3	0.0	16.6	19.2	31.8	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	204	507	431	73	369	651	7	0	444	396	872	923
V/C Ratio(X)	0.82	0.81	0.02	0.93	0.77	0.19	0.73	0.00	0.75	0.90	0.81	0.09
Avail Cap(c_a), veh/h	382	975	829	73	650	883	55	0	739	631	1376	1351
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.7	32.7	25.5	46.1	36.5	17.2	48.0	0.0	33.4	36.2	21.8	8.6
Incr Delay (d2), s/veh	7.7	3.2	0.0	82.8	3.3	0.1	88.7	0.0	2.5	7.0	2.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	10.6	0.2	3.5	7.5	2.1	0.3	0.0	8.4	10.0	16.7	0.9
LnGrp Delay(d),s/veh	49.4	35.9	25.6	128.9	39.8	17.4	136.7	0.0	35.9	43.2	23.9	8.6
LnGrp LOS	D	D	C	F	D	B	F		D	D	C	A
Approach Vol, veh/h		586			475			337			1145	
Approach Delay, s/veh		39.5			46.7			37.4			28.9	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	32.5	4.4	51.6	15.2	25.3	25.9	30.1
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	4.0	51.0	3.0	72.0	21.0	34.0	35.0	40.0
Max Q Clear Time (g_c+I1), s	5.7	22.1	2.3	33.8	10.9	16.0	21.2	18.6
Green Ext Time (p_c), s	0.0	3.6	0.0	6.1	0.4	3.3	0.8	5.5

Intersection Summary	
HCM 2010 Ctrl Delay	35.8
HCM 2010 LOS	D

Notes

User approved changes to right turn type.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	135	35	14	186	568	222
Future Volume (veh/h)	135	35	14	186	568	222
Number	7	14	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1900	1827	1827	1827	1900
Adj Flow Rate, veh/h	135	35	14	186	568	222
Adj No. of Lanes	0	0	1	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	4	4	4	4
Cap, veh/h	169	44	19	1155	612	239
Arrive On Green	0.13	0.13	0.01	0.63	0.49	0.49
Sat Flow, veh/h	1268	329	1740	1827	1251	489
Grp Volume(v), veh/h	171	0	14	186	0	790
Grp Sat Flow(s),veh/h/ln	1606	0	1740	1827	0	1741
Q Serve(g_s), s	4.3	0.0	0.3	1.7	0.0	17.6
Cycle Q Clear(g_c), s	4.3	0.0	0.3	1.7	0.0	17.6
Prop In Lane	0.79	0.20	1.00			0.28
Lane Grp Cap(c), veh/h	215	0	19	1155	0	851
V/C Ratio(X)	0.80	0.00	0.75	0.16	0.00	0.93
Avail Cap(c_a), veh/h	349	0	273	1574	0	978
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.4	0.0	20.4	3.1	0.0	9.9
Incr Delay (d2), s/veh	6.6	0.0	19.4	0.0	0.0	12.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	0.3	0.8	0.0	11.1
LnGrp Delay(d),s/veh	24.0	0.0	39.8	3.1	0.0	22.6
LnGrp LOS	C		D	A		C
Approach Vol, veh/h	171			200	790	
Approach Delay, s/veh	24.0			5.7	22.6	
Approach LOS	C			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	5.9	26.0		9.5		31.9		
Change Period (Y+Rc), s	5.5	* 5.7		4.0		* 5.7		
Max Green Setting (Gmax), s	6.5	* 23		9.0		* 36		
Max Q Clear Time (g_c+I1), s	2.3	19.6		6.3		3.7		
Green Ext Time (p_c), s	0.0	0.7		0.2		1.1		

Intersection Summary	
HCM 2010 Ctrl Delay	19.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	695	642	1	2	269	466	22	216	16	114	1	177
Future Volume (veh/h)	695	642	1	2	269	466	22	216	16	114	1	177
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1792	1792	1900	1792	1792	1792
Adj Flow Rate, veh/h	695	642	1	2	269	466	22	216	16	122	0	177
Adj No. of Lanes	2	2	0	1	1	1	1	1	0	2	0	3
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	6	6	6	6	6	6
Cap, veh/h	772	1951	3	3	579	492	258	249	18	216	0	289
Arrive On Green	0.23	0.54	0.54	0.00	0.31	0.31	0.15	0.15	0.15	0.06	0.00	0.06
Sat Flow, veh/h	3408	3591	6	1757	1845	1568	1707	1649	122	3414	0	4571
Grp Volume(v), veh/h	695	313	330	2	269	466	22	0	232	122	0	177
Grp Sat Flow(s),veh/h/ln	1704	1752	1844	1757	1845	1568	1707	0	1771	1707	0	1524
Q Serve(g_s), s	18.1	9.1	9.1	0.1	10.7	26.6	1.0	0.0	11.7	3.2	0.0	3.5
Cycle Q Clear(g_c), s	18.1	9.1	9.1	0.1	10.7	26.6	1.0	0.0	11.7	3.2	0.0	3.5
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	772	952	1002	3	579	492	258	0	268	216	0	289
V/C Ratio(X)	0.90	0.33	0.33	0.70	0.46	0.95	0.09	0.00	0.87	0.56	0.00	0.61
Avail Cap(c_a), veh/h	912	957	1007	58	588	500	392	0	406	895	0	1198
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.4	11.6	11.6	45.7	25.2	30.6	33.4	0.0	37.9	41.6	0.0	41.8
Incr Delay (d2), s/veh	9.7	0.1	0.1	75.6	0.2	26.7	0.1	0.0	8.1	0.9	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.5	4.4	4.6	0.1	5.5	15.0	0.5	0.0	6.3	1.5	0.0	1.5
LnGrp Delay(d),s/veh	44.1	11.7	11.7	121.3	25.4	57.4	33.4	0.0	46.0	42.5	0.0	42.6
LnGrp LOS	D	B	B	F	C	E	C		D	D		D
Approach Vol, veh/h		1338			737			254			299	
Approach Delay, s/veh		28.5			45.9			44.9			42.5	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	26.2	34.6		11.3	5.2	55.6		19.3
Change Period (Y+Rc), s	5.5	* 5.9		5.5	* 5.1	* 5.9		5.5
Max Green Setting (Gmax), s	24.5	* 29		24.0	* 3	* 50		21.0
Max Q Clear Time (g_c+I1), s	20.1	28.6		5.5	2.1	11.1		13.7
Green Ext Time (p_c), s	0.6	0.2		0.3	0.0	1.2		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	36.6
HCM 2010 LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	87	97	21	309	406	97
Future Volume (veh/h)	87	97	21	309	406	97
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1792	1792	1810	1810
Adj Flow Rate, veh/h	87	97	21	309	406	97
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	8	8	6	6	5	5
Cap, veh/h	188	168	36	962	615	523
Arrive On Green	0.11	0.11	0.02	0.54	0.34	0.34
Sat Flow, veh/h	1675	1495	1707	1792	1810	1538
Grp Volume(v), veh/h	87	97	21	309	406	97
Grp Sat Flow(s),veh/h/ln	1675	1495	1707	1792	1810	1538
Q Serve(g_s), s	1.5	1.9	0.4	3.0	6.0	1.4
Cycle Q Clear(g_c), s	1.5	1.9	0.4	3.0	6.0	1.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	188	168	36	962	615	523
V/C Ratio(X)	0.46	0.58	0.58	0.32	0.66	0.19
Avail Cap(c_a), veh/h	855	763	218	1601	1068	908
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.0	13.2	15.2	4.1	8.8	7.3
Incr Delay (d2), s/veh	1.8	3.1	13.6	0.2	1.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.7	0.3	1.5	3.1	0.6
LnGrp Delay(d),s/veh	14.8	16.3	28.8	4.3	10.0	7.5
LnGrp LOS	B	B	C	A	B	A
Approach Vol, veh/h	184			330	503	
Approach Delay, s/veh	15.6			5.8	9.5	
Approach LOS	B			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		22.3		9.0	6.2	16.2		
Change Period (Y+Rc), s		5.5		5.5	5.5	5.5		
Max Green Setting (Gmax), s		28.0		16.0	4.0	18.5		
Max Q Clear Time (g_c+I1), s		5.0		3.9	2.4	8.0		
Green Ext Time (p_c), s		3.5		0.5	0.0	2.7		

Intersection Summary	
HCM 2010 Ctrl Delay	9.4
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	659	4	58	302	13	4	176	70	42	242	134
Future Volume (veh/h)	117	659	4	58	302	13	4	176	70	42	242	134
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1900	1900	1810	1900	1900	1810	1900
Adj Flow Rate, veh/h	117	659	4	58	302	13	4	176	70	42	242	134
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	5	5	5	5	5	5
Cap, veh/h	142	692	4	69	591	25	4	195	78	41	237	131
Arrive On Green	0.08	0.39	0.39	0.04	0.35	0.35	0.16	0.16	0.16	0.24	0.24	0.24
Sat Flow, veh/h	1707	1780	11	1707	1706	73	28	1213	482	171	987	546
Grp Volume(v), veh/h	117	0	663	58	0	315	250	0	0	418	0	0
Grp Sat Flow(s),veh/h/ln	1707	0	1791	1707	0	1779	1723	0	0	1705	0	0
Q Serve(g_s), s	9.0	0.0	47.9	4.5	0.0	18.7	19.0	0.0	0.0	32.0	0.0	0.0
Cycle Q Clear(g_c), s	9.0	0.0	47.9	4.5	0.0	18.7	19.0	0.0	0.0	32.0	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.04	0.02		0.28	0.10		0.32
Lane Grp Cap(c), veh/h	142	0	696	69	0	616	277	0	0	409	0	0
V/C Ratio(X)	0.82	0.00	0.95	0.84	0.00	0.51	0.90	0.00	0.00	1.02	0.00	0.00
Avail Cap(c_a), veh/h	231	0	726	69	0	616	336	0	0	409	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	60.1	0.0	39.5	63.5	0.0	34.6	54.9	0.0	0.0	50.6	0.0	0.0
Incr Delay (d2), s/veh	5.2	0.0	22.7	54.3	0.0	1.4	23.5	0.0	0.0	49.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	0.0	28.0	3.2	0.0	9.4	10.8	0.0	0.0	20.7	0.0	0.0
LnGrp Delay(d),s/veh	65.3	0.0	62.2	117.8	0.0	36.1	78.4	0.0	0.0	100.5	0.0	0.0
LnGrp LOS	E		E	F		D	E			F		
Approach Vol, veh/h		780			373			250			418	
Approach Delay, s/veh		62.6			48.8			78.4			100.5	
Approach LOS		E			D			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.7	52.1		38.0	10.0	57.8		27.4
Change Period (Y+Rc), s	4.6	6.0		6.0	4.6	6.0		6.0
Max Green Setting (Gmax), s	18.0	41.4		32.0	5.4	54.0		26.0
Max Q Clear Time (g_c+I1), s	11.0	20.7		34.0	6.5	49.9		21.0
Green Ext Time (p_c), s	0.1	9.5		0.0	0.0	1.9		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	70.7
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	453	125	171	663	179	84	399	83	187	817	227
Future Volume (veh/h)	129	453	125	171	663	179	84	399	83	187	817	227
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	129	453	125	171	663	179	84	399	83	187	817	227
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	164	672	184	192	923	413	106	848	379	192	1020	456
Arrive On Green	0.09	0.25	0.25	0.11	0.26	0.26	0.06	0.24	0.24	0.11	0.29	0.29
Sat Flow, veh/h	1757	2721	745	1757	3505	1568	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	129	291	287	171	663	179	84	399	83	187	817	227
Grp Sat Flow(s),veh/h/ln	1757	1752	1713	1757	1752	1568	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	3.9	8.2	8.3	5.3	9.4	5.2	2.6	5.3	2.3	5.8	11.8	6.6
Cycle Q Clear(g_c), s	3.9	8.2	8.3	5.3	9.4	5.2	2.6	5.3	2.3	5.8	11.8	6.6
Prop In Lane	1.00		0.43	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	164	433	423	192	923	413	106	848	379	192	1020	456
V/C Ratio(X)	0.79	0.67	0.68	0.89	0.72	0.43	0.79	0.47	0.22	0.97	0.80	0.50
Avail Cap(c_a), veh/h	192	512	500	192	1024	458	160	1024	458	192	1088	487
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	18.6	18.7	24.1	18.3	16.8	25.4	17.8	16.6	24.3	18.0	16.1
Incr Delay (d2), s/veh	16.8	2.7	2.9	35.9	2.2	0.7	14.1	0.4	0.3	56.5	4.1	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	4.3	4.3	4.4	4.8	2.3	1.7	2.6	1.0	5.8	6.3	2.9
LnGrp Delay(d),s/veh	41.1	21.3	21.6	59.9	20.5	17.5	39.5	18.2	16.9	80.8	22.1	16.9
LnGrp LOS	D	C	C	E	C	B	D	B	B	F	C	B
Approach Vol, veh/h		707			1013			566			1231	
Approach Delay, s/veh		25.0			26.6			21.1			30.1	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	17.2	10.0	17.5	7.3	19.9	9.1	18.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	16.0	6.0	16.0	5.0	17.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	7.8	7.3	7.3	10.3	4.6	13.8	5.9	11.4
Green Ext Time (p_c), s	0.0	4.7	0.0	3.2	0.0	2.1	0.0	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	26.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	329	156	111	504	94	104	532	57	117	1142	193
Future Volume (veh/h)	125	329	156	111	504	94	104	532	57	117	1142	193
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	125	329	156	111	504	94	104	532	57	117	1142	193
Adj No. of Lanes	1	2	1	1	2	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	157	736	329	140	593	110	132	1311	140	150	1263	213
Arrive On Green	0.09	0.21	0.21	0.08	0.20	0.20	0.08	0.41	0.41	0.09	0.42	0.42
Sat Flow, veh/h	1757	3505	1568	1757	2952	548	1740	3165	338	1740	2974	501
Grp Volume(v), veh/h	125	329	156	111	298	300	104	291	298	117	665	670
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1748	1740	1736	1767	1740	1736	1739
Q Serve(g_s), s	5.3	6.2	6.7	4.7	12.5	12.6	4.5	9.0	9.1	5.0	27.3	27.6
Cycle Q Clear(g_c), s	5.3	6.2	6.7	4.7	12.5	12.6	4.5	9.0	9.1	5.0	27.3	27.6
Prop In Lane	1.00		1.00	1.00		0.31	1.00		0.19	1.00		0.29
Lane Grp Cap(c), veh/h	157	736	329	140	352	351	132	719	732	150	737	739
V/C Ratio(X)	0.80	0.45	0.47	0.79	0.85	0.85	0.79	0.40	0.41	0.78	0.90	0.91
Avail Cap(c_a), veh/h	161	736	329	161	367	366	137	719	732	273	795	797
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.1	26.3	26.5	34.5	29.4	29.4	34.7	15.7	15.8	34.2	20.5	20.6
Incr Delay (d2), s/veh	23.4	0.4	1.1	20.4	16.2	17.0	25.4	0.4	0.4	8.5	12.9	13.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	3.1	3.0	3.1	7.6	7.7	3.1	4.4	4.5	2.8	15.6	15.8
LnGrp Delay(d),s/veh	57.5	26.7	27.5	54.9	45.6	46.5	60.1	16.1	16.1	42.7	33.3	34.1
LnGrp LOS	E	C	C	D	D	D	E	B	B	D	C	C
Approach Vol, veh/h		610			709			693			1452	
Approach Delay, s/veh		33.2			47.4			22.7			34.4	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	35.6	10.1	20.0	9.8	36.4	10.8	19.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	12.0	29.0	7.0	16.0	6.0	35.0	7.0	16.0
Max Q Clear Time (g_c+I1), s	7.0	11.1	6.7	8.7	6.5	29.6	7.3	14.6
Green Ext Time (p_c), s	0.1	9.3	0.0	3.0	0.0	2.9	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	34.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	661	195	242	851	125	165	476	91	176	1146	203
Future Volume (veh/h)	155	661	195	242	851	125	165	476	91	176	1146	203
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1827	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	155	661	195	242	851	125	165	476	91	176	1146	203
Adj No. of Lanes	1	3	0	1	2	1	1	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	174	770	223	261	869	389	174	945	180	216	1211	542
Arrive On Green	0.10	0.20	0.20	0.15	0.25	0.25	0.10	0.32	0.32	0.12	0.35	0.35
Sat Flow, veh/h	1740	3840	1115	1740	3471	1553	1740	2911	553	1740	3471	1553
Grp Volume(v), veh/h	155	571	285	242	851	125	165	283	284	176	1146	203
Grp Sat Flow(s),veh/h/ln	1740	1663	1630	1740	1736	1553	1740	1736	1729	1740	1736	1553
Q Serve(g_s), s	7.0	13.2	13.5	11.0	19.4	5.2	7.5	10.5	10.6	7.9	25.6	7.8
Cycle Q Clear(g_c), s	7.0	13.2	13.5	11.0	19.4	5.2	7.5	10.5	10.6	7.9	25.6	7.8
Prop In Lane	1.00		0.68	1.00		1.00	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	174	666	327	261	869	389	174	563	561	216	1211	542
V/C Ratio(X)	0.89	0.86	0.87	0.93	0.98	0.32	0.95	0.50	0.51	0.81	0.95	0.37
Avail Cap(c_a), veh/h	174	666	327	261	869	389	174	563	561	327	1217	545
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.5	30.8	30.9	33.5	29.7	24.4	35.7	21.8	21.8	34.1	25.3	19.5
Incr Delay (d2), s/veh	38.6	10.7	21.9	36.3	25.3	0.5	52.6	0.7	0.7	9.0	14.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	7.0	8.1	7.9	12.3	2.3	6.1	5.1	5.2	4.3	14.7	3.4
LnGrp Delay(d),s/veh	74.1	41.6	52.9	69.8	55.0	24.9	88.3	22.5	22.5	43.1	40.1	19.9
LnGrp LOS	E	D	D	E	E	C	F	C	C	D	D	B
Approach Vol, veh/h		1011			1218			732			1525	
Approach Delay, s/veh		49.7			54.9			37.3			37.7	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.9	29.9	16.0	20.0	12.0	31.9	12.0	24.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	15.0	21.0	12.0	16.0	8.0	28.0	8.0	20.0
Max Q Clear Time (g_c+I1), s	9.9	12.6	13.0	15.5	9.5	27.6	9.0	21.4
Green Ext Time (p_c), s	0.3	5.6	0.0	0.4	0.0	0.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	45.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	518	145	84	591	49	157	224	33	143	829	313
Future Volume (veh/h)	134	518	145	84	591	49	157	224	33	143	829	313
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	134	518	145	84	591	49	157	224	33	143	829	313
Adj No. of Lanes	1	2	0	1	2	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	3	3	3	3	3	3
Cap, veh/h	152	729	203	106	796	66	184	997	446	181	990	443
Arrive On Green	0.09	0.27	0.27	0.06	0.25	0.25	0.10	0.28	0.28	0.10	0.28	0.28
Sat Flow, veh/h	1740	2683	747	1740	3246	269	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	134	334	329	84	316	324	157	224	33	143	829	313
Grp Sat Flow(s),veh/h/ln	1740	1736	1695	1740	1736	1780	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	4.4	9.9	10.0	2.7	9.6	9.6	5.0	2.8	0.9	4.5	12.7	10.2
Cycle Q Clear(g_c), s	4.4	9.9	10.0	2.7	9.6	9.6	5.0	2.8	0.9	4.5	12.7	10.2
Prop In Lane	1.00		0.44	1.00		0.15	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	152	472	461	106	425	436	184	997	446	181	990	443
V/C Ratio(X)	0.88	0.71	0.71	0.79	0.74	0.74	0.85	0.22	0.07	0.79	0.84	0.71
Avail Cap(c_a), veh/h	152	486	475	152	486	498	184	997	446	215	1043	466
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.8	18.8	18.8	26.5	19.9	19.9	25.1	15.6	14.9	25.0	19.3	18.4
Incr Delay (d2), s/veh	40.4	4.6	4.9	16.4	5.2	5.2	29.7	0.1	0.1	15.3	5.9	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	5.3	5.3	1.8	5.2	5.3	4.0	1.4	0.4	3.0	6.9	4.9
LnGrp Delay(d),s/veh	66.2	23.4	23.7	42.9	25.1	25.1	54.8	15.7	15.0	40.3	25.2	23.0
LnGrp LOS	E	C	C	D	C	C	D	B	B	D	C	C
Approach Vol, veh/h		797			724			414			1285	
Approach Delay, s/veh		30.7			27.2			30.5			26.3	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.9	20.3	7.5	19.5	10.0	20.1	9.0	18.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	16.0	5.0	16.0	6.0	17.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	6.5	4.8	4.7	12.0	7.0	14.7	6.4	11.6
Green Ext Time (p_c), s	0.0	5.2	0.0	2.2	0.0	1.4	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	28.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	157	430	19	61	488	100	45	279	85	225	534	579
Future Volume (veh/h)	157	430	19	61	488	100	45	279	85	225	534	579
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1827	1900	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	157	430	19	61	488	100	45	279	85	225	534	579
Adj No. of Lanes	2	2	1	2	2	0	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	253	934	418	150	686	140	123	761	227	339	1225	548
Arrive On Green	0.07	0.27	0.27	0.04	0.24	0.24	0.04	0.29	0.29	0.10	0.35	0.35
Sat Flow, veh/h	3375	3471	1553	3375	2873	586	3375	2636	787	3375	3471	1553
Grp Volume(v), veh/h	157	430	19	61	294	294	45	182	182	225	534	579
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1688	1736	1724	1688	1736	1688	1688	1736	1553
Q Serve(g_s), s	2.4	5.6	0.5	0.9	8.4	8.4	0.7	4.5	4.6	3.5	6.3	19.0
Cycle Q Clear(g_c), s	2.4	5.6	0.5	0.9	8.4	8.4	0.7	4.5	4.6	3.5	6.3	19.0
Prop In Lane	1.00		1.00	1.00		0.34	1.00		0.47	1.00		1.00
Lane Grp Cap(c), veh/h	253	934	418	150	414	411	123	501	487	339	1225	548
V/C Ratio(X)	0.62	0.46	0.05	0.41	0.71	0.72	0.37	0.36	0.37	0.66	0.44	1.06
Avail Cap(c_a), veh/h	313	1096	490	251	516	512	251	516	502	439	1225	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.2	16.4	14.6	25.0	18.8	18.8	25.3	15.2	15.3	23.3	13.3	17.4
Incr Delay (d2), s/veh	2.5	0.4	0.0	1.8	3.4	3.6	1.8	0.4	0.5	2.4	0.2	54.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.7	0.2	0.5	4.4	4.4	0.4	2.2	2.2	1.7	3.1	16.3
LnGrp Delay(d),s/veh	26.7	16.8	14.6	26.8	22.1	22.4	27.2	15.7	15.7	25.8	13.6	71.7
LnGrp LOS	C	B	B	C	C	C	C	B	B	C	B	F
Approach Vol, veh/h		606			649			409			1338	
Approach Delay, s/veh		19.3			22.7			17.0			40.8	
Approach LOS		B			C			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	19.5	6.4	18.5	6.0	23.0	8.0	16.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	16.0	4.0	17.0	4.0	19.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	5.5	6.6	2.9	7.6	2.7	21.0	4.4	10.4
Green Ext Time (p_c), s	0.2	4.6	0.0	3.4	0.0	0.0	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	29.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	6	80	50	9	1	53	488	55	1	944	0
Future Volume (veh/h)	1	6	80	50	9	1	53	488	55	1	944	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1759	1900	1845	1845	1900	1792	1792	1792	1792	1792	1900
Adj Flow Rate, veh/h	1	6	80	50	9	1	53	488	55	1	944	0
Adj No. of Lanes	0	1	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	8	8	8	3	3	3	6	6	6	6	6	6
Cap, veh/h	2	9	123	105	98	11	65	575	489	497	1029	0
Arrive On Green	0.09	0.09	0.09	0.06	0.06	0.06	0.04	0.32	0.32	0.29	0.57	0.00
Sat Flow, veh/h	17	104	1391	1757	1631	181	1707	1792	1524	1707	1792	0
Grp Volume(v), veh/h	87	0	0	50	0	10	53	488	55	1	944	0
Grp Sat Flow(s),veh/h/ln	1513	0	0	1757	0	1813	1707	1792	1524	1707	1792	0
Q Serve(g_s), s	3.7	0.0	0.0	1.8	0.0	0.3	2.1	17.0	1.7	0.0	31.6	0.0
Cycle Q Clear(g_c), s	3.7	0.0	0.0	1.8	0.0	0.3	2.1	17.0	1.7	0.0	31.6	0.0
Prop In Lane	0.01		0.92	1.00		0.10	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	134	0	0	105	0	109	65	575	489	497	1029	0
V/C Ratio(X)	0.65	0.00	0.00	0.48	0.00	0.09	0.82	0.85	0.11	0.00	0.92	0.00
Avail Cap(c_a), veh/h	363	0	0	421	0	434	102	1289	1095	497	1289	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.4	0.0	0.0	30.4	0.0	29.7	31.9	21.2	16.0	16.8	12.8	0.0
Incr Delay (d2), s/veh	5.3	0.0	0.0	3.3	0.0	0.4	23.5	3.6	0.1	0.0	9.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.0	1.0	0.0	0.2	1.4	9.0	0.7	0.0	18.1	0.0
LnGrp Delay(d),s/veh	34.7	0.0	0.0	33.7	0.0	30.0	55.3	24.8	16.1	16.8	21.9	0.0
LnGrp LOS	C			C		C	E	C	B	B	C	
Approach Vol, veh/h		87			60			596			945	
Approach Delay, s/veh		34.7			33.1			26.7			21.9	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	23.4	25.4		9.9	6.5	42.3		8.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	48.0		16.0	4.0	48.0		16.0
Max Q Clear Time (g_c+I1), s	2.0	19.0		5.7	4.1	33.6		3.8
Green Ext Time (p_c), s	1.1	2.5		0.2	0.0	4.7		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	24.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	12	2	173	3	138	10	544	247	443	691	1
Future Volume (veh/h)	15	12	2	173	3	138	10	544	247	443	691	1
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	15	12	2	173	3	138	10	544	247	443	691	1
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	23	49	8	195	4	200	16	559	254	466	1328	2
Arrive On Green	0.01	0.03	0.03	0.11	0.13	0.13	0.01	0.47	0.47	0.27	0.72	0.72
Sat Flow, veh/h	1757	1542	257	1757	33	1540	1757	1202	546	1757	1842	3
Grp Volume(v), veh/h	15	0	14	173	0	141	10	0	791	443	0	692
Grp Sat Flow(s),veh/h/ln	1757	0	1799	1757	0	1573	1757	0	1748	1757	0	1844
Q Serve(g_s), s	1.1	0.0	1.0	12.2	0.0	10.8	0.7	0.0	55.7	31.2	0.0	21.1
Cycle Q Clear(g_c), s	1.1	0.0	1.0	12.2	0.0	10.8	0.7	0.0	55.7	31.2	0.0	21.1
Prop In Lane	1.00		0.14	1.00		0.98	1.00		0.31	1.00		0.00
Lane Grp Cap(c), veh/h	23	0	57	195	0	204	16	0	813	466	0	1329
V/C Ratio(X)	0.66	0.00	0.25	0.89	0.00	0.69	0.61	0.00	0.97	0.95	0.00	0.52
Avail Cap(c_a), veh/h	56	0	228	195	0	325	56	0	832	474	0	1329
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.9	0.0	59.5	55.2	0.0	52.4	62.2	0.0	32.9	45.5	0.0	7.9
Incr Delay (d2), s/veh	27.9	0.0	2.2	35.1	0.0	4.1	31.0	0.0	24.4	29.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.5	7.9	0.0	4.9	0.5	0.0	32.3	18.9	0.0	10.7
LnGrp Delay(d),s/veh	89.8	0.0	61.8	90.3	0.0	56.5	93.2	0.0	57.3	74.6	0.0	8.2
LnGrp LOS	F		E	F		E	F		E	E		A
Approach Vol, veh/h		29			314			801			1135	
Approach Delay, s/veh		76.2			75.1			57.7			34.1	
Approach LOS		E			E			E			C	

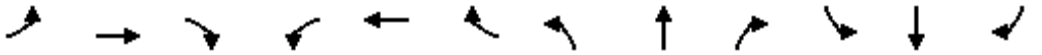
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	37.4	62.6	18.0	8.0	5.2	94.8	5.6	20.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	34.0	60.0	14.0	16.0	4.0	90.0	4.0	26.0
Max Q Clear Time (g_c+I1), s	33.2	57.7	14.2	3.0	2.7	23.1	3.1	12.8
Green Ext Time (p_c), s	0.2	0.9	0.0	0.5	0.0	10.5	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	48.6
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	296	12	14	1	6	4	10	430	0	3	610	320
Future Volume (veh/h)	296	12	14	1	6	4	10	430	0	3	610	320
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1900	1845	1900	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	296	12	14	1	6	4	10	430	0	3	610	0
Adj No. of Lanes	0	1	1	0	1	0	1	1	0	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	372	15	345	2	11	7	18	782	0	6	769	654
Arrive On Green	0.22	0.22	0.22	0.01	0.01	0.01	0.01	0.42	0.00	0.00	0.42	0.00
Sat Flow, veh/h	1692	69	1568	157	941	628	1757	1845	0	1757	1845	1568
Grp Volume(v), veh/h	308	0	14	11	0	0	10	430	0	3	610	0
Grp Sat Flow(s),veh/h/ln	1760	0	1568	1726	0	0	1757	1845	0	1757	1845	1568
Q Serve(g_s), s	7.8	0.0	0.3	0.3	0.0	0.0	0.3	8.2	0.0	0.1	13.5	0.0
Cycle Q Clear(g_c), s	7.8	0.0	0.3	0.3	0.0	0.0	0.3	8.2	0.0	0.1	13.5	0.0
Prop In Lane	0.96		1.00	0.09		0.36	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	387	0	345	20	0	0	18	782	0	6	769	654
V/C Ratio(X)	0.80	0.00	0.04	0.56	0.00	0.00	0.55	0.55	0.00	0.52	0.79	0.00
Avail Cap(c_a), veh/h	601	0	535	589	0	0	150	1102	0	150	1102	937
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.3	0.0	14.4	23.1	0.0	0.0	23.1	10.1	0.0	23.3	11.9	0.0
Incr Delay (d2), s/veh	4.1	0.0	0.0	22.6	0.0	0.0	23.0	0.6	0.0	58.3	2.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	0.1	0.3	0.0	0.0	0.2	4.2	0.0	0.1	7.3	0.0
LnGrp Delay(d),s/veh	21.4	0.0	14.4	45.6	0.0	0.0	46.1	10.7	0.0	81.6	14.5	0.0
LnGrp LOS	C		B	D			D	B		F	B	
Approach Vol, veh/h		322			11			440			613	
Approach Delay, s/veh		21.1			45.6			11.5			14.9	
Approach LOS		C			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.2	23.9		14.3	4.5	23.5		4.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	28.0		16.0	4.0	28.0		16.0
Max Q Clear Time (g_c+I1), s	2.1	10.2		9.8	2.3	15.5		2.3
Green Ext Time (p_c), s	0.0	4.7		0.7	0.0	4.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	15.5
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	15	50	25	3	12	20	192	86	18	259	21
Future Volume (veh/h)	16	15	50	25	3	12	20	192	86	18	259	21
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	16	15	50	25	3	12	20	192	86	18	259	21
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	22	109	93	34	121	103	27	567	245	25	776	62
Arrive On Green	0.01	0.06	0.06	0.02	0.07	0.07	0.02	0.24	0.24	0.01	0.24	0.24
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	2386	1029	1757	3286	265
Grp Volume(v), veh/h	16	15	50	25	3	12	20	139	139	18	137	143
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1663	1757	1752	1798
Q Serve(g_s), s	0.2	0.2	0.7	0.3	0.0	0.2	0.3	1.6	1.7	0.2	1.6	1.6
Cycle Q Clear(g_c), s	0.2	0.2	0.7	0.3	0.0	0.2	0.3	1.6	1.7	0.2	1.6	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.62	1.00		0.15
Lane Grp Cap(c), veh/h	22	109	93	34	121	103	27	416	395	25	414	425
V/C Ratio(X)	0.72	0.14	0.54	0.74	0.02	0.12	0.73	0.33	0.35	0.72	0.33	0.34
Avail Cap(c_a), veh/h	221	1158	985	221	1158	985	221	1321	1253	221	1321	1355
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.7	10.7	10.9	11.7	10.4	10.5	11.7	7.5	7.6	11.7	7.6	7.6
Incr Delay (d2), s/veh	35.2	0.6	4.8	26.8	0.1	0.5	30.6	0.5	0.5	32.6	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	0.4	0.4	0.0	0.1	0.4	0.8	0.8	0.3	0.8	0.8
LnGrp Delay(d),s/veh	46.9	11.2	15.7	38.5	10.5	11.0	42.3	8.0	8.1	44.3	8.0	8.0
LnGrp LOS	D	B	B	D	B	B	D	A	A	D	A	A
Approach Vol, veh/h		81			40			298			298	
Approach Delay, s/veh		21.0			28.2			10.4			10.2	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.3	9.7	4.5	5.4	4.4	9.6	4.3	5.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	18.0	3.0	15.0	3.0	18.0	3.0	15.0
Max Q Clear Time (g_c+I1), s	2.2	3.7	2.3	2.7	2.3	3.6	2.2	2.2
Green Ext Time (p_c), s	0.0	2.0	0.0	0.1	0.0	2.0	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	12.5
HCM 2010 LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1	6	11	176	322	5
Future Volume (veh/h)	1	6	11	176	322	5
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	1	6	11	176	322	5
Adj No. of Lanes	1	1	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	10	9	16	1853	1014	16
Arrive On Green	0.01	0.01	0.01	0.53	0.29	0.29
Sat Flow, veh/h	1757	1568	1757	3597	3625	55
Grp Volume(v), veh/h	1	6	11	176	160	167
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1752	1752	1835
Q Serve(g_s), s	0.0	0.1	0.1	0.4	1.2	1.2
Cycle Q Clear(g_c), s	0.0	0.1	0.1	0.4	1.2	1.2
Prop In Lane	1.00	1.00	1.00			0.03
Lane Grp Cap(c), veh/h	10	9	16	1853	503	527
V/C Ratio(X)	0.10	0.66	0.70	0.09	0.32	0.32
Avail Cap(c_a), veh/h	1534	1369	307	4487	1530	1602
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.5	8.5	8.5	2.0	4.8	4.8
Incr Delay (d2), s/veh	4.1	59.1	43.9	0.0	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.2	0.2	0.6	0.7
LnGrp Delay(d),s/veh	12.6	67.7	52.3	2.0	5.2	5.2
LnGrp LOS	B	E	D	A	A	A
Approach Vol, veh/h	7			187	327	
Approach Delay, s/veh	59.8			5.0	5.2	
Approach LOS	E			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		13.1		4.1	4.2	8.9		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		22.0		15.0	3.0	15.0		
Max Q Clear Time (g_c+I1), s		2.4		2.1	2.1	3.2		
Green Ext Time (p_c), s		2.0		0.0	0.0	1.7		

Intersection Summary	
HCM 2010 Ctrl Delay	5.8
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	16	26	208	32	68	21	57	99	39	93	0
Future Volume (veh/h)	5	16	26	208	32	68	21	57	99	39	93	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	5	16	26	208	32	68	21	57	99	39	93	0
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	7	136	115	277	419	356	28	278	249	49	599	0
Arrive On Green	0.00	0.07	0.07	0.16	0.23	0.23	0.02	0.16	0.16	0.03	0.17	0.00
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	1752	1568	1757	3597	0
Grp Volume(v), veh/h	5	16	26	208	32	68	21	57	99	39	93	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1568	1757	1752	0
Q Serve(g_s), s	0.1	0.2	0.4	3.1	0.4	1.0	0.3	0.8	1.6	0.6	0.6	0.0
Cycle Q Clear(g_c), s	0.1	0.2	0.4	3.1	0.4	1.0	0.3	0.8	1.6	0.6	0.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	7	136	115	277	419	356	28	278	249	49	599	0
V/C Ratio(X)	0.70	0.12	0.23	0.75	0.08	0.19	0.74	0.20	0.40	0.79	0.16	0.00
Avail Cap(c_a), veh/h	192	1006	855	639	1476	1255	192	1020	912	192	2040	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	13.7	11.9	12.0	11.1	8.4	8.6	13.5	10.1	10.4	13.3	9.7	0.0
Incr Delay (d2), s/veh	78.7	0.4	1.0	4.1	0.1	0.3	30.8	0.4	1.0	23.7	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.2	1.8	0.2	0.4	0.4	0.4	0.7	0.6	0.3	0.0
LnGrp Delay(d),s/veh	92.4	12.3	13.0	15.2	8.4	8.8	44.2	10.4	11.4	37.0	9.8	0.0
LnGrp LOS	F	B	B	B	A	A	D	B	B	D	A	
Approach Vol, veh/h		47			308			177			132	
Approach Delay, s/veh		21.2			13.1			15.0			17.8	
Approach LOS		C			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.8	8.4	8.3	6.0	4.4	8.7	4.1	10.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	16.0	10.0	15.0	3.0	16.0	3.0	22.0
Max Q Clear Time (g_c+I1), s	2.6	3.6	5.1	2.4	2.3	2.6	2.1	3.0
Green Ext Time (p_c), s	0.0	0.8	0.3	0.3	0.0	0.8	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	15.1
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	40	133	37	10	9	16	47	14	13	213	12
Future Vol, veh/h	22	40	133	37	10	9	16	47	14	13	213	12
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	22	40	133	37	10	9	16	47	14	13	213	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.8	8.4	8.3	9.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	11%	66%	5%
Vol Thru, %	61%	21%	18%	89%
Vol Right, %	18%	68%	16%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	77	195	56	238
LT Vol	16	22	37	13
Through Vol	47	40	10	213
RT Vol	14	133	9	12
Lane Flow Rate	77	195	56	238
Geometry Grp	1	1	1	1
Degree of Util (X)	0.101	0.237	0.077	0.304
Departure Headway (Hd)	4.743	4.382	4.964	4.599
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	753	819	720	781
Service Time	2.786	2.414	3.006	2.634
HCM Lane V/C Ratio	0.102	0.238	0.078	0.305
HCM Control Delay	8.3	8.8	8.4	9.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.9	0.2	1.3

Intersection	
Intersection Delay, s/veh	20
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	273	23	25	370	35	4	29	8	76	288	19
Future Vol, veh/h	21	273	23	25	370	35	4	29	8	76	288	19
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	21	273	23	25	370	35	4	29	8	76	288	19
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	16.4	22.6	10.9	21.1
HCM LOS	C	C	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	7%	6%	20%
Vol Thru, %	71%	86%	86%	75%
Vol Right, %	20%	7%	8%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	41	317	430	383
LT Vol	4	21	25	76
Through Vol	29	273	370	288
RT Vol	8	23	35	19
Lane Flow Rate	41	317	430	383
Geometry Grp	1	1	1	1
Degree of Util (X)	0.081	0.543	0.714	0.668
Departure Headway (Hd)	7.147	6.168	5.977	6.277
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	499	583	606	578
Service Time	5.219	4.217	4.003	4.3
HCM Lane V/C Ratio	0.082	0.544	0.71	0.663
HCM Control Delay	10.9	16.4	22.6	21.1
HCM Lane LOS	B	C	C	C
HCM 95th-tile Q	0.3	3.2	5.9	5

Intersection	
Intersection Delay, s/veh	15.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	265	9	1	408	5	10	4	1	189	8	136
Future Vol, veh/h	34	265	9	1	408	5	10	4	1	189	8	136
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	4	4	4	4	4	4	3	3	3	3	3	3
Mvmt Flow	34	265	9	1	408	5	10	4	1	189	8	136
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.1	17.8	10.1	15.4
HCM LOS	B	C	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	67%	11%	0%	57%
Vol Thru, %	27%	86%	99%	2%
Vol Right, %	7%	3%	1%	41%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	15	308	414	333
LT Vol	10	34	1	189
Through Vol	4	265	408	8
RT Vol	1	9	5	136
Lane Flow Rate	15	308	414	333
Geometry Grp	1	1	1	1
Degree of Util (X)	0.029	0.488	0.636	0.536
Departure Headway (Hd)	6.906	5.702	5.534	5.791
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	522	628	650	619
Service Time	4.906	3.767	3.593	3.854
HCM Lane V/C Ratio	0.029	0.49	0.637	0.538
HCM Control Delay	10.1	14.1	17.8	15.4
HCM Lane LOS	B	B	C	C
HCM 95th-tile Q	0.1	2.7	4.5	3.2

Intersection	
Intersection Delay, s/veh	67.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	72	118	62	114	189	4	14	148	49	1	558	91
Future Vol, veh/h	72	118	62	114	189	4	14	148	49	1	558	91
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	6	6	6	8	8	8	3	3	3	3	3	3
Mvmt Flow	72	118	62	114	189	4	14	148	49	1	558	91
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	19.4	23.7	16.6	123.7
HCM LOS	C	C	C	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	29%	37%	0%
Vol Thru, %	70%	47%	62%	86%
Vol Right, %	23%	25%	1%	14%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	211	252	307	650
LT Vol	14	72	114	1
Through Vol	148	118	189	558
RT Vol	49	62	4	91
Lane Flow Rate	211	252	307	650
Geometry Grp	1	1	1	1
Degree of Util (X)	0.43	0.52	0.633	1.185
Departure Headway (Hd)	7.811	8.008	7.976	6.562
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	464	454	457	553
Service Time	5.811	6.008	5.976	4.609
HCM Lane V/C Ratio	0.455	0.555	0.672	1.175
HCM Control Delay	16.6	19.4	23.7	123.7
HCM Lane LOS	C	C	C	F
HCM 95th-tile Q	2.1	2.9	4.3	23.1

Intersection	
Intersection Delay, s/veh	20.8
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	84	3	31	0	1	1	18	122	1	1	396	320
Future Vol, veh/h	84	3	31	0	1	1	18	122	1	1	396	320
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	84	3	31	0	1	1	18	122	1	1	396	320
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.2	8.9	9.4	24.8
HCM LOS	B	A	A	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	71%	0%	0%
Vol Thru, %	87%	3%	50%	55%
Vol Right, %	1%	26%	50%	45%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	141	118	2	717
LT Vol	18	84	0	1
Through Vol	122	3	1	396
RT Vol	1	31	1	320
Lane Flow Rate	141	118	2	717
Geometry Grp	1	1	1	1
Degree of Util (X)	0.198	0.189	0.003	0.837
Departure Headway (Hd)	5.05	5.765	5.833	4.202
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	706	617	617	860
Service Time	3.116	3.855	3.833	2.24
HCM Lane V/C Ratio	0.2	0.191	0.003	0.834
HCM Control Delay	9.4	10.2	8.9	24.8
HCM Lane LOS	A	B	A	C
HCM 95th-tile Q	0.7	0.7	0	9.8

Intersection	
Intersection Delay, s/veh	18.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	406	0	73	0	90	156	169	252	0
Future Vol, veh/h	0	0	0	406	0	73	0	90	156	169	252	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	0	406	0	73	0	90	156	169	252	0
Number of Lanes	0	1	0	0	1	0	0	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	0	26	12.9	13.9
HCM LOS	-	D	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	0%	0%	85%	100%	0%
Vol Thru, %	37%	100%	0%	0%	100%
Vol Right, %	63%	0%	15%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	246	0	479	169	252
LT Vol	0	0	406	169	0
Through Vol	90	0	0	0	252
RT Vol	156	0	73	0	0
Lane Flow Rate	246	0	479	169	252
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.401	0	0.773	0.327	0.452
Departure Headway (Hd)	5.866	6.978	5.808	6.969	6.46
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	610	0	623	514	554
Service Time	3.935	4.978	3.861	4.737	4.227
HCM Lane V/C Ratio	0.403	0	0.769	0.329	0.455
HCM Control Delay	12.9	10	26	13.1	14.5
HCM Lane LOS	B	N	D	B	B
HCM 95th-tile Q	1.9	0	7.2	1.4	2.3

Intersection	
Intersection Delay, s/veh	12.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	21	0	16	1	311	0	87	391	0
Future Vol, veh/h	0	0	0	21	0	16	1	311	0	87	391	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	20	20	20	5	5	5	6	6	6
Mvmt Flow	0	0	0	21	0	16	1	311	0	87	391	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	9.2	10.6	13.9
HCM LOS	-	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	57%	18%
Vol Thru, %	100%	100%	0%	82%
Vol Right, %	0%	0%	43%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	312	0	37	478
LT Vol	1	0	21	87
Through Vol	311	0	0	391
RT Vol	0	0	16	0
Lane Flow Rate	312	0	37	478
Geometry Grp	1	1	1	1
Degree of Util (X)	0.398	0	0.06	0.594
Departure Headway (Hd)	4.588	5.758	5.818	4.474
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	786	0	613	808
Service Time	2.614	3.823	3.873	2.499
HCM Lane V/C Ratio	0.397	0	0.06	0.592
HCM Control Delay	10.6	8.8	9.2	13.9
HCM Lane LOS	B	N	A	B
HCM 95th-tile Q	1.9	0	0.2	4

Intersection	
Intersection Delay, s/veh	20.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	141	114	15	229	17	86	117	12	18	347	87
Future Vol, veh/h	36	141	114	15	229	17	86	117	12	18	347	87
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	3	3	3
Mvmt Flow	36	141	114	15	229	17	86	117	12	18	347	87
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	17.2	16.7	15	28.5
HCM LOS	C	C	B	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	40%	12%	6%	4%
Vol Thru, %	54%	48%	88%	77%
Vol Right, %	6%	39%	7%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	215	291	261	452
LT Vol	86	36	15	18
Through Vol	117	141	229	347
RT Vol	12	114	17	87
Lane Flow Rate	215	291	261	452
Geometry Grp	1	1	1	1
Degree of Util (X)	0.416	0.535	0.498	0.784
Departure Headway (Hd)	6.967	6.621	6.867	6.246
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	514	541	522	574
Service Time	5.065	4.712	4.961	4.323
HCM Lane V/C Ratio	0.418	0.538	0.5	0.787
HCM Control Delay	15	17.2	16.7	28.5
HCM Lane LOS	B	C	C	D
HCM 95th-tile Q	2	3.1	2.7	7.4

Intersection	
Int Delay, s/veh	3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	55	98	857	87	203	279
Future Vol, veh/h	55	98	857	87	203	279
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	70	0	-	-	85	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	4	4	3	3	3	3
Mvmt Flow	55	98	857	87	203	279

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1447	472	0	0	944	0
Stage 1	901	-	-	-	-	-
Stage 2	546	-	-	-	-	-
Critical Hdwy	6.88	6.98	-	-	4.16	-
Critical Hdwy Stg 1	5.88	-	-	-	-	-
Critical Hdwy Stg 2	5.88	-	-	-	-	-
Follow-up Hdwy	3.54	3.34	-	-	2.23	-
Pot Cap-1 Maneuver	120	533	-	-	716	-
Stage 1	352	-	-	-	-	-
Stage 2	539	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	86	533	-	-	716	-
Mov Cap-2 Maneuver	207	-	-	-	-	-
Stage 1	352	-	-	-	-	-
Stage 2	386	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.8	0	5.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	207	533	716	-
HCM Lane V/C Ratio	-	-	0.266	0.184	0.284	-
HCM Control Delay (s)	-	-	28.6	13.3	12	-
HCM Lane LOS	-	-	D	B	B	-
HCM 95th %tile Q(veh)	-	-	1	0.7	1.2	-

Intersection	
Int Delay, s/veh	8.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	299	72	94	158	20	64
Future Vol, veh/h	299	72	94	158	20	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	4	4	4	4
Mvmt Flow	299	72	94	158	20	64

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	277	173	0	0	252	0
Stage 1	173	-	-	-	-	-
Stage 2	104	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.14	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.236	-
Pot Cap-1 Maneuver	711	868	-	-	1302	-
Stage 1	855	-	-	-	-	-
Stage 2	918	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	700	868	-	-	1302	-
Mov Cap-2 Maneuver	700	-	-	-	-	-
Stage 1	855	-	-	-	-	-
Stage 2	903	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15	0	1.9
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	727	1302	-
HCM Lane V/C Ratio	-	-	0.51	0.015	-
HCM Control Delay (s)	-	-	15	7.8	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	2.9	0	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	83	858	655	25	14	30
Future Vol, veh/h	83	858	655	25	14	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	190	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	6	6	6	6	3	3
Mvmt Flow	83	858	655	25	14	30

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	680	0	-	0	1692	668
Stage 1	-	-	-	-	668	-
Stage 2	-	-	-	-	1024	-
Critical Hdwy	4.16	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.254	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	894	-	-	-	102	456
Stage 1	-	-	-	-	508	-
Stage 2	-	-	-	-	345	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	894	-	-	-	93	456
Mov Cap-2 Maneuver	-	-	-	-	93	-
Stage 1	-	-	-	-	508	-
Stage 2	-	-	-	-	313	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	27.6
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	894	-	-	-	203
HCM Lane V/C Ratio	0.093	-	-	-	0.217
HCM Control Delay (s)	9.4	-	-	-	27.6
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0.3	-	-	-	0.8

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	1	2	0	2	0	38	6	1	328	4
Future Vol, veh/h	2	0	1	2	0	2	0	38	6	1	328	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	2	0	1	2	0	2	0	38	6	1	328	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	374	376	330	374	375	41	332	0	0	44	0	0
Stage 1	332	332	-	41	41	-	-	-	-	-	-	-
Stage 2	42	44	-	333	334	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	581	554	709	581	554	1027	1222	-	-	1558	-	-
Stage 1	679	643	-	971	859	-	-	-	-	-	-	-
Stage 2	970	856	-	679	641	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	579	553	709	580	553	1027	1222	-	-	1558	-	-
Mov Cap-2 Maneuver	579	553	-	580	553	-	-	-	-	-	-	-
Stage 1	679	642	-	971	859	-	-	-	-	-	-	-
Stage 2	968	856	-	677	640	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.9	9.9	0	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1222	-	-	617	741	1558	-	-
HCM Lane V/C Ratio	-	-	-	0.005	0.005	0.001	-	-
HCM Control Delay (s)	0	-	-	10.9	9.9	7.3	0	-
HCM Lane LOS	A	-	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	744	2	7	745	1	5	0	42	2	4	4
Future Vol, veh/h	4	744	2	7	745	1	5	0	42	2	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	80	-	90	200	-	-	-	-	200	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	3	6	3	3	6	3	3	3	3	3	3	3
Mvmt Flow	4	744	2	7	745	1	5	0	42	2	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	746	0	0	744	0	0	1516	1512	744	1512	1512	746
Stage 1	-	-	-	-	-	-	752	752	-	760	760	-
Stage 2	-	-	-	-	-	-	764	760	-	752	752	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	858	-	-	859	-	-	97	119	413	98	119	412
Stage 1	-	-	-	-	-	-	401	416	-	397	413	-
Stage 2	-	-	-	-	-	-	395	413	-	401	416	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	858	-	-	859	-	-	93	117	413	87	117	412
Mov Cap-2 Maneuver	-	-	-	-	-	-	93	117	-	87	117	-
Stage 1	-	-	-	-	-	-	399	414	-	395	410	-
Stage 2	-	-	-	-	-	-	384	410	-	359	414	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	18	30.7
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	93	413	858	-	-	859	-	-	150
HCM Lane V/C Ratio	0.054	0.102	0.005	-	-	0.008	-	-	0.067
HCM Control Delay (s)	45.9	14.7	9.2	-	-	9.2	-	-	30.7
HCM Lane LOS	E	B	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.2	0.3	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	6.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	41	1	3	3	2	11
Future Vol, veh/h	41	1	3	3	2	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	41	1	3	3	2	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	17	8	13	0	-	0
Stage 1	8	-	-	-	-	-
Stage 2	9	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	998	1071	1599	-	-	-
Stage 1	1012	-	-	-	-	-
Stage 2	1011	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	996	1071	1599	-	-	-
Mov Cap-2 Maneuver	996	-	-	-	-	-
Stage 1	1012	-	-	-	-	-
Stage 2	1009	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	3.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1599	-	998	-	-
HCM Lane V/C Ratio	0.002	-	0.042	-	-
HCM Control Delay (s)	7.3	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	368	0	0	358	1	6	0	1	1	0	2
Future Vol, veh/h	2	368	0	0	358	1	6	0	1	1	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	2	368	0	0	358	1	6	0	1	1	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	359	0	0	368	0	0	732	731	368	732	731	359
Stage 1	-	-	-	-	-	-	372	372	-	359	359	-
Stage 2	-	-	-	-	-	-	360	359	-	373	372	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1194	-	-	1185	-	-	336	348	675	336	348	683
Stage 1	-	-	-	-	-	-	646	617	-	657	625	-
Stage 2	-	-	-	-	-	-	656	625	-	646	617	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1194	-	-	1185	-	-	335	347	675	335	347	683
Mov Cap-2 Maneuver	-	-	-	-	-	-	449	441	-	449	442	-
Stage 1	-	-	-	-	-	-	645	616	-	656	625	-
Stage 2	-	-	-	-	-	-	654	625	-	644	616	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	12.7	11.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	472	1194	-	-	1185	-	-	582
HCM Lane V/C Ratio	0.015	0.002	-	-	-	-	-	0.005
HCM Control Delay (s)	12.7	8	0	-	0	-	-	11.2
HCM Lane LOS	B	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	243	0	0	1	1	443
Future Vol, veh/h	243	0	0	1	1	443
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	243	0	0	1	1	443

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	224	223	444	0	-	0
Stage 1	223	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	762	814	1111	-	-	-
Stage 1	812	-	-	-	-	-
Stage 2	1020	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	762	814	1111	-	-	-
Mov Cap-2 Maneuver	762	-	-	-	-	-
Stage 1	812	-	-	-	-	-
Stage 2	1020	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1111	-	762	-	-
HCM Lane V/C Ratio	-	-	0.319	-	-
HCM Control Delay (s)	0	-	11.9	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	1.4	-	-

Intersection	
Int Delay, s/veh	14.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	525	40	381	659	55	312
Future Vol, veh/h	525	40	381	659	55	312
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	300	250	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	525	40	381	659	55	312

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	525	0	1946	525
Stage 1	-	-	-	-	525	-
Stage 2	-	-	-	-	1421	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1037	-	71	551
Stage 1	-	-	-	-	591	-
Stage 2	-	-	-	-	222	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1037	-	~ 45	551
Mov Cap-2 Maneuver	-	-	-	-	~ 45	-
Stage 1	-	-	-	-	591	-
Stage 2	-	-	-	-	140	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.8	69.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	45	551	-	-	1037	-
HCM Lane V/C Ratio	1.222	0.566	-	-	0.367	-
HCM Control Delay (s)	$ 350.6	19.7	-	-	10.5	-
HCM Lane LOS	F	C	-	-	B	-
HCM 95th %tile Q(veh)	5.2	3.5	-	-	1.7	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	44.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	370	2	15	211	635	287
Future Vol, veh/h	370	2	15	211	635	287
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Free
Storage Length	0	-	-	-	-	90
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	370	2	15	211	635	287

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	876	635	635	0	-	0
Stage 1	635	-	-	-	-	-
Stage 2	241	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	~ 318	477	943	-	-	0
Stage 1	526	-	-	-	-	0
Stage 2	797	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	~ 312	477	943	-	-	-
Mov Cap-2 Maneuver	~ 312	-	-	-	-	-
Stage 1	526	-	-	-	-	-
Stage 2	783	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	148.1	0.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	943	-	313	-
HCM Lane V/C Ratio	0.016	-	1.188	-
HCM Control Delay (s)	8.9	0	148.1	-
HCM Lane LOS	A	A	F	-
HCM 95th %tile Q(veh)	0	-	16.1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	20

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	68	559	76	16	330	1	51	5	0	0	92	243
Future Vol, veh/h	68	559	76	16	330	1	51	5	0	0	92	243
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	350	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3	3	8	3	3	8	3
Mvmt Flow	68	559	76	16	330	1	51	5	0	0	92	243

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	331	0	0	635	0	0	1263	1096	597	1099	1134	331
Stage 1	-	-	-	-	-	-	733	733	-	363	363	-
Stage 2	-	-	-	-	-	-	530	363	-	736	771	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.58	6.23	7.13	6.58	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.58	-	6.13	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.58	-	6.13	5.58	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.072	3.327	3.527	4.072	3.327
Pot Cap-1 Maneuver	1223	-	-	943	-	-	146	208	501	189	197	708
Stage 1	-	-	-	-	-	-	411	418	-	654	614	-
Stage 2	-	-	-	-	-	-	531	614	-	409	401	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1223	-	-	943	-	-	55	193	501	175	183	708
Mov Cap-2 Maneuver	-	-	-	-	-	-	55	193	-	175	183	-
Stage 1	-	-	-	-	-	-	388	395	-	618	604	-
Stage 2	-	-	-	-	-	-	291	604	-	381	379	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0.4	216.4	47.7
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	59	1223	-	-	943	-	-	396
HCM Lane V/C Ratio	0.949	0.056	-	-	0.017	-	-	0.846
HCM Control Delay (s)	216.4	8.1	-	-	8.9	-	-	47.7
HCM Lane LOS	F	A	-	-	A	-	-	E
HCM 95th %tile Q(veh)	4.4	0.2	-	-	0.1	-	-	8

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	159	8	0	236	1	9	46	0	0	92	75
Future Vol, veh/h	11	159	8	0	236	1	9	46	0	0	92	75
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	8	8	8	10	10	10	8	8	8	8	8	8
Mvmt Flow	11	159	8	0	236	1	9	46	0	0	92	75

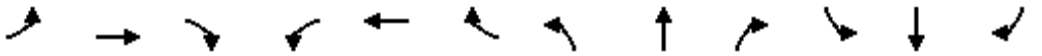
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	237	0	0	-	-	0	505	422	163	445	426	237
Stage 1	-	-	-	-	-	-	185	185	-	237	237	-
Stage 2	-	-	-	-	-	-	320	237	-	208	189	-
Critical Hdwy	4.18	-	-	-	-	-	7.18	6.58	6.28	7.18	6.58	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Follow-up Hdwy	2.272	-	-	-	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	1296	-	-	0	-	-	468	514	866	513	511	787
Stage 1	-	-	-	0	-	-	803	736	-	753	698	-
Stage 2	-	-	-	0	-	-	679	698	-	780	733	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1296	-	-	-	-	-	362	509	866	474	506	787
Mov Cap-2 Maneuver	-	-	-	-	-	-	362	509	-	474	506	-
Stage 1	-	-	-	-	-	-	796	729	-	746	698	-
Stage 2	-	-	-	-	-	-	533	698	-	724	726	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0	13.5	13.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	477	1296	-	-	-	-	603
HCM Lane V/C Ratio	0.115	0.008	-	-	-	-	0.277
HCM Control Delay (s)	13.5	7.8	0	-	-	-	13.2
HCM Lane LOS	B	A	A	-	-	-	B
HCM 95th %tile Q(veh)	0.4	0	-	-	-	-	1.1

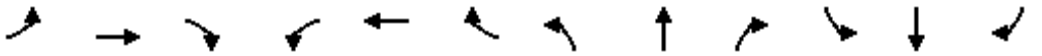
Existing Plus All Projects

AM



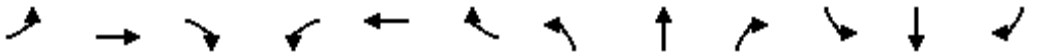
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	644	0	1526	0	0	0	0	1662	522	0	1162	449
Future Volume (vph)	644	0	1526	0	0	0	0	1662	522	0	1162	449
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	4.0		4.0	4.0
Lane Util. Factor	0.97		0.88					0.91	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3367		2733					4988	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3367		2733					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	644	0	1526	0	0	0	0	1662	522	0	1162	449
RTOR Reduction (vph)	0	0	9	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	644	0	1517	0	0	0	0	1662	522	0	1162	449
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot		Perm					NA	Free		NA	Free
Protected Phases	4							2			6	
Permitted Phases			4						Free			Free
Actuated Green, G (s)	44.0		44.0					28.0	80.0		28.0	80.0
Effective Green, g (s)	44.0		44.0					28.0	80.0		28.0	80.0
Actuated g/C Ratio	0.55		0.55					0.35	1.00		0.35	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	1851		1503					1745	1553		1745	1553
v/s Ratio Prot	0.19							c0.33			0.23	
v/s Ratio Perm			c0.56						0.34			0.29
v/c Ratio	0.35		1.01					0.95	0.34		0.67	0.29
Uniform Delay, d1	10.0		18.0					25.4	0.0		22.0	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1		25.5					12.1	0.6		1.0	0.5
Delay (s)	10.1		43.5					37.5	0.6		23.0	0.5
Level of Service	B		D					D	A		C	A
Approach Delay (s)		33.6			0.0			28.7			16.7	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM 2000 Control Delay	27.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



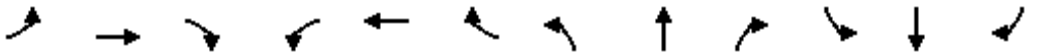
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	136	472	15	198	1041	880	399	1166	167	1306	1393	95
Future Volume (vph)	136	472	15	198	1041	880	399	1166	167	1306	1393	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		0.97	0.95	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	3455		3367	3471	2733	3367	4988	1553	3367	4988	1553
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	3455		3367	3471	2733	3367	4988	1553	3367	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	136	472	15	198	1041	880	399	1166	167	1306	1393	95
RTOR Reduction (vph)	0	2	0	0	0	645	0	0	92	0	0	56
Lane Group Flow (vph)	136	485	0	198	1041	235	399	1166	75	1306	1393	39
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	4.0	21.3		14.7	32.0	32.0	18.7	26.0	26.0	42.0	49.3	49.3
Effective Green, g (s)	4.0	21.3		14.7	32.0	32.0	18.7	26.0	26.0	42.0	49.3	49.3
Actuated g/C Ratio	0.03	0.18		0.12	0.27	0.27	0.16	0.22	0.22	0.35	0.41	0.41
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	112	613		412	925	728	524	1080	336	1178	2049	638
v/s Ratio Prot	c0.04	0.14		0.06	c0.30		0.12	c0.23		c0.39	0.28	
v/s Ratio Perm						0.09			0.05			0.03
v/c Ratio	1.21	0.79		0.48	1.13	0.32	0.76	1.08	0.22	1.11	0.68	0.06
Uniform Delay, d1	58.0	47.2		49.1	44.0	35.3	48.5	47.0	38.7	39.0	28.9	21.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	153.6	6.9		0.9	70.4	0.3	6.5	51.5	0.3	61.3	0.9	0.0
Delay (s)	211.6	54.2		50.0	114.4	35.6	55.0	98.5	39.0	100.3	29.8	21.4
Level of Service	F	D		D	F	D	D	F	D	F	C	C
Approach Delay (s)		88.5			75.7			82.8			62.5	
Approach LOS		F			E			F			E	

Intersection Summary			
HCM 2000 Control Delay	73.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	105.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	284	1367	5	634	27	1263	12	2	20	15	113
Future Volume (vph)	71	284	1367	5	634	27	1263	12	2	20	15	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.97	1.00
Satd. Flow (prot)	1736	3471	1553	1736	3471	1553	1618	1623	1524		1793	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.97	1.00
Satd. Flow (perm)	1736	3471	1553	1736	3471	1553	1618	1623	1524		1793	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	71	284	1367	5	634	27	1263	12	2	20	15	113
RTOR Reduction (vph)	0	0	210	0	0	21	0	0	1	0	0	105
Lane Group Flow (vph)	71	284	1157	5	634	6	631	644	1	0	35	8
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4	2	3	8		2	2		6	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	5.0	28.5	85.5	0.8	24.3	24.3	57.0	57.0	57.0		7.7	7.7
Effective Green, g (s)	5.0	28.5	85.5	0.8	24.3	24.3	57.0	57.0	57.0		7.7	7.7
Actuated g/C Ratio	0.05	0.26	0.78	0.01	0.22	0.22	0.52	0.52	0.52		0.07	0.07
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	78	899	1263	12	766	343	838	841	789		125	109
v/s Ratio Prot	c0.04	0.08	c0.47	0.00	0.18		0.39	0.40			c0.02	
v/s Ratio Perm			0.27			0.00			0.00			0.01
v/c Ratio	0.91	0.32	0.92	0.42	0.83	0.02	0.75	0.77	0.00		0.28	0.07
Uniform Delay, d1	52.3	32.9	9.5	54.4	40.9	33.5	20.9	21.2	12.8		48.5	47.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	72.0	0.2	10.4	21.8	7.3	0.0	3.9	4.2	0.0		1.2	0.3
Delay (s)	124.3	33.1	19.9	76.1	48.2	33.5	24.8	25.4	12.8		49.7	48.1
Level of Service	F	C	B	E	D	C	C	C	B		D	D
Approach Delay (s)		26.4			47.8			25.1			48.5	
Approach LOS		C			D			C			D	

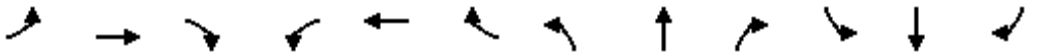
Intersection Summary			
HCM 2000 Control Delay	30.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	101.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	206	32	252	412	55	283	102	291	86	220	34
Future Volume (vph)	26	206	32	252	412	55	283	102	291	86	220	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		0.95	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85		0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00		0.99	
Satd. Flow (prot)	1752	3505	1568	1752	3443		1665	1712	1568		3409	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00		0.99	
Satd. Flow (perm)	1752	3505	1568	1752	3443		1665	1712	1568		3409	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	26	206	32	252	412	55	283	102	291	86	220	34
RTOR Reduction (vph)	0	0	26	0	12	0	0	0	234	0	11	0
Lane Group Flow (vph)	26	206	6	252	455	0	190	195	57	0	329	0
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4						2			
Actuated Green, G (s)	1.8	12.0	12.0	11.2	21.4		12.3	12.3	12.3		11.2	
Effective Green, g (s)	1.8	12.0	12.0	11.2	21.4		12.3	12.3	12.3		11.2	
Actuated g/C Ratio	0.03	0.19	0.19	0.18	0.34		0.20	0.20	0.20		0.18	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	50	670	300	312	1175		326	335	307		608	
v/s Ratio Prot	0.01	0.06		c0.14	c0.13		c0.11	0.11			c0.10	
v/s Ratio Perm			0.00						0.04			
v/c Ratio	0.52	0.31	0.02	0.81	0.39		0.58	0.58	0.19		0.54	
Uniform Delay, d1	30.0	21.8	20.6	24.7	15.7		22.9	22.9	21.0		23.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	9.4	0.3	0.0	14.2	0.2		2.6	2.6	0.3		1.0	
Delay (s)	39.4	22.0	20.6	38.9	15.9		25.5	25.4	21.3		24.4	
Level of Service	D	C	C	D	B		C	C	C		C	
Approach Delay (s)		23.6			23.9			23.7			24.4	
Approach LOS		C			C			C			C	

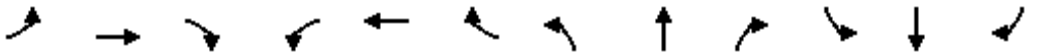
Intersection Summary			
HCM 2000 Control Delay	23.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	62.7	Sum of lost time (s)	20.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



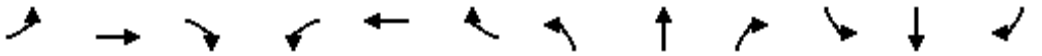
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	346	218	42	684	19	509	48	41	28	144	39
Future Volume (vph)	21	346	218	42	684	19	509	48	41	28	144	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	3.9	3.9	5.5	4.0	4.0	4.3	4.3		5.1	5.1	5.1
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1568	3400	3505	1568	3367	3231		1752	3505	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	3505	1568	3400	3505	1568	3367	3231		1752	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	21	346	218	42	684	19	509	48	41	28	144	39
RTOR Reduction (vph)	0	0	146	0	0	13	0	32	0	0	0	35
Lane Group Flow (vph)	21	346	72	42	684	6	509	57	0	28	144	4
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	3%	3%	3%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		8	8		4	4	
Permitted Phases			6			2						4
Actuated Green, G (s)	1.4	20.5	20.5	2.1	21.1	21.1	14.4	14.4		6.4	6.4	6.4
Effective Green, g (s)	1.4	20.5	20.5	2.1	21.1	21.1	14.4	14.4		6.4	6.4	6.4
Actuated g/C Ratio	0.02	0.33	0.33	0.03	0.34	0.34	0.23	0.23		0.10	0.10	0.10
Clearance Time (s)	5.5	3.9	3.9	5.5	4.0	4.0	4.3	4.3		5.1	5.1	5.1
Vehicle Extension (s)	1.0	4.9	4.9	1.0	4.1	4.1	2.0	2.0		1.0	1.0	1.0
Lane Grp Cap (vph)	39	1155	516	114	1188	531	779	748		180	360	161
v/s Ratio Prot	0.01	0.10		c0.01	c0.20		c0.15	0.02		0.02	c0.04	
v/s Ratio Perm			0.05			0.00						0.00
v/c Ratio	0.54	0.30	0.14	0.37	0.58	0.01	0.65	0.08		0.16	0.40	0.02
Uniform Delay, d1	30.1	15.5	14.7	29.4	16.9	13.6	21.6	18.7		25.4	26.1	25.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	7.0	0.3	0.3	0.7	0.8	0.0	1.5	0.0		0.1	0.3	0.0
Delay (s)	37.1	15.8	14.9	30.1	17.7	13.6	23.2	18.7		25.6	26.4	25.1
Level of Service	D	B	B	C	B	B	C	B		C	C	C
Approach Delay (s)		16.2			18.3			22.5			26.0	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	62.2	Sum of lost time (s)	22.9
Intersection Capacity Utilization	48.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



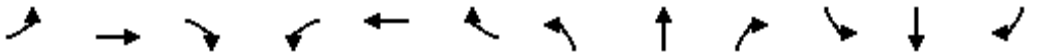
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	1308	0	359	0	811	1227	0	353	363
Future Volume (vph)	0	0	0	1308	0	359	0	811	1227	0	353	363
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.6		4.6		3.5	4.0		5.1	4.0
Lane Util. Factor				0.97		0.88		0.91	1.00		0.91	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3367		2733		4988	1553		4988	1553
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3367		2733		4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	1308	0	359	0	811	1227	0	353	363
RTOR Reduction (vph)	0	0	0	0	0	68	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	1308	0	291	0	811	1227	0	353	363
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type				Prot		Perm		NA	Free		NA	Free
Protected Phases				4				6			2	
Permitted Phases						4			Free			Free
Actuated Green, G (s)				19.4		19.4		10.5	38.0		8.9	38.0
Effective Green, g (s)				19.4		19.4		10.5	38.0		8.9	38.0
Actuated g/C Ratio				0.51		0.51		0.28	1.00		0.23	1.00
Clearance Time (s)				4.6		4.6		3.5			5.1	
Vehicle Extension (s)				1.0		1.0		1.0			1.0	
Lane Grp Cap (vph)				1718		1395		1378	1553		1168	1553
v/s Ratio Prot				0.39				0.16			0.07	
v/s Ratio Perm						0.11			c0.79			0.23
v/c Ratio				0.76		0.21		0.59	0.79		0.30	0.23
Uniform Delay, d1				7.4		5.1		11.9	0.0		12.0	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				1.8		0.0		0.4	4.2		0.1	0.4
Delay (s)				9.3		5.1		12.3	4.2		12.0	0.4
Level of Service				A		A		B	A		B	A
Approach Delay (s)		0.0			8.4			7.4			6.1	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	38.0	Sum of lost time (s)	9.7
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	479	0	1505	0	0	0	0	1844	1180	0	1536	121
Future Volume (vph)	479	0	1505	0	0	0	0	1844	1180	0	1536	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4		6.4					5.1	4.0		4.6	4.0
Lane Util. Factor	0.97		0.88					0.91	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3367		2733					4988	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3367		2733					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	479	0	1505	0	0	0	0	1844	1180	0	1536	121
RTOR Reduction (vph)	0	0	11	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	479	0	1494	0	0	0	0	1844	1180	0	1536	121
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot		Perm					NA	Free		NA	Free
Protected Phases	4							2			6	
Permitted Phases			4						Free			Free
Actuated Green, G (s)	50.6		50.6					37.8	99.9		38.3	99.9
Effective Green, g (s)	50.6		50.6					37.8	99.9		38.3	99.9
Actuated g/C Ratio	0.51		0.51					0.38	1.00		0.38	1.00
Clearance Time (s)	6.4		6.4					5.1			4.6	
Vehicle Extension (s)	1.0		1.0					1.0			1.0	
Lane Grp Cap (vph)	1705		1384					1887	1553		1912	1553
v/s Ratio Prot	0.14							c0.37			0.31	
v/s Ratio Perm			c0.55						0.76			0.08
v/c Ratio	0.28		1.08					0.98	0.76		0.80	0.08
Uniform Delay, d1	14.2		24.7					30.6	0.0		27.4	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0		48.6					15.4	3.6		2.4	0.1
Delay (s)	14.2		73.3					46.1	3.6		29.8	0.1
Level of Service	B		E					D	A		C	A
Approach Delay (s)		59.0			0.0			29.5			27.7	
Approach LOS		E			A			C			C	

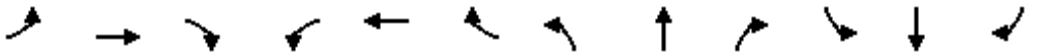
Intersection Summary			
HCM 2000 Control Delay	37.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	99.9	Sum of lost time (s)	11.5
Intersection Capacity Utilization	91.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	676	13	79	1017	34	3	352	34	114	45	237
Future Volume (vph)	81	676	13	79	1017	34	3	352	34	114	45	237
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	3495		1752	3488		1752	1845	1568	1752	1845	1568
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1752	3495		1752	3488		1752	1845	1568	1752	1845	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	81	676	13	79	1017	34	3	352	34	114	45	237
RTOR Reduction (vph)	0	2	0	0	4	0	0	0	25	0	0	159
Lane Group Flow (vph)	81	687	0	79	1047	0	3	352	9	114	45	78
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)	2.9	19.6		3.2	19.9		0.5	16.1	16.1	3.6	19.2	19.2
Effective Green, g (s)	2.9	19.6		3.2	19.9		0.5	16.1	16.1	3.6	19.2	19.2
Actuated g/C Ratio	0.05	0.34		0.05	0.34		0.01	0.28	0.28	0.06	0.33	0.33
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	86	1170		95	1186		14	507	431	107	605	514
v/s Ratio Prot	c0.05	0.20		0.05	c0.30		0.00	c0.19		c0.07	0.02	
v/s Ratio Perm									0.01			c0.05
v/c Ratio	0.94	0.59		0.83	0.88		0.21	0.69	0.02	1.07	0.07	0.15
Uniform Delay, d1	27.7	16.1		27.4	18.2		28.8	19.0	15.5	27.4	13.5	13.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	77.4	0.8		43.3	8.0		7.6	4.1	0.0	105.7	0.1	0.1
Delay (s)	105.1	16.9		70.7	26.2		36.4	23.1	15.5	133.2	13.6	14.0
Level of Service	F	B		E	C		D	C	B	F	B	B
Approach Delay (s)		26.1			29.3			22.5			48.3	
Approach LOS		C			C			C			D	

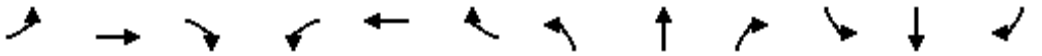
Intersection Summary			
HCM 2000 Control Delay	30.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	58.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



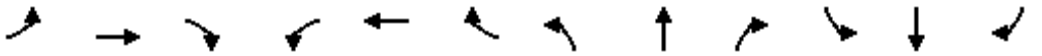
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	1162	0	311	0	679	342	0	701	477
Future Volume (vph)	0	0	0	1162	0	311	0	679	342	0	701	477
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.9			4.8	4.0		4.8	4.0
Lane Util. Factor				0.95	0.95			0.95	1.00		0.95	1.00
Frt				1.00	0.94			1.00	0.85		1.00	0.85
Flt Protected				0.95	0.97			1.00	1.00		1.00	1.00
Satd. Flow (prot)				1649	1578			3471	1553		3471	1553
Flt Permitted				0.95	0.97			1.00	1.00		1.00	1.00
Satd. Flow (perm)				1649	1578			3471	1553		3471	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	1162	0	311	0	679	342	0	701	477
RTOR Reduction (vph)	0	0	0	0	21	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	755	697	0	0	679	342	0	701	477
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type				Prot	NA			NA	Free		NA	Free
Protected Phases				3	8			2			6	
Permitted Phases									Free			Free
Actuated Green, G (s)				30.1	30.1			13.4	52.3		13.4	52.3
Effective Green, g (s)				30.1	30.1			13.4	52.3		13.4	52.3
Actuated g/C Ratio				0.58	0.58			0.26	1.00		0.26	1.00
Clearance Time (s)				4.0	4.9			4.8			4.8	
Vehicle Extension (s)				3.0	1.0			1.0			1.0	
Lane Grp Cap (vph)				949	908			889	1553		889	1553
v/s Ratio Prot				c0.46	0.44			0.20			c0.20	
v/s Ratio Perm									0.22			0.31
v/c Ratio				0.80	0.77			0.76	0.22		0.79	0.31
Uniform Delay, d1				8.7	8.4			18.0	0.0		18.1	0.0
Progression Factor				1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2				4.7	3.6			3.5	0.3		4.3	0.5
Delay (s)				13.4	12.0			21.5	0.3		22.5	0.5
Level of Service				B	B			C	A		C	A
Approach Delay (s)		0.0			12.7			14.4			13.6	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	52.3	Sum of lost time (s)	9.7
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



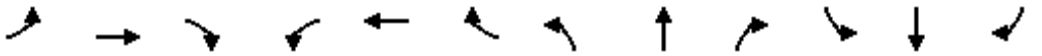
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	276	0	850	0	0	0	0	796	716	0	1626	189
Future Volume (vph)	276	0	850	0	0	0	0	796	716	0	1626	189
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.1	5.1					4.9	4.0		4.8	4.0
Lane Util. Factor	0.95	0.91	0.95					0.91	1.00		0.95	1.00
Frt	1.00	0.86	0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	1649	1424	1475					4988	1553		3471	1553
Flt Permitted	0.95	1.00	1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	1649	1424	1475					4988	1553		3471	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	276	0	850	0	0	0	0	796	716	0	1626	189
RTOR Reduction (vph)	0	18	18	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	248	427	415	0	0	0	0	796	716	0	1626	189
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA	Perm					NA	Free		NA	Free
Protected Phases	7	4						2			6	
Permitted Phases			4						Free			Free
Actuated Green, G (s)	26.1	26.1	25.0					35.6	70.6		35.7	70.6
Effective Green, g (s)	26.1	26.1	25.0					35.6	70.6		35.7	70.6
Actuated g/C Ratio	0.37	0.37	0.35					0.50	1.00		0.51	1.00
Clearance Time (s)	4.0	5.1	5.1					4.9			4.8	
Vehicle Extension (s)	3.0	1.0	1.0					1.0			1.0	
Lane Grp Cap (vph)	609	526	522					2515	1553		1755	1553
v/s Ratio Prot	0.15	c0.30						0.16			c0.47	
v/s Ratio Perm			0.28						0.46			0.12
v/c Ratio	0.41	0.81	0.79					0.32	0.46		0.93	0.12
Uniform Delay, d1	16.5	20.0	20.5					10.3	0.0		16.2	0.0
Progression Factor	1.00	1.00	1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.4	8.8	7.6					0.0	1.0		8.8	0.2
Delay (s)	17.0	28.9	28.1					10.3	1.0		25.0	0.2
Level of Service	B	C	C					B	A		C	A
Approach Delay (s)		26.0			0.0			5.9			22.4	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	70.6	Sum of lost time (s)	10.0
Intersection Capacity Utilization	88.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



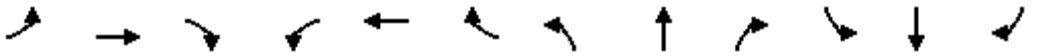
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	777	47	658	25	63	161	545	482	13	105	1229	1151
Future Volume (vph)	777	47	658	25	63	161	545	482	13	105	1229	1151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3	5.3		5.5	5.5	4.7	4.6		4.4	4.8	4.8
Lane Util. Factor	0.95	0.95	1.00		1.00	1.00	1.00	0.91		1.00	0.91	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.96	1.00		0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1649	1662	1553		1819	1568	1736	4968		1736	4988	1553
Flt Permitted	0.95	0.96	1.00		0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1649	1662	1553		1819	1568	1736	4968		1736	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	777	47	658	25	63	161	545	482	13	105	1229	1151
RTOR Reduction (vph)	0	0	274	0	0	155	0	2	0	0	0	459
Lane Group Flow (vph)	412	412	384	0	88	6	545	493	0	105	1229	692
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	4%	4%	4%	4%	4%	4%
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4						2
Actuated Green, G (s)	25.9	25.9	25.9		3.5	3.5	19.3	42.5		8.1	30.8	30.8
Effective Green, g (s)	25.9	25.9	25.9		3.5	3.5	19.3	42.5		8.1	30.8	30.8
Actuated g/C Ratio	0.26	0.26	0.26		0.04	0.04	0.19	0.43		0.08	0.31	0.31
Clearance Time (s)	5.3	5.3	5.3		5.5	5.5	4.7	4.6		4.4	4.8	4.8
Vehicle Extension (s)	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lane Grp Cap (vph)	427	431	403		63	54	335	2115		140	1539	479
v/s Ratio Prot	c0.25	0.25			c0.05		c0.31	0.10		0.06	0.25	
v/s Ratio Perm			0.25			0.00						c0.45
v/c Ratio	0.96	0.96	0.95		1.40	0.10	1.63	0.23		0.75	0.80	1.44
Uniform Delay, d1	36.5	36.4	36.4		48.1	46.6	40.2	18.3		44.9	31.7	34.5
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	34.1	31.7	32.5		250.3	0.3	295.4	0.0		18.0	2.8	211.6
Delay (s)	70.6	68.1	68.8		298.5	46.9	335.7	18.3		62.8	34.4	246.1
Level of Service	E	E	E		F	D	F	B		E	C	F
Approach Delay (s)		69.1			135.8			184.6			133.7	
Approach LOS		E			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	125.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	99.8	Sum of lost time (s)	20.3
Intersection Capacity Utilization	118.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



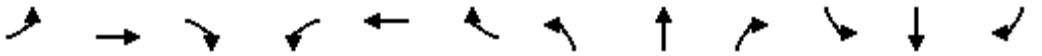
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	1034	0	122	0	862	627	0	867	250
Future Volume (vph)	0	0	0	1034	0	122	0	862	627	0	867	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.8		6.8		4.6	4.0		4.6	4.0
Lane Util. Factor				0.97		1.00		0.91	1.00		0.95	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3400		1568		5036	1568		3505	1568
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3400		1568		5036	1568		3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	1034	0	122	0	862	627	0	867	250
RTOR Reduction (vph)	0	0	0	0	0	35	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	1034	0	87	0	862	627	0	867	250
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				Perm		Perm		NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases				8		8			Free			Free
Actuated Green, G (s)				15.5		15.5		13.7	40.6		13.7	40.6
Effective Green, g (s)				15.5		15.5		13.7	40.6		13.7	40.6
Actuated g/C Ratio				0.38		0.38		0.34	1.00		0.34	1.00
Clearance Time (s)				6.8		6.8		4.6			4.6	
Vehicle Extension (s)				1.0		1.0		1.0			1.0	
Lane Grp Cap (vph)				1298		598		1699	1568		1182	1568
v/s Ratio Prot								0.17			c0.25	
v/s Ratio Perm				c0.30		0.06			0.40			0.16
v/c Ratio				0.80		0.15		0.51	0.40		0.73	0.16
Uniform Delay, d1				11.1		8.2		10.8	0.0		11.8	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				3.3		0.0		0.1	0.8		2.1	0.2
Delay (s)				14.4		8.3		10.8	0.8		13.9	0.2
Level of Service				B		A		B	A		B	A
Approach Delay (s)		0.0			13.8			6.6			10.8	
Approach LOS		A			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	40.6	Sum of lost time (s)	11.4
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



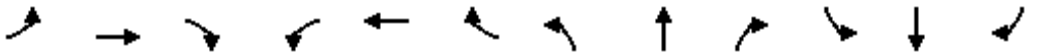
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	360	932	1195	0	0	146	0	1569	9	0	1740	173
Future Volume (vph)	360	932	1195	0	0	146	0	1569	9	0	1740	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0		4.0			4.0	4.0
Lane Util. Factor	0.91	0.86	0.91			0.88		0.86			0.95	1.00
Frt	1.00	0.95	0.85			0.85		1.00			1.00	0.85
Flt Protected	0.95	1.00	1.00			1.00		1.00			1.00	1.00
Satd. Flow (prot)	1595	3002	1427			2733		6340			3505	1568
Flt Permitted	0.95	1.00	1.00			1.00		1.00			1.00	1.00
Satd. Flow (perm)	1595	3002	1427			2733		6340			3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	360	932	1195	0	0	146	0	1569	9	0	1740	173
RTOR Reduction (vph)	0	3	30	0	0	143	0	1	0	0	0	55
Lane Group Flow (vph)	324	1491	639	0	0	3	0	1577	0	0	1740	118
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Turn Type	Split	NA	Perm			Prot		NA			NA	Perm
Protected Phases	4	4				1		2			6	
Permitted Phases			4									6
Actuated Green, G (s)	46.0	46.0	46.0			2.0		40.0			46.0	46.0
Effective Green, g (s)	46.0	46.0	46.0			2.0		40.0			46.0	46.0
Actuated g/C Ratio	0.46	0.46	0.46			0.02		0.40			0.46	0.46
Clearance Time (s)	4.0	4.0	4.0			4.0		4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	733	1380	656			54		2536			1612	721
v/s Ratio Prot	0.20	c0.50				0.00		0.25			c0.50	
v/s Ratio Perm			0.45									0.08
v/c Ratio	0.44	1.08	0.97			0.05		0.62			1.08	0.16
Uniform Delay, d1	18.3	27.0	26.4			48.1		24.0			27.0	15.8
Progression Factor	1.00	1.00	1.00			1.00		1.00			1.00	1.00
Incremental Delay, d2	0.4	49.0	28.6			0.4		0.5			47.2	0.1
Delay (s)	18.7	76.0	55.0			48.5		24.4			74.2	15.9
Level of Service	B	E	E			D		C			E	B
Approach Delay (s)		62.9			48.5			24.4			68.9	
Approach LOS		E			D			C			E	

Intersection Summary			
HCM 2000 Control Delay	54.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	104.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



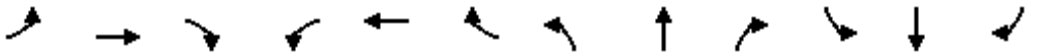
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	355	0	252	0	2154	221	0	1874	1856
Future Volume (vph)	0	0	0	355	0	252	0	2154	221	0	1874	1856
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.5		3.5		4.8	4.0		5.1	4.0
Lane Util. Factor				0.97		0.88		0.91	1.00		0.91	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3303		2682		4988	1553		4988	1553
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3303		2682		4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	355	0	252	0	2154	221	0	1874	1856
RTOR Reduction (vph)	0	0	0	0	0	46	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	355	0	206	0	2154	221	0	1874	1856
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	4%	4%	4%	4%	4%	4%
Turn Type				Prot		Perm		NA	Free		NA	Free
Protected Phases				8				6			2	
Permitted Phases						8			Free			Free
Actuated Green, G (s)				6.5		6.5		20.3	35.1		20.0	35.1
Effective Green, g (s)				6.5		6.5		20.3	35.1		20.0	35.1
Actuated g/C Ratio				0.19		0.19		0.58	1.00		0.57	1.00
Clearance Time (s)				3.5		3.5		4.8			5.1	
Vehicle Extension (s)				1.0		1.0		1.0			1.0	
Lane Grp Cap (vph)				611		496		2884	1553		2842	1553
v/s Ratio Prot				0.11				0.43			0.38	
v/s Ratio Perm						0.08			0.14			c1.20
v/c Ratio				0.58		0.41		0.75	0.14		0.66	1.20
Uniform Delay, d1				13.1		12.6		5.5	0.0		5.2	17.6
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				0.9		0.2		0.9	0.2		0.4	94.4
Delay (s)				14.0		12.8		6.4	0.2		5.6	112.0
Level of Service				B		B		A	A		A	F
Approach Delay (s)		0.0			13.5			5.9			58.5	
Approach LOS		A			B			A			E	

Intersection Summary			
HCM 2000 Control Delay	35.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.58		
Actuated Cycle Length (s)	35.1	Sum of lost time (s)	8.6
Intersection Capacity Utilization	59.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



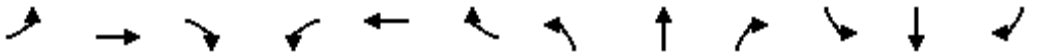
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1310	0	434	0	0	0	0	1072	535	0	2056	172
Future Volume (vph)	1310	0	434	0	0	0	0	1072	535	0	2056	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		3.5					4.8	4.0		5.1	4.0
Lane Util. Factor	0.94		0.88					0.86	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	4894		2733					6285	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	4894		2733					6285	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1310	0	434	0	0	0	0	1072	535	0	2056	172
RTOR Reduction (vph)	0	0	16	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	1310	0	418	0	0	0	0	1072	535	0	2056	172
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	4%	4%	4%	4%	4%	4%
Turn Type	Prot		Perm					NA	Free		NA	Free
Protected Phases	7				8			6			2	
Permitted Phases			4	8					Free			Free
Actuated Green, G (s)	23.1		23.6					34.1	66.0		33.8	66.0
Effective Green, g (s)	23.1		23.6					34.1	66.0		33.8	66.0
Actuated g/C Ratio	0.35		0.36					0.52	1.00		0.51	1.00
Clearance Time (s)	4.0		3.5					4.8			5.1	
Vehicle Extension (s)	3.0		1.0					1.0			1.0	
Lane Grp Cap (vph)	1712		977					3247	1553		2554	1553
v/s Ratio Prot	c0.27							0.17			c0.41	
v/s Ratio Perm			0.15						0.34			0.11
v/c Ratio	0.77		0.43					0.33	0.34		0.81	0.11
Uniform Delay, d1	19.0		16.1					9.3	0.0		13.4	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	2.1		0.1					0.0	0.6		1.8	0.1
Delay (s)	21.1		16.2					9.3	0.6		15.2	0.1
Level of Service	C		B					A	A		B	A
Approach Delay (s)		19.9			0.0			6.4			14.0	
Approach LOS		B			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	13.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	66.0	Sum of lost time (s)	13.1
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



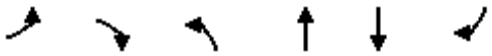
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	724	131	7	0	182	15	8	30	5	7	6	257
Future Volume (vph)	724	131	7	0	182	15	8	30	5	7	6	257
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.9	6.9		6.0			6.1			6.2	5.5
Lane Util. Factor	1.00	1.00	1.00		1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.85		0.99			0.98			1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00			0.99			0.97	1.00
Satd. Flow (prot)	1703	1792	1524		1789			1799			1779	1553
Flt Permitted	0.95	1.00	1.00		1.00			0.99			0.97	1.00
Satd. Flow (perm)	1703	1792	1524		1789			1799			1779	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	724	131	7	0	182	15	8	30	5	7	6	257
RTOR Reduction (vph)	0	0	2	0	3	0	0	4	0	0	0	114
Lane Group Flow (vph)	724	131	5	0	194	0	0	39	0	0	13	143
Heavy Vehicles (%)	6%	6%	6%	5%	5%	5%	3%	3%	3%	4%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	pm+ov
Protected Phases	1	6		5	2		8	8		4	4	1
Permitted Phases			6									4
Actuated Green, G (s)	49.7	68.2	68.2		13.9			2.9			0.9	50.6
Effective Green, g (s)	49.7	68.2	68.2		13.9			2.9			0.9	50.6
Actuated g/C Ratio	0.54	0.75	0.75		0.15			0.03			0.01	0.55
Clearance Time (s)	5.5	6.9	6.9		6.0			6.1			6.2	5.5
Vehicle Extension (s)	1.0	1.0	1.0		1.0			1.0			1.0	1.0
Lane Grp Cap (vph)	928	1340	1139		272			57			17	861
v/s Ratio Prot	c0.43	0.07			c0.11			c0.02			c0.01	0.09
v/s Ratio Perm			0.00									0.00
v/c Ratio	0.78	0.10	0.00		0.71			0.69			0.76	0.17
Uniform Delay, d1	16.4	3.1	2.9		36.8			43.7			45.0	10.0
Progression Factor	1.00	1.00	1.00		1.00			1.00			1.00	1.00
Incremental Delay, d2	4.0	0.0	0.0		7.2			23.9			99.4	0.0
Delay (s)	20.4	3.1	2.9		44.0			67.6			144.4	10.0
Level of Service	C	A	A		D			E			F	A
Approach Delay (s)		17.6			44.0			67.6			16.5	
Approach LOS		B			D			E			B	

Intersection Summary			
HCM 2000 Control Delay	22.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	91.2	Sum of lost time (s)	24.7
Intersection Capacity Utilization	74.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



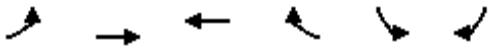
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	228	55	156	380	336	827	0	0	3095	151
Future Volume (vph)	0	0	228	55	156	380	336	827	0	0	3095	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.6		6.2	6.2	4.6	5.0			5.3	5.3
Lane Util. Factor			1.00		1.00	0.88	0.97	0.91			0.86	1.00
Frt			0.86		1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected			1.00		0.99	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)			1596		1769	2682	3303	4893			6166	1524
Flt Permitted			1.00		0.99	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)			1596		1769	2682	3303	4893			6166	1524
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	228	55	156	380	336	827	0	0	3095	151
RTOR Reduction (vph)	0	0	162	0	0	321	0	0	0	0	0	40
Lane Group Flow (vph)	0	0	66	0	211	59	336	827	0	0	3095	111
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type			Over	Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases			1	4	4		1	6			2	
Permitted Phases						4						2
Actuated Green, G (s)			17.3		19.8	19.8	17.3	96.6			74.4	74.4
Effective Green, g (s)			17.3		19.8	19.8	17.3	96.6			74.4	74.4
Actuated g/C Ratio			0.14		0.16	0.16	0.14	0.76			0.58	0.58
Clearance Time (s)			4.6		6.2	6.2	4.6	5.0			5.3	5.3
Vehicle Extension (s)			3.0		3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)			216		274	416	447	3704			3595	888
v/s Ratio Prot			0.04		c0.12		c0.10	0.17			c0.50	
v/s Ratio Perm						0.02						0.07
v/c Ratio			0.31		0.77	0.14	0.75	0.22			0.86	0.12
Uniform Delay, d1			49.7		51.7	46.6	53.1	4.5			22.3	12.0
Progression Factor			1.00		1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2			0.8		12.5	0.2	7.0	0.0			2.3	0.1
Delay (s)			50.6		64.2	46.7	60.1	4.6			24.6	12.0
Level of Service			D		E	D	E	A			C	B
Approach Delay (s)		50.6			53.0			20.6			24.0	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	27.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	127.6	Sum of lost time (s)	16.1
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



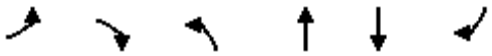
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	977	171	0	0	1085	599
Future Volume (vph)	977	171	0	0	1085	599
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5			4.7	4.0
Lane Util. Factor	0.97	0.91			0.95	1.00
Frt	1.00	0.85			1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00
Satd. Flow (prot)	3306	1386			3406	1524
Flt Permitted	0.95	1.00			1.00	1.00
Satd. Flow (perm)	3306	1386			3406	1524
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	977	171	0	0	1085	599
RTOR Reduction (vph)	3	21	0	0	0	0
Lane Group Flow (vph)	991	133	0	0	1085	599
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%
Turn Type	Prot	Perm			NA	Free
Protected Phases	4				2	
Permitted Phases		4				Free
Actuated Green, G (s)	13.5	13.5			14.1	35.8
Effective Green, g (s)	13.5	13.5			14.1	35.8
Actuated g/C Ratio	0.38	0.38			0.39	1.00
Clearance Time (s)	3.5	3.5			4.7	
Vehicle Extension (s)	1.5	1.5			1.0	
Lane Grp Cap (vph)	1246	522			1341	1524
v/s Ratio Prot	c0.30				c0.32	
v/s Ratio Perm		0.10				0.39
v/c Ratio	0.80	0.25			0.81	0.39
Uniform Delay, d1	9.9	7.7			9.7	0.0
Progression Factor	1.00	1.00			1.00	1.00
Incremental Delay, d2	3.4	0.1			3.5	0.8
Delay (s)	13.3	7.8			13.2	0.8
Level of Service	B	A			B	A
Approach Delay (s)	12.5			0.0	8.7	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	10.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	35.8	Sum of lost time (s)	8.2
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



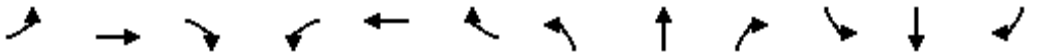
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	293	219	475	106	37	159
Future Volume (vph)	293	219	475	106	37	159
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1671	3343	3343	1495	1752	1568
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1671	3343	3343	1495	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	293	219	475	106	37	159
RTOR Reduction (vph)	0	0	0	77	0	134
Lane Group Flow (vph)	293	219	475	29	37	25
Heavy Vehicles (%)	8%	8%	8%	8%	3%	3%
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	12.5	28.3	11.8	11.8	6.9	6.9
Effective Green, g (s)	12.5	28.3	11.8	11.8	6.9	6.9
Actuated g/C Ratio	0.29	0.66	0.27	0.27	0.16	0.16
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	483	2189	913	408	279	250
v/s Ratio Prot	c0.18	0.07	c0.14		c0.02	
v/s Ratio Perm				0.02		0.02
v/c Ratio	0.61	0.10	0.52	0.07	0.13	0.10
Uniform Delay, d1	13.2	2.7	13.3	11.6	15.6	15.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.2	0.0	0.5	0.1	0.2	0.2
Delay (s)	15.4	2.8	13.8	11.7	15.8	15.7
Level of Service	B	A	B	B	B	B
Approach Delay (s)		10.0	13.5		15.7	
Approach LOS		A	B		B	

Intersection Summary			
HCM 2000 Control Delay	12.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	43.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	13	3	20	506	424	215
Future Volume (vph)	13	3	20	506	424	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3367	1553	1719	3438	3343	1495
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3367	1553	1719	3438	3343	1495
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	13	3	20	506	424	215
RTOR Reduction (vph)	0	3	0	0	0	179
Lane Group Flow (vph)	13	0	20	506	424	36
Heavy Vehicles (%)	4%	4%	5%	5%	8%	8%
Turn Type	Prot	Perm	Prot	NA	NA	Over
Protected Phases	4		5	2	6	4
Permitted Phases		4				
Actuated Green, G (s)	5.4	5.4	0.6	19.1	14.5	5.4
Effective Green, g (s)	5.4	5.4	0.6	19.1	14.5	5.4
Actuated g/C Ratio	0.17	0.17	0.02	0.59	0.45	0.17
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	559	258	31	2020	1491	248
v/s Ratio Prot	0.00		0.01	c0.15	0.13	c0.02
v/s Ratio Perm		0.00				
v/c Ratio	0.02	0.00	0.65	0.25	0.28	0.14
Uniform Delay, d1	11.3	11.3	15.8	3.2	5.7	11.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0	0.0	37.9	0.1	0.1	0.3
Delay (s)	11.4	11.3	53.7	3.3	5.8	11.8
Level of Service	B	B	D	A	A	B
Approach Delay (s)	11.3			5.2	7.8	
Approach LOS	B			A	A	

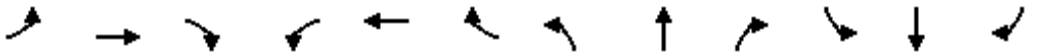
Intersection Summary			
HCM 2000 Control Delay	6.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	32.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	26.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	455	0	661	0	0	0	0	2740	521	0	1790	1584
Future Volume (vph)	455	0	661	0	0	0	0	2740	521	0	1790	1584
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	4.0		4.0	4.0
Lane Util. Factor	0.97		0.88					0.86	1.00		0.86	0.86
Frt	1.00		0.85					1.00	0.85		0.95	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3400		2760					6346	1568		4540	1348
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3400		2760					6346	1568		4540	1348
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	455	0	661	0	0	0	0	2740	521	0	1790	1584
RTOR Reduction (vph)	0	0	24	0	0	0	0	0	0	0	132	0
Lane Group Flow (vph)	455	0	637	0	0	0	0	2740	521	0	2450	792
Turn Type	Prot		Perm					NA	Free		NA	Free
Protected Phases	4							2			6	
Permitted Phases			4						Free			Free
Actuated Green, G (s)	15.8		15.8					36.0	59.8		36.0	59.8
Effective Green, g (s)	15.8		15.8					36.0	59.8		36.0	59.8
Actuated g/C Ratio	0.26		0.26					0.60	1.00		0.60	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	898		729					3820	1568		2733	1348
v/s Ratio Prot	0.13							0.43			c0.54	
v/s Ratio Perm			c0.23						0.33			0.59
v/c Ratio	0.51		0.87					0.72	0.33		0.90	0.59
Uniform Delay, d1	18.7		21.0					8.3	0.0		10.3	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.5		11.3					0.7	0.6		4.3	1.9
Delay (s)	19.1		32.3					9.0	0.6		14.6	1.9
Level of Service	B		C					A	A		B	A
Approach Delay (s)		26.9			0.0			7.6			11.6	
Approach LOS		C			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	12.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	59.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	438	0	1136	0	2071	1120	0	3373	1268
Future Volume (vph)	0	0	0	438	0	1136	0	2071	1120	0	3373	1268
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0		4.0		4.0	4.0		4.0	4.0
Lane Util. Factor				0.97		0.76		0.86	0.86		0.81	0.81
Frt				1.00		0.85		0.98	0.85		0.98	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3400		3575		4643	1348		5872	1270
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3400		3575		4643	1348		5872	1270
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	438	0	1136	0	2071	1120	0	3373	1268
RTOR Reduction (vph)	0	0	0	0	0	22	0	20	0	0	17	0
Lane Group Flow (vph)	0	0	0	438	0	1114	0	2454	717	0	3800	824
Turn Type				Prot		Perm		NA	Free		NA	Free
Protected Phases				8				2			6	
Permitted Phases						8			Free			Free
Actuated Green, G (s)				38.0		38.0		84.0	130.0		84.0	130.0
Effective Green, g (s)				38.0		38.0		84.0	130.0		84.0	130.0
Actuated g/C Ratio				0.29		0.29		0.65	1.00		0.65	1.00
Clearance Time (s)				4.0		4.0		4.0			4.0	
Vehicle Extension (s)				3.0		3.0		3.0			3.0	
Lane Grp Cap (vph)				993		1045		3000	1348		3794	1270
v/s Ratio Prot				0.13				0.53			c0.65	
v/s Ratio Perm						c0.31			0.53			0.65
v/c Ratio				0.44		1.07		0.82	0.53		1.00	0.65
Uniform Delay, d1				37.4		46.0		17.3	0.0		23.0	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				0.3		47.2		1.8	1.5		15.0	2.6
Delay (s)				37.7		93.2		19.1	1.5		38.0	2.6
Level of Service				D		F		B	A		D	A
Approach Delay (s)		0.0			77.8			15.1			31.7	
Approach LOS		A			E			B			C	

Intersection Summary			
HCM 2000 Control Delay	33.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.5%	ICU Level of Service	D
Analysis Period (min)	15		

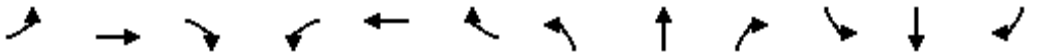
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	570	535	334	709	358	306
Future Volume (vph)	570	535	334	709	358	306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3154	1411	1577	3154	3060	1411
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3154	1411	1577	3154	3060	1411
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	570	535	334	709	358	306
RTOR Reduction (vph)	0	388	0	0	0	238
Lane Group Flow (vph)	570	147	334	709	358	68
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	14.8	14.8	15.1	33.9	12.0	12.0
Effective Green, g (s)	14.8	14.8	15.1	33.9	12.0	12.0
Actuated g/C Ratio	0.27	0.27	0.28	0.63	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	866	387	441	1983	681	314
v/s Ratio Prot	c0.18		c0.21	0.22	c0.12	
v/s Ratio Perm		0.10				0.05
v/c Ratio	0.66	0.38	0.76	0.36	0.53	0.22
Uniform Delay, d1	17.3	15.8	17.7	4.8	18.4	17.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.8	0.6	7.3	0.1	0.7	0.3
Delay (s)	19.1	16.5	25.0	4.9	19.2	17.5
Level of Service	B	B	C	A	B	B
Approach Delay (s)	17.8			11.3	18.4	
Approach LOS	B			B	B	

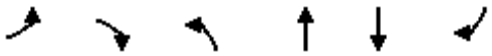
Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	53.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	219	481	0	1	225	33	1	1	0	45	2	455
Future Volume (vph)	219	481	0	1	225	33	1	1	0	45	2	455
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00		0.95	0.95	1.00
Frt	1.00	1.00		1.00	0.98			1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98		0.95	0.96	1.00
Satd. Flow (prot)	1736	3471		1736	3405			1800		1665	1676	1568
Flt Permitted	0.95	1.00		0.95	1.00			0.98		0.95	0.96	1.00
Satd. Flow (perm)	1736	3471		1736	3405			1800		1665	1676	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	219	481	0	1	225	33	1	1	0	45	2	455
RTOR Reduction (vph)	0	0	0	0	15	0	0	0	0	0	0	378
Lane Group Flow (vph)	219	481	0	1	243	0	0	2	0	23	24	77
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases												6
Actuated Green, G (s)	10.8	22.4		0.5	12.1			0.8		8.1	8.1	8.1
Effective Green, g (s)	10.8	22.4		0.5	12.1			0.8		8.1	8.1	8.1
Actuated g/C Ratio	0.23	0.47		0.01	0.25			0.02		0.17	0.17	0.17
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	392	1626		18	861			30		282	284	265
v/s Ratio Prot	c0.13	c0.14		0.00	0.07			c0.00		0.01	0.01	
v/s Ratio Perm												c0.05
v/c Ratio	0.56	0.30		0.06	0.28			0.07		0.08	0.08	0.29
Uniform Delay, d1	16.4	7.8		23.4	14.4			23.1		16.7	16.7	17.3
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2	1.7	0.1		1.3	0.2			0.9		0.1	0.1	0.6
Delay (s)	18.1	7.9		24.7	14.5			24.1		16.8	16.9	18.0
Level of Service	B	A		C	B			C		B	B	B
Approach Delay (s)		11.1			14.6			24.1			17.8	
Approach LOS		B			B			C			B	

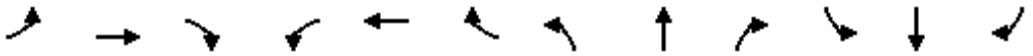
Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	47.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	48.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	392	27	21	881	655	98
Future Volume (vph)	392	27	21	881	655	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	0.98	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1747		1752	1845	1812	
Flt Permitted	0.96		0.95	1.00	1.00	
Satd. Flow (perm)	1747		1752	1845	1812	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	392	27	21	881	655	98
RTOR Reduction (vph)	4	0	0	0	8	0
Lane Group Flow (vph)	415	0	21	881	745	0
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	16.5		0.7	35.1	30.4	
Effective Green, g (s)	16.5		0.7	35.1	30.4	
Actuated g/C Ratio	0.28		0.01	0.59	0.51	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	483		20	1086	924	
v/s Ratio Prot	c0.24		0.01	c0.48	0.41	
v/s Ratio Perm						
v/c Ratio	0.86		1.05	0.81	0.81	
Uniform Delay, d1	20.5		29.4	9.6	12.2	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	14.5		217.8	4.7	5.2	
Delay (s)	34.9		247.2	14.3	17.4	
Level of Service	C		F	B	B	
Approach Delay (s)	34.9			19.8	17.4	
Approach LOS	C			B	B	

Intersection Summary			
HCM 2000 Control Delay	21.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	59.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		

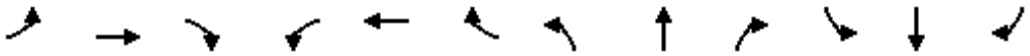
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	178	13	42	107	8	68	20	1384	49	45	547	30
Future Volume (vph)	178	13	42	107	8	68	20	1384	49	45	547	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1845	1568	1752	1845	1568	1752	3487		1752	3478	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1752	1845	1568	1752	1845	1568	1752	3487		1752	3478	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	178	13	42	107	8	68	20	1384	49	45	547	30
RTOR Reduction (vph)	0	0	39	0	0	64	0	3	0	0	4	0
Lane Group Flow (vph)	178	13	3	107	8	4	20	1430	0	45	573	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	9.2	5.6	5.6	7.5	3.9	3.9	1.1	36.3		2.1	37.3	
Effective Green, g (s)	9.2	5.6	5.6	7.5	3.9	3.9	1.1	36.3		2.1	37.3	
Actuated g/C Ratio	0.14	0.08	0.08	0.11	0.06	0.06	0.02	0.54		0.03	0.55	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	238	153	130	194	106	90	28	1875		54	1921	
v/s Ratio Prot	c0.10	c0.01		0.06	0.00		0.01	c0.41		c0.03	0.16	
v/s Ratio Perm			0.00			0.00						
v/c Ratio	0.75	0.08	0.03	0.55	0.08	0.04	0.71	0.76		0.83	0.30	
Uniform Delay, d1	28.0	28.6	28.4	28.4	30.1	30.0	33.0	12.2		32.5	8.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	12.1	0.2	0.1	3.4	0.3	0.2	60.5	1.9		65.0	0.1	
Delay (s)	40.1	28.8	28.5	31.8	30.4	30.2	93.6	14.1		97.5	8.2	
Level of Service	D	C	C	C	C	C	F	B		F	A	
Approach Delay (s)		37.4			31.1			15.2			14.6	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	67.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	3	41	0	4	33	15	1108	0	60	631	65
Future Volume (vph)	47	3	41	0	4	33	15	1108	0	60	631	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00	1.00		1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1845	1568		1845	1568	1752	3505		1752	3456	
Flt Permitted	0.95	1.00	1.00		1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1752	1845	1568		1845	1568	1752	3505		1752	3456	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	47	3	41	0	4	33	15	1108	0	60	631	65
RTOR Reduction (vph)	0	0	35	0	0	32	0	0	0	0	8	0
Lane Group Flow (vph)	47	3	6	0	4	1	15	1108	0	60	688	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	1.0	6.9	6.9		1.9	1.9	0.5	26.6		2.2	28.3	
Effective Green, g (s)	1.0	6.9	6.9		1.9	1.9	0.5	26.6		2.2	28.3	
Actuated g/C Ratio	0.02	0.14	0.14		0.04	0.04	0.01	0.56		0.05	0.59	
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	36	266	226		73	62	18	1954		80	2050	
v/s Ratio Prot	c0.03	0.00			0.00		0.01	c0.32		c0.03	0.20	
v/s Ratio Perm			c0.00			0.00						
v/c Ratio	1.31	0.01	0.03		0.05	0.02	0.83	0.57		0.75	0.34	
Uniform Delay, d1	23.4	17.5	17.5		22.0	22.0	23.6	6.8		22.5	4.9	
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	253.4	0.0	0.0		0.3	0.1	131.9	0.4		32.0	0.1	
Delay (s)	276.8	17.5	17.6		22.4	22.1	155.5	7.2		54.5	5.0	
Level of Service	F	B	B		C	C	F	A		D	A	
Approach Delay (s)		151.4			22.2			9.2			9.0	
Approach LOS		F			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	15.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	47.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		

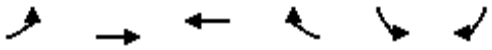
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	635	23	33	552	99	124
Future Volume (vph)	635	23	33	552	99	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3486		1752	3505	1752	1568
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3486		1752	3505	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	635	23	33	552	99	124
RTOR Reduction (vph)	4	0	0	0	0	102
Lane Group Flow (vph)	654	0	33	552	99	22
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases						2
Actuated Green, G (s)	16.9		0.6	21.5	6.2	6.2
Effective Green, g (s)	16.9		0.6	21.5	6.2	6.2
Actuated g/C Ratio	0.47		0.02	0.60	0.17	0.17
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1650		29	2110	304	272
v/s Ratio Prot	c0.19		c0.02	0.16	c0.06	
v/s Ratio Perm						0.01
v/c Ratio	0.40		1.14	0.26	0.33	0.08
Uniform Delay, d1	6.1		17.6	3.4	12.9	12.4
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2		212.0	0.1	0.6	0.1
Delay (s)	6.3		229.5	3.4	13.5	12.5
Level of Service	A		F	A	B	B
Approach Delay (s)	6.3			16.2	13.0	
Approach LOS	A			B	B	

Intersection Summary			
HCM 2000 Control Delay	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	35.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	37.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	264	511	423	432	161	77
Future Volume (vph)	264	511	423	432	161	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1752	1845	3505	1568	1752	1568
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1752	1845	3505	1568	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	264	511	423	432	161	77
RTOR Reduction (vph)	0	0	0	314	0	60
Lane Group Flow (vph)	264	511	423	118	161	17
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	10.3	26.3	12.0	12.0	9.5	9.5
Effective Green, g (s)	10.3	26.3	12.0	12.0	9.5	9.5
Actuated g/C Ratio	0.24	0.60	0.27	0.27	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	412	1107	960	429	380	340
v/s Ratio Prot	c0.15	c0.28	0.12		c0.09	
v/s Ratio Perm				0.08		0.01
v/c Ratio	0.64	0.46	0.44	0.28	0.42	0.05
Uniform Delay, d1	15.1	4.8	13.1	12.5	14.8	13.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.4	0.3	0.3	0.4	0.8	0.1
Delay (s)	18.5	5.1	13.5	12.8	15.6	13.6
Level of Service	B	A	B	B	B	B
Approach Delay (s)		9.7	13.1		14.9	
Approach LOS		A	B		B	

Intersection Summary			
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	43.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		

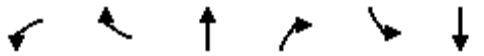
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2435	24	19	2049	105	58
Future Volume (vph)	2435	24	19	2049	105	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3500		1752	3505	1752	1568
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3500		1752	3505	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2435	24	19	2049	105	58
RTOR Reduction (vph)	1	0	0	0	0	48
Lane Group Flow (vph)	2458	0	19	2049	105	10
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases						2
Actuated Green, G (s)	69.3		1.1	74.4	10.7	10.7
Effective Green, g (s)	69.3		1.1	74.4	10.7	10.7
Actuated g/C Ratio	0.74		0.01	0.80	0.11	0.11
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2605		20	2800	201	180
v/s Ratio Prot	c0.70		0.01	c0.58	c0.06	
v/s Ratio Perm						0.01
v/c Ratio	0.94		0.95	0.73	0.52	0.06
Uniform Delay, d1	10.2		46.0	4.5	38.8	36.7
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	8.0		175.6	1.0	2.4	0.1
Delay (s)	18.2		221.6	5.5	41.2	36.8
Level of Service	B		F	A	D	D
Approach Delay (s)	18.2			7.5	39.7	
Approach LOS	B			A	D	

Intersection Summary			
HCM 2000 Control Delay	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	93.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.6%	ICU Level of Service	D
Analysis Period (min)	15		

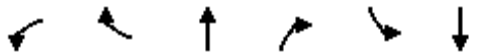
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	49	70	1297	37	54	1038
Future Volume (vph)	49	70	1297	37	54	1038
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.95		0.97	0.95
Frt	1.00	0.85	1.00		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	1568	3490		3400	3505
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	1568	3490		3400	3505
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	49	70	1297	37	54	1038
RTOR Reduction (vph)	0	64	2	0	0	0
Lane Group Flow (vph)	49	6	1332	0	54	1038
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Actuated Green, G (s)	4.4	4.4	32.5		1.1	37.6
Effective Green, g (s)	4.4	4.4	32.5		1.1	37.6
Actuated g/C Ratio	0.09	0.09	0.65		0.02	0.75
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	154	137	2268		74	2635
v/s Ratio Prot	c0.03		c0.38		0.02	c0.30
v/s Ratio Perm		0.00				
v/c Ratio	0.32	0.04	0.59		0.73	0.39
Uniform Delay, d1	21.4	20.9	5.0		24.3	2.2
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.2	0.1	0.4		29.9	0.4
Delay (s)	22.6	21.0	5.3		54.2	2.6
Level of Service	C	C	A		D	A
Approach Delay (s)	21.7		5.3			5.2
Approach LOS	C		A			A

Intersection Summary			
HCM 2000 Control Delay	6.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	50	0	2335	102	0	1492
Future Volume (vph)	50	0	2335	102	0	1492
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.91			0.95
Frt	1.00		0.99			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	1752		5004			3505
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	1752		5004			3505
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	0	2335	102	0	1492
RTOR Reduction (vph)	0	0	3	0	0	0
Lane Group Flow (vph)	50	0	2434	0	0	1492
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Actuated Green, G (s)	3.1		45.7			45.7
Effective Green, g (s)	3.1		45.7			45.7
Actuated g/C Ratio	0.05		0.80			0.80
Clearance Time (s)	4.0		4.0			4.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	95		4026			2820
v/s Ratio Prot	c0.03		c0.49			0.43
v/s Ratio Perm						
v/c Ratio	0.53		0.60			0.53
Uniform Delay, d1	26.1		2.1			1.9
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	5.2		0.3			0.2
Delay (s)	31.3		2.4			2.1
Level of Service	C		A			A
Approach Delay (s)	31.3		2.4			2.1
Approach LOS	C		A			A

Intersection Summary			
HCM 2000 Control Delay	2.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	56.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

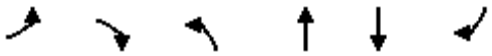
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	186	342	1781	370	865	255
Future Volume (vph)	186	342	1781	370	865	255
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.91		1.00	0.91
Frt	1.00	0.85	0.97		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	1568	4906		1752	5036
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	1568	4906		1752	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	186	342	1781	370	865	255
RTOR Reduction (vph)	0	265	32	0	0	0
Lane Group Flow (vph)	186	77	2119	0	865	255
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		3				
Actuated Green, G (s)	8.0	8.0	39.0		41.0	84.0
Effective Green, g (s)	8.0	8.0	39.0		41.0	84.0
Actuated g/C Ratio	0.08	0.08	0.39		0.41	0.84
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	140	125	1913		718	4230
v/s Ratio Prot	c0.11		c0.43		c0.49	0.05
v/s Ratio Perm		0.05				
v/c Ratio	1.33	0.62	1.11		1.20	0.06
Uniform Delay, d1	46.0	44.5	30.5		29.5	1.3
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	188.6	8.7	56.8		105.1	0.0
Delay (s)	234.6	53.2	87.3		134.6	1.4
Level of Service	F	D	F		F	A
Approach Delay (s)	117.1		87.3			104.2
Approach LOS	F		F			F

Intersection Summary			
HCM 2000 Control Delay	96.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	110.9%	ICU Level of Service	H
Analysis Period (min)	15		

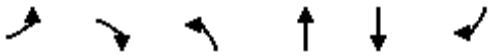
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	141	63	63	1735	240	82
Future Volume (vph)	141	63	63	1735	240	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	
Frt	1.00	0.85	1.00	1.00	0.96	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1568	1752	5036	4844	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1752	1568	1752	5036	4844	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	141	63	63	1735	240	82
RTOR Reduction (vph)	0	52	0	0	41	0
Lane Group Flow (vph)	141	11	63	1735	281	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	7.1	7.1	1.8	26.8	21.0	
Effective Green, g (s)	7.1	7.1	1.8	26.8	21.0	
Actuated g/C Ratio	0.17	0.17	0.04	0.64	0.50	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	296	265	75	3221	2427	
v/s Ratio Prot	c0.08		0.04	c0.34	0.06	
v/s Ratio Perm		0.01				
v/c Ratio	0.48	0.04	0.84	0.54	0.12	
Uniform Delay, d1	15.7	14.6	19.9	4.2	5.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.2	0.1	52.9	0.2	0.0	
Delay (s)	16.9	14.6	72.8	4.3	5.6	
Level of Service	B	B	E	A	A	
Approach Delay (s)	16.2			6.7	5.6	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	41.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		

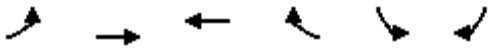
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	109	128	384	784	498	369
Future Volume (vph)	109	128	384	784	498	369
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	0.94	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1568	1752	3505	3281	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1752	1568	1752	3505	3281	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	109	128	384	784	498	369
RTOR Reduction (vph)	0	110	0	0	211	0
Lane Group Flow (vph)	109	18	384	784	656	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	6.8	6.8	14.9	34.0	15.1	
Effective Green, g (s)	6.8	6.8	14.9	34.0	15.1	
Actuated g/C Ratio	0.14	0.14	0.31	0.70	0.31	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	244	218	534	2442	1015	
v/s Ratio Prot	c0.06		c0.22	0.22	c0.20	
v/s Ratio Perm		0.01				
v/c Ratio	0.45	0.08	0.72	0.32	0.65	
Uniform Delay, d1	19.3	18.3	15.1	2.9	14.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.3	0.2	4.6	0.1	1.4	
Delay (s)	20.6	18.4	19.7	3.0	16.0	
Level of Service	C	B	B	A	B	
Approach Delay (s)	19.4			8.5	16.0	
Approach LOS	B			A	B	

Intersection Summary			
HCM 2000 Control Delay	12.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	48.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		

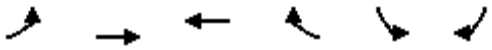
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	357	470	310	100	7	0
Future Volume (vph)	357	470	310	100	7	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	1.00	0.85	1.00	
Flt Protected	0.95	1.00	1.00	1.00	0.95	
Satd. Flow (prot)	1752	1845	1845	1568	1752	
Flt Permitted	0.95	1.00	1.00	1.00	0.95	
Satd. Flow (perm)	1752	1845	1845	1568	1752	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	357	470	310	100	7	0
RTOR Reduction (vph)	0	0	0	72	0	0
Lane Group Flow (vph)	357	470	310	28	7	0
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	13.9	30.2	12.3	12.3	5.8	
Effective Green, g (s)	13.9	30.2	12.3	12.3	5.8	
Actuated g/C Ratio	0.32	0.69	0.28	0.28	0.13	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	553	1266	515	438	230	
v/s Ratio Prot	c0.20	0.25	c0.17		c0.00	
v/s Ratio Perm				0.02		
v/c Ratio	0.65	0.37	0.60	0.06	0.03	
Uniform Delay, d1	12.9	2.9	13.7	11.6	16.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.6	0.2	2.0	0.1	0.1	
Delay (s)	15.5	3.1	15.7	11.7	16.7	
Level of Service	B	A	B	B	B	
Approach Delay (s)		8.5	14.7		16.7	
Approach LOS		A	B		B	

Intersection Summary			
HCM 2000 Control Delay	10.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	44.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		

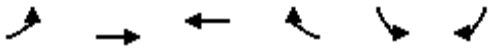
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	801	1052	1727	102	37	391
Future Volume (vph)	801	1052	1727	102	37	391
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	0.95	0.91		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3400	3505	4994		1752	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3400	3505	4994		1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	801	1052	1727	102	37	391
RTOR Reduction (vph)	0	0	7	0	0	343
Lane Group Flow (vph)	801	1052	1822	0	37	48
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	20.2	54.4	30.2		8.8	8.8
Effective Green, g (s)	20.2	54.4	30.2		8.8	8.8
Actuated g/C Ratio	0.28	0.76	0.42		0.12	0.12
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	964	2677	2118		216	193
v/s Ratio Prot	c0.24	0.30	c0.36		0.02	
v/s Ratio Perm						c0.03
v/c Ratio	0.83	0.39	0.86		0.17	0.25
Uniform Delay, d1	23.9	2.8	18.6		27.9	28.2
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	6.2	0.1	3.8		0.4	0.7
Delay (s)	30.1	2.9	22.4		28.3	28.9
Level of Service	C	A	C		C	C
Approach Delay (s)		14.7	22.4		28.9	
Approach LOS		B	C		C	

Intersection Summary			
HCM 2000 Control Delay	19.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	71.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		

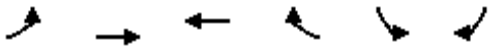
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	140	683	1606	40	47	149
Future Volume (vph)	140	683	1606	40	47	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3400	3505	3505	1568	3400	1568
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3400	3505	3505	1568	3400	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	140	683	1606	40	47	149
RTOR Reduction (vph)	0	0	0	16	0	129
Lane Group Flow (vph)	140	683	1606	24	47	20
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	3.1	37.3	30.2	30.2	5.5	5.5
Effective Green, g (s)	3.1	37.3	30.2	30.2	5.5	5.5
Actuated g/C Ratio	0.06	0.73	0.59	0.59	0.11	0.11
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	207	2573	2083	932	368	169
v/s Ratio Prot	c0.04	0.19	c0.46		c0.01	
v/s Ratio Perm				0.02		0.01
v/c Ratio	0.68	0.27	0.77	0.03	0.13	0.12
Uniform Delay, d1	23.4	2.2	7.7	4.2	20.5	20.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.4	0.1	1.8	0.0	0.2	0.3
Delay (s)	31.8	2.3	9.5	4.3	20.6	20.8
Level of Service	C	A	A	A	C	C
Approach Delay (s)		7.3	9.4		20.7	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	50.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	105	652	1350	9	29	211
Future Volume (vph)	105	652	1350	9	29	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3501		1752	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3501		1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	105	652	1350	9	29	211
RTOR Reduction (vph)	0	0	0	0	0	181
Lane Group Flow (vph)	105	652	1359	0	29	30
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	4.7	35.6	26.9		7.1	7.1
Effective Green, g (s)	4.7	35.6	26.9		7.1	7.1
Actuated g/C Ratio	0.09	0.70	0.53		0.14	0.14
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	162	2461	1857		245	219
v/s Ratio Prot	c0.06	0.19	c0.39		0.02	
v/s Ratio Perm						c0.02
v/c Ratio	0.65	0.26	0.73		0.12	0.13
Uniform Delay, d1	22.2	2.8	9.1		19.1	19.1
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	8.6	0.1	1.5		0.2	0.3
Delay (s)	30.8	2.8	10.6		19.3	19.4
Level of Service	C	A	B		B	B
Approach Delay (s)		6.7	10.6		19.4	
Approach LOS		A	B		B	

Intersection Summary			
HCM 2000 Control Delay	10.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	50.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	562	161	243	767	187	370
Future Volume (vph)	562	161	243	767	187	370
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3505	1568	3400	3505	3400	1568
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3505	1568	3400	3505	3400	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	562	161	243	767	187	370
RTOR Reduction (vph)	0	109	0	0	0	209
Lane Group Flow (vph)	562	52	243	767	187	161
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	11.4	11.4	3.1	18.5	9.0	9.0
Effective Green, g (s)	11.4	11.4	3.1	18.5	9.0	9.0
Actuated g/C Ratio	0.32	0.32	0.09	0.52	0.25	0.25
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1125	503	296	1826	861	397
v/s Ratio Prot	0.16		c0.07	c0.22	0.06	
v/s Ratio Perm		0.03				c0.10
v/c Ratio	0.50	0.10	0.82	0.42	0.22	0.41
Uniform Delay, d1	9.7	8.5	15.9	5.2	10.5	11.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.1	16.5	0.2	0.1	0.7
Delay (s)	10.1	8.5	32.4	5.4	10.6	11.7
Level of Service	B	A	C	A	B	B
Approach Delay (s)	9.8			11.9	11.3	
Approach LOS	A			B	B	

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	35.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	932	0	215	1010	0	60
Future Volume (vph)	932	0	215	1010	0	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0		4.0
Lane Util. Factor	0.95		1.00	0.95		1.00
Frt	1.00		1.00	1.00		0.85
Flt Protected	1.00		0.95	1.00		1.00
Satd. Flow (prot)	3505		1752	3505		1568
Flt Permitted	1.00		0.95	1.00		1.00
Satd. Flow (perm)	3505		1752	3505		1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	932	0	215	1010	0	60
RTOR Reduction (vph)	0	0	0	0	0	56
Lane Group Flow (vph)	932	0	215	1010	0	4
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases						2
Actuated Green, G (s)	21.1		10.3	35.4		3.0
Effective Green, g (s)	21.1		10.3	35.4		3.0
Actuated g/C Ratio	0.45		0.22	0.76		0.06
Clearance Time (s)	4.0		4.0	4.0		4.0
Vehicle Extension (s)	3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	1593		388	2674		101
v/s Ratio Prot	c0.27		c0.12	0.29		
v/s Ratio Perm						c0.00
v/c Ratio	0.59		0.55	0.38		0.04
Uniform Delay, d1	9.4		16.0	1.8		20.3
Progression Factor	1.00		1.00	1.00		1.00
Incremental Delay, d2	0.6		1.7	0.1		0.2
Delay (s)	10.0		17.7	1.9		20.5
Level of Service	A		B	A		C
Approach Delay (s)	10.0			4.7	20.5	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	46.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	0	223	311	478	552	0	1372	980	0	1550	278
Future Volume (veh/h)	96	0	223	311	478	552	0	1372	980	0	1550	278
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1827	1827	1827	0	1827	1827	0	1827	1827
Adj Flow Rate, veh/h	96	0	223	311	754	368	0	1372	0	0	1550	278
Adj No. of Lanes	0	1	2	2	2	1	0	3	1	0	4	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	0	4	4	0	4	4
Cap, veh/h	225	0	354	977	1025	436	0	1861	580	0	2346	580
Arrive On Green	0.13	0.00	0.13	0.28	0.28	0.28	0.00	0.37	0.00	0.00	0.37	0.37
Sat Flow, veh/h	1757	0	2760	3480	3654	1553	0	5152	1553	0	6540	1553
Grp Volume(v), veh/h	96	0	223	311	754	368	0	1372	0	0	1550	278
Grp Sat Flow(s),veh/h/ln	1757	0	1380	1740	1827	1553	0	1663	1553	0	1571	1553
Q Serve(g_s), s	2.8	0.0	4.2	3.9	10.3	12.3	0.0	13.1	0.0	0.0	11.3	7.5
Cycle Q Clear(g_c), s	2.8	0.0	4.2	3.9	10.3	12.3	0.0	13.1	0.0	0.0	11.3	7.5
Prop In Lane	1.00		1.00	1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	225	0	354	977	1025	436	0	1861	580	0	2346	580
V/C Ratio(X)	0.43	0.00	0.63	0.32	0.74	0.84	0.00	0.74	0.00	0.00	0.66	0.48
Avail Cap(c_a), veh/h	510	0	802	1011	1062	451	0	1902	592	0	2397	592
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	22.1	0.0	22.8	15.6	18.0	18.7	0.0	14.9	0.0	0.0	14.4	13.2
Incr Delay (d2), s/veh	1.3	0.0	1.9	0.2	2.6	13.4	0.0	1.5	0.0	0.0	0.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	1.7	1.9	5.5	6.8	0.0	6.2	0.0	0.0	5.0	3.3
LnGrp Delay(d),s/veh	23.4	0.0	24.6	15.8	20.6	32.0	0.0	16.4	0.0	0.0	15.0	13.8
LnGrp LOS	C		C	B	C	C		B			B	B
Approach Vol, veh/h		319			1433			1372			1828	
Approach Delay, s/veh		24.3			22.5			16.4			14.8	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		24.6		11.1		24.6		19.5
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		21.0		16.0		21.0		16.0
Max Q Clear Time (g_c+I1), s		15.1		6.2		13.3		14.3
Green Ext Time (p_c), s		5.5		0.9		7.0		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	18.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	355	31	142	10	84	26	152	1470	19	16	812	131
Future Volume (veh/h)	355	31	142	10	84	26	152	1470	19	16	812	131
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1827	1900	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	377	0	142	10	84	26	152	1470	19	16	812	131
Adj No. of Lanes	2	0	1	0	1	0	2	3	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	4	4	4	4	4	4
Cap, veh/h	611	0	273	13	112	35	252	1982	26	28	1152	515
Arrive On Green	0.17	0.00	0.17	0.09	0.09	0.09	0.07	0.39	0.39	0.02	0.33	0.33
Sat Flow, veh/h	3514	0	1568	146	1227	380	3375	5075	66	1740	3471	1553
Grp Volume(v), veh/h	377	0	142	120	0	0	152	963	526	16	812	131
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1753	0	0	1688	1663	1815	1740	1736	1553
Q Serve(g_s), s	4.8	0.0	4.0	3.3	0.0	0.0	2.1	12.1	12.1	0.4	9.9	3.0
Cycle Q Clear(g_c), s	4.8	0.0	4.0	3.3	0.0	0.0	2.1	12.1	12.1	0.4	9.9	3.0
Prop In Lane	1.00		1.00	0.08		0.22	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	611	0	273	160	0	0	252	1298	709	28	1152	515
V/C Ratio(X)	0.62	0.00	0.52	0.75	0.00	0.00	0.60	0.74	0.74	0.58	0.71	0.25
Avail Cap(c_a), veh/h	1154	0	515	576	0	0	347	1570	857	143	1568	701
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.6	0.0	18.3	21.6	0.0	0.0	21.8	12.7	12.7	23.8	14.2	11.9
Incr Delay (d2), s/veh	1.0	0.0	1.5	7.0	0.0	0.0	2.3	1.5	2.8	17.4	0.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	1.9	1.9	0.0	0.0	1.1	5.8	6.5	0.3	4.9	1.3
LnGrp Delay(d),s/veh	19.6	0.0	19.8	28.6	0.0	0.0	24.1	14.3	15.5	41.2	15.1	12.1
LnGrp LOS	B		B	C			C	B	B	D	B	B
Approach Vol, veh/h		519			120			1641			959	
Approach Delay, s/veh		19.7			28.6			15.6			15.1	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.8	23.0		12.5	7.6	20.2		8.4
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	23.0		16.0	5.0	22.0		16.0
Max Q Clear Time (g_c+I1), s	2.4	14.1		6.8	4.1	11.9		5.3
Green Ext Time (p_c), s	0.8	4.9		1.6	0.0	3.5		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	16.6
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	216	726	37	67	632	425	100	1120	148	248	469	68
Future Volume (veh/h)	216	726	37	67	632	425	100	1120	148	248	469	68
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	216	726	37	67	632	425	100	1120	148	248	469	68
Adj No. of Lanes	1	2	0	1	2	1	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	242	981	50	85	701	314	163	1157	153	295	1437	643
Arrive On Green	0.14	0.29	0.29	0.05	0.20	0.20	0.05	0.38	0.38	0.09	0.41	0.41
Sat Flow, veh/h	1757	3394	173	1757	3505	1568	3375	3084	407	3375	3471	1553
Grp Volume(v), veh/h	216	375	388	67	632	425	100	629	639	248	469	68
Grp Sat Flow(s),veh/h/ln	1757	1752	1814	1757	1752	1568	1688	1736	1755	1688	1736	1553
Q Serve(g_s), s	9.7	15.5	15.5	3.0	14.1	16.0	2.3	28.4	28.6	5.8	7.3	2.1
Cycle Q Clear(g_c), s	9.7	15.5	15.5	3.0	14.1	16.0	2.3	28.4	28.6	5.8	7.3	2.1
Prop In Lane	1.00		0.10	1.00		1.00	1.00		0.23	1.00		1.00
Lane Grp Cap(c), veh/h	242	506	524	85	701	314	163	651	658	295	1437	643
V/C Ratio(X)	0.89	0.74	0.74	0.79	0.90	1.36	0.61	0.97	0.97	0.84	0.33	0.11
Avail Cap(c_a), veh/h	242	506	524	110	701	314	211	651	658	295	1437	643
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.9	25.7	25.7	37.6	31.2	32.0	37.3	24.5	24.6	35.9	15.9	14.4
Incr Delay (d2), s/veh	31.6	5.7	5.6	24.0	14.9	179.4	3.7	27.1	27.7	18.9	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	8.3	8.6	2.0	8.2	22.5	1.2	18.4	18.9	3.5	3.5	0.9
LnGrp Delay(d),s/veh	65.5	31.4	31.3	61.7	46.1	211.4	41.0	51.7	52.3	54.9	16.0	14.4
LnGrp LOS	E	C	C	E	D	F	D	D	D	D	B	B
Approach Vol, veh/h		979			1124			1368			785	
Approach Delay, s/veh		38.9			109.5			51.2			28.2	
Approach LOS		D			F			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	34.0	7.9	27.1	7.9	37.1	15.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	30.0	5.0	22.0	5.0	32.0	11.0	16.0
Max Q Clear Time (g_c+I1), s	7.8	30.6	5.0	17.5	4.3	9.3	11.7	18.0
Green Ext Time (p_c), s	0.0	0.0	0.0	3.1	0.0	9.9	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	59.5
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1279	136	190	1628	88	14	536	111	58	474	2
Future Volume (veh/h)	10	1279	136	190	1628	88	14	536	111	58	474	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1900	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	10	1279	136	190	1628	88	14	536	111	58	474	2
Adj No. of Lanes	1	1	2	1	2	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	16	1111	1663	159	2315	124	21	537	240	47	602	3
Arrive On Green	0.01	0.62	0.62	0.09	0.70	0.70	0.01	0.15	0.15	0.03	0.17	0.17
Sat Flow, veh/h	1707	1792	2682	1707	3287	177	1757	3505	1568	1757	3579	15
Grp Volume(v), veh/h	10	1279	136	190	839	877	14	536	111	58	232	244
Grp Sat Flow(s),veh/h/ln	1707	1792	1341	1707	1703	1761	1757	1752	1568	1757	1752	1842
Q Serve(g_s), s	0.9	93.0	3.0	14.0	43.1	44.0	1.2	22.9	9.7	4.0	19.0	19.0
Cycle Q Clear(g_c), s	0.9	93.0	3.0	14.0	43.1	44.0	1.2	22.9	9.7	4.0	19.0	19.0
Prop In Lane	1.00		1.00	1.00		0.10	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	16	1111	1663	159	1199	1240	21	537	240	47	295	310
V/C Ratio(X)	0.64	1.15	0.08	1.19	0.70	0.71	0.68	1.00	0.46	1.24	0.79	0.79
Avail Cap(c_a), veh/h	46	1111	1663	159	1199	1240	47	537	240	47	295	310
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	74.1	28.5	11.4	68.0	12.9	13.1	73.8	63.5	57.9	73.0	59.8	59.8
Incr Delay (d2), s/veh	36.9	78.6	0.0	132.4	1.8	1.9	32.1	38.1	1.4	209.4	13.2	12.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	69.9	1.1	12.5	20.7	21.8	0.8	13.9	4.3	4.7	10.3	10.8
LnGrp Delay(d),s/veh	111.0	107.1	11.4	200.4	14.8	14.9	106.0	101.6	59.2	282.4	73.0	72.5
LnGrp LOS	F	F	B	F	B	B	F	F	E	F	E	E
Approach Vol, veh/h		1425			1906			661			534	
Approach Delay, s/veh		98.0			33.3			94.6			95.5	
Approach LOS		F			C			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	27.0	18.0	97.0	5.8	29.2	5.4	109.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	23.0	14.0	93.0	4.0	23.0	4.0	103.0
Max Q Clear Time (g_c+I1), s	6.0	24.9	16.0	95.0	3.2	21.0	2.9	46.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	1.1	0.0	39.5

Intersection Summary	
HCM 2010 Ctrl Delay	70.0
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	778	165	151	768	62	370	377	284	7	316	65
Future Volume (veh/h)	81	778	165	151	768	62	370	377	284	7	316	65
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	81	778	165	151	768	62	370	377	284	7	316	65
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	103	903	404	183	996	80	416	1374	615	13	570	255
Arrive On Green	0.06	0.26	0.26	0.10	0.30	0.30	0.24	0.39	0.39	0.01	0.16	0.16
Sat Flow, veh/h	1757	3505	1568	1757	3285	265	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	81	778	165	151	410	420	370	377	284	7	316	65
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1798	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	3.1	14.2	5.9	5.6	14.2	14.3	13.7	4.9	9.0	0.3	5.6	2.4
Cycle Q Clear(g_c), s	3.1	14.2	5.9	5.6	14.2	14.3	13.7	4.9	9.0	0.3	5.6	2.4
Prop In Lane	1.00		1.00	1.00		0.15	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	103	903	404	183	531	545	416	1374	615	13	570	255
V/C Ratio(X)	0.79	0.86	0.41	0.82	0.77	0.77	0.89	0.27	0.46	0.55	0.55	0.25
Avail Cap(c_a), veh/h	131	941	421	183	531	545	445	1568	702	105	889	398
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.1	23.8	20.7	29.4	21.2	21.2	24.7	13.9	15.1	33.2	25.8	24.5
Incr Delay (d2), s/veh	21.1	8.0	0.7	25.1	6.8	6.7	18.6	0.1	0.5	31.7	0.8	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	7.8	2.6	4.0	7.8	8.0	8.7	2.4	3.9	0.2	2.7	1.1
LnGrp Delay(d),s/veh	52.3	31.8	21.3	54.5	28.1	27.9	43.3	14.0	15.7	64.8	26.7	25.0
LnGrp LOS	D	C	C	D	C	C	D	B	B	E	C	C
Approach Vol, veh/h		1024			981			1031			388	
Approach Delay, s/veh		31.7			32.1			25.0			27.1	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.5	30.3	11.0	21.3	19.9	14.9	7.9	24.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	30.0	7.0	18.0	17.0	17.0	5.0	20.0
Max Q Clear Time (g_c+I1), s	2.3	11.0	7.6	16.2	15.7	7.6	5.1	16.3
Green Ext Time (p_c), s	0.0	4.6	0.0	1.1	0.2	3.3	0.0	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	29.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	237	508	108	47	445	94	132	787	150	0	248	108
Future Volume (veh/h)	237	508	108	47	445	94	132	787	150	0	248	108
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	237	508	108	47	445	94	132	787	150	0	248	108
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	290	1254	561	69	812	363	149	1223	547	4	628	281
Arrive On Green	0.16	0.36	0.36	0.04	0.23	0.23	0.08	0.35	0.35	0.00	0.18	0.18
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	237	508	108	47	445	94	132	787	150	0	248	108
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1568	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	6.1	5.1	2.2	1.2	5.3	2.3	3.5	8.9	3.2	0.0	2.9	2.9
Cycle Q Clear(g_c), s	6.1	5.1	2.2	1.2	5.3	2.3	3.5	8.9	3.2	0.0	2.9	2.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	290	1254	561	69	812	363	149	1223	547	4	628	281
V/C Ratio(X)	0.82	0.41	0.19	0.69	0.55	0.26	0.89	0.64	0.27	0.00	0.39	0.38
Avail Cap(c_a), veh/h	298	1412	632	186	1189	532	149	1223	547	149	1189	532
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	19.0	11.4	10.4	22.4	15.9	14.8	21.4	12.9	11.1	0.0	17.1	17.1
Incr Delay (d2), s/veh	15.9	0.2	0.2	11.5	0.6	0.4	42.2	1.2	0.3	0.0	0.4	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	2.5	1.0	0.8	2.6	1.0	3.4	4.5	1.4	0.0	1.4	1.3
LnGrp Delay(d),s/veh	34.9	11.6	10.6	33.9	16.5	15.2	63.6	14.1	11.3	0.0	17.5	17.9
LnGrp LOS	C	B	B	C	B	B	E	B	B		B	B
Approach Vol, veh/h		853			586			1069			356	
Approach Delay, s/veh		17.9			17.7			19.8			17.6	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	20.5	5.8	20.9	8.0	12.5	11.8	14.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	5.0	19.0	4.0	16.0	8.0	16.0
Max Q Clear Time (g_c+I1), s	0.0	10.9	3.2	7.1	5.5	4.9	8.1	7.3
Green Ext Time (p_c), s	0.0	2.8	0.0	4.4	0.0	3.5	0.0	3.7

Intersection Summary	
HCM 2010 Ctrl Delay	18.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	336	379	117	220	383	440	95	2486	290	561	2004	498
Future Volume (veh/h)	336	379	117	220	383	440	95	2486	290	561	2004	498
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	336	379	117	220	383	440	95	2486	290	561	2004	498
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	313	760	340	254	699	547	129	2254	702	505	2810	875
Arrive On Green	0.09	0.22	0.22	0.07	0.20	0.20	0.04	0.45	0.45	0.15	0.56	0.56
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	336	379	117	220	383	440	95	2486	290	561	2004	498
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	17.5	18.1	12.0	12.2	18.7	38.0	5.3	86.1	24.0	28.5	55.9	39.3
Cycle Q Clear(g_c), s	17.5	18.1	12.0	12.2	18.7	38.0	5.3	86.1	24.0	28.5	55.9	39.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	313	760	340	254	699	547	129	2254	702	505	2810	875
V/C Ratio(X)	1.07	0.50	0.34	0.87	0.55	0.80	0.74	1.10	0.41	1.11	0.71	0.57
Avail Cap(c_a), veh/h	313	760	340	277	699	547	179	2254	702	505	2810	875
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	86.5	65.5	63.1	87.2	68.5	56.1	90.7	52.2	35.2	81.0	30.4	26.7
Incr Delay (d2), s/veh	71.7	0.2	0.2	20.9	0.5	7.9	5.1	53.7	0.1	74.0	0.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.3	8.8	5.2	6.5	9.1	22.1	2.6	50.6	10.3	18.4	25.8	16.9
LnGrp Delay(d),s/veh	158.2	65.7	63.4	108.1	69.1	64.0	95.8	105.9	35.3	155.0	31.1	27.3
LnGrp LOS	F	E	E	F	E	E	F	F	D	F	C	C
Approach Vol, veh/h		832			1043			2871			3063	
Approach Delay, s/veh		102.7			75.2			98.4			53.2	
Approach LOS		F			E			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	112.1	23.0	42.6	34.0	90.9	19.7	45.9
Change Period (Y+Rc), s	5.5	4.8	5.5	* 4.6	5.5	* 4.8	5.5	4.6
Max Green Setting (Gmax), s	10.1	104.3	17.5	* 38	28.5	* 86	15.5	39.7
Max Q Clear Time (g_c+I1), s	7.3	57.9	19.5	40.0	30.5	88.1	14.2	20.1
Green Ext Time (p_c), s	0.0	18.5	0.0	0.0	0.0	0.0	0.0	1.4

Intersection Summary	
HCM 2010 Ctrl Delay	78.0
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	2	44	0	58	0	2716	103	30	2238	6
Future Volume (veh/h)	10	0	2	44	0	58	0	2716	103	30	2238	6
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	10	0	2	44	0	58	0	2716	103	30	2238	6
Adj No. of Lanes	0	1	0	1	0	2	1	3	1	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	13	0	3	80	0	143	2	3211	1000	35	3761	10
Arrive On Green	0.01	0.00	0.01	0.05	0.00	0.05	0.00	0.64	0.64	0.02	0.73	0.73
Sat Flow, veh/h	1435	0	287	1757	0	3136	1740	4988	1553	1740	5136	14
Grp Volume(v), veh/h	12	0	0	44	0	58	0	2716	103	30	1449	795
Grp Sat Flow(s),veh/h/ln	1722	0	0	1757	0	1568	1740	1663	1553	1740	1663	1824
Q Serve(g_s), s	0.5	0.0	0.0	1.8	0.0	1.3	0.0	31.9	1.9	1.3	15.5	15.5
Cycle Q Clear(g_c), s	0.5	0.0	0.0	1.8	0.0	1.3	0.0	31.9	1.9	1.3	15.5	15.5
Prop In Lane	0.83		0.17	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	15	0	0	80	0	143	2	3211	1000	35	2435	1336
V/C Ratio(X)	0.79	0.00	0.00	0.55	0.00	0.41	0.00	0.85	0.10	0.85	0.60	0.60
Avail Cap(c_a), veh/h	69	0	0	281	0	502	70	3397	1058	70	2435	1336
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.1	0.0	0.0	35.0	0.0	34.8	0.0	10.4	5.1	36.6	4.8	4.8
Incr Delay (d2), s/veh	27.3	0.0	0.0	2.2	0.0	0.7	0.0	2.6	0.1	17.8	0.8	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	0.9	0.0	0.6	0.0	15.1	0.8	0.8	7.1	8.1
LnGrp Delay(d),s/veh	64.4	0.0	0.0	37.2	0.0	35.5	0.0	13.1	5.2	54.4	5.6	6.3
LnGrp LOS	E			D		D		B	A	D	A	A
Approach Vol, veh/h		12			102			2819			2274	
Approach Delay, s/veh		64.4			36.2			12.8			6.5	
Approach LOS		E			D			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	59.9		6.2	6.6	53.3		8.9
Change Period (Y+Rc), s	* 4.6	5.0		5.5	* 5.1	* 5		5.5
Max Green Setting (Gmax), s	* 3	51.4		3.0	* 3	* 51		12.0
Max Q Clear Time (g_c+I1), s	0.0	17.5		2.5	3.3	33.9		3.8
Green Ext Time (p_c), s	0.0	33.8		0.0	0.0	14.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	10.6
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	142	23	148	179	777	34	2115	149	553	1610	65
Future Volume (veh/h)	37	142	23	148	179	777	34	2115	149	553	1610	65
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1845	1845	1845	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	37	142	23	148	179	777	34	2115	149	553	1610	65
Adj No. of Lanes	2	2	1	2	2	1	2	3	0	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	64	735	329	192	872	390	60	2103	147	484	2792	113
Arrive On Green	0.02	0.21	0.21	0.06	0.25	0.25	0.02	0.44	0.44	0.14	0.57	0.57
Sat Flow, veh/h	3375	3471	1553	3408	3505	1568	3375	4760	333	3375	4918	199
Grp Volume(v), veh/h	37	142	23	148	179	777	34	1473	791	553	1088	587
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1704	1752	1568	1688	1663	1768	1688	1663	1792
Q Serve(g_s), s	1.6	5.0	1.8	6.4	6.1	37.3	1.5	66.2	66.2	21.5	31.5	31.5
Cycle Q Clear(g_c), s	1.6	5.0	1.8	6.4	6.1	37.3	1.5	66.2	66.2	21.5	31.5	31.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		0.11
Lane Grp Cap(c), veh/h	64	735	329	192	872	390	60	1469	781	484	1887	1017
V/C Ratio(X)	0.58	0.19	0.07	0.77	0.21	1.99	0.57	1.00	1.01	1.14	0.58	0.58
Avail Cap(c_a), veh/h	70	735	329	225	872	390	97	1469	781	484	1887	1017
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.9	48.5	47.3	69.8	44.5	56.3	73.0	41.8	41.8	64.2	20.8	20.8
Incr Delay (d2), s/veh	5.0	0.0	0.0	10.6	0.0	455.0	3.1	24.1	35.4	86.0	0.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	2.4	0.8	3.3	2.9	65.4	0.7	35.1	39.8	15.7	14.4	15.8
LnGrp Delay(d),s/veh	77.9	48.6	47.3	80.4	44.6	511.2	76.2	66.0	77.2	150.2	21.1	21.4
LnGrp LOS	E	D	D	F	D	F	E	F	F	F	C	C
Approach Vol, veh/h		202			1104			2298			2228	
Approach Delay, s/veh		53.8			377.8			70.0			53.2	
Approach LOS		D			F			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	90.4	8.4	43.0	27.0	71.5	13.9	37.4
Change Period (Y+Rc), s	5.5	5.3	5.5	* 5.7	5.5	* 5.3	5.5	* 5.7
Max Green Setting (Gmax), s	4.3	83.3	3.1	* 37	21.5	* 66	9.9	* 31
Max Q Clear Time (g_c+I1), s	3.5	33.5	3.6	39.3	23.5	68.2	8.4	7.0
Green Ext Time (p_c), s	0.0	8.6	0.0	0.0	0.0	0.0	0.0	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	121.3
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	46	103	2126	24	61	1770
Future Volume (veh/h)	46	103	2126	24	61	1770
Number	3	18	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1827	1900	1827	1827
Adj Flow Rate, veh/h	46	103	2126	24	61	1770
Adj No. of Lanes	1	1	3	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	4	4	4	4
Cap, veh/h	161	144	2729	31	74	2369
Arrive On Green	0.09	0.09	0.54	0.54	0.04	0.68
Sat Flow, veh/h	1757	1568	5249	57	1740	3563
Grp Volume(v), veh/h	46	103	1390	760	61	1770
Grp Sat Flow(s),veh/h/ln	1757	1568	1663	1817	1740	1736
Q Serve(g_s), s	1.1	2.9	15.2	15.2	1.6	15.1
Cycle Q Clear(g_c), s	1.1	2.9	15.2	15.2	1.6	15.1
Prop In Lane	1.00	1.00		0.03	1.00	
Lane Grp Cap(c), veh/h	161	144	1785	975	74	2369
V/C Ratio(X)	0.29	0.72	0.78	0.78	0.83	0.75
Avail Cap(c_a), veh/h	212	189	2364	1292	271	3367
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.3	20.1	8.4	8.4	21.6	4.7
Incr Delay (d2), s/veh	0.4	4.9	0.8	1.6	8.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.5	7.0	7.8	0.9	7.0
LnGrp Delay(d),s/veh	19.7	25.1	9.2	10.0	30.0	5.0
LnGrp LOS	B	C	A	A	C	A
Approach Vol, veh/h	149		2150			1831
Approach Delay, s/veh	23.4		9.5			5.8
Approach LOS	C		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		35.9			6.6	29.3		9.7
Change Period (Y+Rc), s		4.8			* 4.7	4.8		5.5
Max Green Setting (Gmax), s		44.2			* 7.1	32.4		5.5
Max Q Clear Time (g_c+I1), s		17.1			3.6	17.2		4.9
Green Ext Time (p_c), s		8.9			0.0	7.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	8.4
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	1322	106	283	1410	1114	407	1062	55	938	766	111
Future Volume (veh/h)	60	1322	106	283	1410	1114	407	1062	55	938	766	111
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1792	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	60	1322	106	283	1410	1114	407	1062	55	938	766	111
Adj No. of Lanes	1	1	0	2	2	1	2	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	4	4	4	4	4	4
Cap, veh/h	35	687	55	125	1498	670	450	745	333	329	935	418
Arrive On Green	0.02	0.42	0.42	0.04	0.44	0.44	0.13	0.21	0.21	0.19	0.27	0.27
Sat Flow, veh/h	1707	1638	131	3312	3406	1524	3375	3471	1553	1740	3471	1553
Grp Volume(v), veh/h	60	0	1428	283	1410	1114	407	1062	55	938	766	111
Grp Sat Flow(s),veh/h/ln	1707	0	1769	1656	1703	1524	1688	1736	1553	1740	1736	1553
Q Serve(g_s), s	3.0	0.0	60.9	5.5	57.5	63.9	17.3	31.2	4.2	27.5	30.1	8.2
Cycle Q Clear(g_c), s	3.0	0.0	60.9	5.5	57.5	63.9	17.3	31.2	4.2	27.5	30.1	8.2
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	35	0	742	125	1498	670	450	745	333	329	935	418
V/C Ratio(X)	1.70	0.00	1.93	2.26	0.94	1.66	0.91	1.42	0.16	2.85	0.82	0.27
Avail Cap(c_a), veh/h	35	0	742	125	1498	670	469	745	333	329	935	418
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.1	0.0	42.2	69.9	38.9	40.7	62.1	57.1	46.4	58.9	49.8	41.8
Incr Delay (d2), s/veh	411.2	0.0	421.5	590.6	11.9	304.8	19.8	199.0	0.1	840.1	5.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	0.0	116.5	12.8	29.5	83.6	9.3	35.5	1.8	90.0	15.1	3.5
LnGrp Delay(d),s/veh	482.3	0.0	463.7	660.5	50.8	345.5	81.8	256.0	46.5	899.0	55.2	41.9
LnGrp LOS	F		F	F	D	F	F	F	D	F	E	D
Approach Vol, veh/h		1488			2807			1524			1815	
Approach Delay, s/veh		464.5			229.2			201.9			490.5	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	69.3	24.1	43.9	11.0	66.3	32.0	36.0
Change Period (Y+Rc), s	5.0	* 5.4	* 4.7	4.8	5.5	* 5.4	4.5	4.8
Max Green Setting (Gmax), s	3.0	* 64	* 20	38.3	5.5	* 61	27.5	31.2
Max Q Clear Time (g_c+I1), s	5.0	65.9	19.3	32.1	7.5	62.9	29.5	33.2
Green Ext Time (p_c), s	0.0	0.0	0.1	2.1	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	331.7
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	161	738	43	60	439	249	134	803	52	160	688	247
Future Volume (veh/h)	161	738	43	60	439	249	134	803	52	160	688	247
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1827	1828	1900	1845	1827	1827
Adj Flow Rate, veh/h	161	738	43	60	439	249	134	803	52	160	688	247
Adj No. of Lanes	1	1	1	1	2	0	1	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	3	4	4
Cap, veh/h	192	733	623	77	711	400	163	842	54	174	926	414
Arrive On Green	0.11	0.40	0.40	0.04	0.33	0.33	0.09	0.25	0.25	0.10	0.27	0.27
Sat Flow, veh/h	1757	1845	1568	1757	2164	1218	1740	3312	214	1757	3471	1553
Grp Volume(v), veh/h	161	738	43	60	355	333	134	421	434	160	688	247
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1752	1630	1740	1737	1790	1757	1736	1553
Q Serve(g_s), s	9.0	39.7	1.7	3.4	17.0	17.3	7.6	23.9	23.9	9.0	18.1	13.9
Cycle Q Clear(g_c), s	9.0	39.7	1.7	3.4	17.0	17.3	7.6	23.9	23.9	9.0	18.1	13.9
Prop In Lane	1.00		1.00	1.00		0.75	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	192	733	623	77	576	535	163	441	455	174	926	414
V/C Ratio(X)	0.84	1.01	0.07	0.78	0.62	0.62	0.82	0.95	0.95	0.92	0.74	0.60
Avail Cap(c_a), veh/h	283	733	623	77	576	535	190	441	455	174	926	414
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.7	30.1	18.7	47.3	28.3	28.3	44.5	36.7	36.7	44.6	33.5	32.0
Incr Delay (d2), s/veh	9.0	35.1	0.0	36.2	1.5	1.7	19.1	31.0	30.5	45.0	2.9	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	27.3	0.7	2.4	8.5	8.0	4.5	15.3	15.7	6.6	9.1	6.1
LnGrp Delay(d),s/veh	52.6	65.2	18.7	83.5	29.7	30.0	63.6	67.7	67.2	89.6	36.4	33.6
LnGrp LOS	D	F	B	F	C	C	E	E	E	F	D	C
Approach Vol, veh/h		942			748			989			1095	
Approach Delay, s/veh		60.9			34.2			66.9			43.6	
Approach LOS		E			C			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.9	31.5	16.4	38.1	15.2	30.2	9.6	45.0
Change Period (Y+Rc), s	* 4.6	4.8	5.5	* 5.3	* 5.3	4.8	* 5.2	* 5.3
Max Green Setting (Gmax), s	* 11	25.1	16.1	* 28	* 9.9	25.4	* 4.4	* 40
Max Q Clear Time (g_c+I1), s	9.6	20.1	11.0	19.3	11.0	25.9	5.4	41.7
Green Ext Time (p_c), s	0.0	1.4	0.1	1.4	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	52.2
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	642	28	225	434	191	70	693	310	78	430	206
Future Volume (veh/h)	49	642	28	225	434	191	70	693	310	78	430	206
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1845	1845	1845	1827	1827	1845	1845	1827	1827
Adj Flow Rate, veh/h	49	642	28	225	434	191	70	693	310	78	430	206
Adj No. of Lanes	0	1	1	1	1	1	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	3	3	4	4
Cap, veh/h	39	506	465	343	360	306	86	615	528	57	590	502
Arrive On Green	0.30	0.30	0.30	0.20	0.20	0.20	0.05	0.34	0.34	0.03	0.32	0.32
Sat Flow, veh/h	130	1708	1568	1757	1845	1568	1740	1827	1568	1757	1827	1553
Grp Volume(v), veh/h	691	0	28	225	434	191	70	693	310	78	430	206
Grp Sat Flow(s),veh/h/ln	1838	0	1568	1757	1845	1568	1740	1827	1568	1757	1827	1553
Q Serve(g_s), s	51.9	0.0	2.2	20.7	34.2	19.5	7.0	58.9	28.6	5.7	36.5	18.1
Cycle Q Clear(g_c), s	51.9	0.0	2.2	20.7	34.2	19.5	7.0	58.9	28.6	5.7	36.5	18.1
Prop In Lane	0.07		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	545	0	465	343	360	306	86	615	528	57	590	502
V/C Ratio(X)	1.27	0.00	0.06	0.66	1.20	0.62	0.81	1.13	0.59	1.36	0.73	0.41
Avail Cap(c_a), veh/h	545	0	465	343	360	306	101	615	528	57	590	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.6	0.0	44.1	65.0	70.4	64.5	82.3	58.0	48.0	84.6	52.5	46.2
Incr Delay (d2), s/veh	134.4	0.0	0.0	4.5	115.2	3.9	28.8	76.6	1.2	242.9	4.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	46.7	0.0	1.0	10.5	29.0	8.8	4.1	42.8	12.6	6.6	19.0	7.8
LnGrp Delay(d),s/veh	196.0	0.0	44.1	69.4	185.6	68.4	111.1	134.6	49.2	327.5	56.4	46.4
LnGrp LOS	F		D	E	F	E	F	F	D	F	E	D
Approach Vol, veh/h		719			850			1073			714	
Approach Delay, s/veh		190.1			128.5			108.4			83.2	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.4	61.6		41.0	11.0	64.0		59.0
Change Period (Y+Rc), s	* 4.7	5.1		6.8	* 5.3	5.1		7.1
Max Green Setting (Gmax), s	* 10	55.0		34.2	* 5.7	58.9		51.9
Max Q Clear Time (g_c+I1), s	9.0	38.5		36.2	7.7	60.9		53.9
Green Ext Time (p_c), s	0.0	1.5		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	125.6
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	237	881	72	39	361	7	331	818	299	9	330	343
Future Volume (veh/h)	237	881	72	39	361	7	331	818	299	9	330	343
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1827	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	237	881	72	39	361	7	331	818	299	9	330	343
Adj No. of Lanes	1	2	0	1	2	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	271	955	78	48	571	255	365	1078	394	12	411	368
Arrive On Green	0.16	0.29	0.29	0.03	0.16	0.16	0.21	0.43	0.43	0.01	0.24	0.24
Sat Flow, veh/h	1740	3250	266	1740	3471	1553	1740	2492	910	1740	1736	1553
Grp Volume(v), veh/h	237	470	483	39	361	7	331	569	548	9	330	343
Grp Sat Flow(s),veh/h/ln	1740	1736	1780	1740	1736	1553	1740	1736	1666	1740	1736	1553
Q Serve(g_s), s	11.6	23.0	23.0	1.9	8.5	0.3	16.2	24.2	24.3	0.5	15.7	18.9
Cycle Q Clear(g_c), s	11.6	23.0	23.0	1.9	8.5	0.3	16.2	24.2	24.3	0.5	15.7	18.9
Prop In Lane	1.00		0.15	1.00		1.00	1.00		0.55	1.00		1.00
Lane Grp Cap(c), veh/h	271	510	523	48	571	255	365	751	721	12	411	368
V/C Ratio(X)	0.87	0.92	0.92	0.81	0.63	0.03	0.91	0.76	0.76	0.77	0.80	0.93
Avail Cap(c_a), veh/h	297	514	527	60	571	255	400	751	721	62	411	368
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.1	29.9	29.9	42.3	34.1	30.7	33.7	20.9	21.0	43.4	31.4	32.7
Incr Delay (d2), s/veh	21.1	24.6	24.2	39.6	5.3	0.2	21.8	7.1	7.4	31.3	15.2	32.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	14.5	14.8	1.5	4.5	0.2	10.0	13.0	12.6	0.3	9.3	11.4
LnGrp Delay(d),s/veh	57.1	54.5	54.1	81.9	39.3	30.9	55.5	28.0	28.3	74.6	46.7	65.4
LnGrp LOS	E	D	D	F	D	C	E	C	C	E	D	E
Approach Vol, veh/h		1190			407			1448			682	
Approach Delay, s/veh		54.9			43.3			34.4			56.5	
Approach LOS		D			D			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.2	25.9	18.7	19.6	6.1	43.0	7.4	30.9
Change Period (Y+Rc), s	* 4.9	* 5.2	* 5.1	* 5.2	5.5	* 5.2	5.0	* 5.2
Max Green Setting (Gmax), s	* 20	* 21	* 15	* 14	3.1	* 37	3.0	* 26
Max Q Clear Time (g_c+I1), s	18.2	20.9	13.6	10.5	2.5	26.3	3.9	25.0
Green Ext Time (p_c), s	0.1	0.0	0.0	3.2	0.0	10.5	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	45.9
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	297	311	43	301	52	667	1279	276	19	348	57
Future Volume (veh/h)	100	297	311	43	301	52	667	1279	276	19	348	57
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	100	297	311	43	301	52	667	1279	276	19	348	57
Adj No. of Lanes	2	2	1	2	2	1	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	135	951	425	77	891	399	719	1334	284	42	929	416
Arrive On Green	0.04	0.27	0.27	0.02	0.25	0.25	0.21	0.47	0.47	0.01	0.27	0.27
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	2849	607	3375	3471	1553
Grp Volume(v), veh/h	100	297	311	43	301	52	667	773	782	19	348	57
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1736	1720	1688	1736	1553
Q Serve(g_s), s	2.8	6.6	17.7	1.2	6.9	2.5	19.0	41.9	43.5	0.5	8.0	2.7
Cycle Q Clear(g_c), s	2.8	6.6	17.7	1.2	6.9	2.5	19.0	41.9	43.5	0.5	8.0	2.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.35	1.00		1.00
Lane Grp Cap(c), veh/h	135	951	425	77	891	399	719	813	806	42	929	416
V/C Ratio(X)	0.74	0.31	0.73	0.56	0.34	0.13	0.93	0.95	0.97	0.46	0.37	0.14
Avail Cap(c_a), veh/h	135	1075	481	139	1072	479	719	813	806	107	998	446
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.6	28.5	32.5	47.4	29.8	28.2	37.9	25.0	25.4	48.1	29.2	27.3
Incr Delay (d2), s/veh	17.0	0.9	10.6	2.3	0.7	0.5	17.9	21.2	25.1	2.9	0.8	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	3.3	8.9	0.6	3.4	1.1	10.7	24.7	26.0	0.3	3.9	1.2
LnGrp Delay(d),s/veh	63.5	29.3	43.1	49.7	30.6	28.7	55.8	46.2	50.5	51.0	30.0	27.8
LnGrp LOS	E	C	D	D	C	C	E	D	D	D	C	C
Approach Vol, veh/h		708			396			2222			424	
Approach Delay, s/veh		40.2			32.4			50.6			30.7	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.4	31.8	9.4	30.5	6.7	51.5	7.7	32.2
Change Period (Y+Rc), s	5.5	* 5.5	5.5	5.6	5.5	* 5.5	5.5	* 5.6
Max Green Setting (Gmax), s	20.9	* 28	3.9	30.0	3.1	* 46	4.0	* 30
Max Q Clear Time (g_c+I1), s	21.0	10.0	4.8	8.9	2.5	45.5	3.2	19.7
Green Ext Time (p_c), s	0.0	16.3	0.0	11.7	0.0	0.4	0.0	6.9

Intersection Summary	
HCM 2010 Ctrl Delay	44.5
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	2173	33	24	2041	8	397	42	172	7	16	55
Future Volume (veh/h)	14	2173	33	24	2041	8	397	42	172	7	16	55
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	14	2173	33	24	2041	8	397	42	172	7	16	55
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	21	1994	30	30	2039	8	354	84	344	12	23	81
Arrive On Green	0.01	0.58	0.58	0.02	0.59	0.59	0.20	0.27	0.27	0.01	0.06	0.06
Sat Flow, veh/h	1707	3434	52	1707	3479	14	1757	317	1298	1757	366	1257
Grp Volume(v), veh/h	14	1075	1131	24	998	1051	397	0	214	7	0	71
Grp Sat Flow(s),veh/h/ln	1707	1703	1783	1707	1703	1790	1757	0	1616	1757	0	1623
Q Serve(g_s), s	1.1	79.6	79.6	1.9	80.3	80.3	27.6	0.0	15.4	0.5	0.0	5.9
Cycle Q Clear(g_c), s	1.1	79.6	79.6	1.9	80.3	80.3	27.6	0.0	15.4	0.5	0.0	5.9
Prop In Lane	1.00		0.03	1.00		0.01	1.00		0.80	1.00		0.77
Lane Grp Cap(c), veh/h	21	989	1035	30	998	1049	354	0	428	12	0	104
V/C Ratio(X)	0.68	1.09	1.09	0.80	1.00	1.00	1.12	0.00	0.50	0.58	0.00	0.68
Avail Cap(c_a), veh/h	50	989	1035	50	998	1049	354	0	526	51	0	249
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	67.5	28.7	28.7	67.1	28.4	28.4	54.7	0.0	42.7	67.9	0.0	62.8
Incr Delay (d2), s/veh	23.5	55.2	56.7	27.7	28.5	28.2	85.2	0.0	0.8	27.0	0.0	6.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	52.3	55.1	1.1	45.3	47.5	21.7	0.0	7.0	0.4	0.0	2.8
LnGrp Delay(d),s/veh	90.9	84.0	85.5	94.8	56.9	56.5	140.0	0.0	43.5	94.8	0.0	69.7
LnGrp LOS	F	F	F	F	F	F	F		D	F		E
Approach Vol, veh/h		2220			2073			611			78	
Approach Delay, s/veh		84.8			57.2			106.2			72.0	
Approach LOS		F			E			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.9	86.0	32.0	13.2	5.2	86.7	4.4	40.8
Change Period (Y+Rc), s	3.5	6.4	4.4	* 4.4	3.5	6.4	3.5	4.4
Max Green Setting (Gmax), s	4.0	79.6	27.6	* 21	4.0	79.6	4.0	44.6
Max Q Clear Time (g_c+I1), s	3.9	81.6	29.6	7.9	3.1	82.3	2.5	17.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.9	0.0	0.0	0.0	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	75.7
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	701	13	155	722	78	20	65	218	24	26	8
Future Volume (veh/h)	61	701	13	155	722	78	20	65	218	24	26	8
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	61	701	13	155	722	78	20	65	218	24	26	8
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	74	1111	21	196	1229	133	26	358	304	30	362	308
Arrive On Green	0.04	0.32	0.32	0.11	0.38	0.38	0.01	0.19	0.19	0.02	0.20	0.20
Sat Flow, veh/h	1757	3520	65	1757	3192	345	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	61	349	365	155	396	404	20	65	218	24	26	8
Grp Sat Flow(s),veh/h/ln	1757	1752	1833	1757	1752	1784	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	1.5	7.5	7.5	3.8	7.9	8.0	0.5	1.3	5.8	0.6	0.5	0.2
Cycle Q Clear(g_c), s	1.5	7.5	7.5	3.8	7.9	8.0	0.5	1.3	5.8	0.6	0.5	0.2
Prop In Lane	1.00		0.04	1.00		0.19	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	74	553	578	196	675	687	26	358	304	30	362	308
V/C Ratio(X)	0.82	0.63	0.63	0.79	0.59	0.59	0.77	0.18	0.72	0.79	0.07	0.03
Avail Cap(c_a), veh/h	199	713	746	199	713	726	119	751	638	119	751	638
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.0	12.9	12.9	19.1	10.8	10.8	21.7	14.9	16.7	21.7	14.5	14.4
Incr Delay (d2), s/veh	19.5	1.2	1.1	18.9	1.1	1.1	37.0	0.2	3.2	34.9	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	3.8	3.9	2.9	4.0	4.0	0.5	0.7	2.7	0.6	0.3	0.1
LnGrp Delay(d),s/veh	40.5	14.1	14.1	38.0	12.0	11.9	58.7	15.1	19.9	56.6	14.6	14.4
LnGrp LOS	D	B	B	D	B	B	E	B	B	E	B	B
Approach Vol, veh/h		775			955			303			58	
Approach Delay, s/veh		16.2			16.2			21.4			31.9	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.8	12.6	8.9	18.0	4.7	12.7	5.9	21.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	18.0	5.0	18.0	3.0	18.0	5.0	18.0
Max Q Clear Time (g_c+I1), s	2.6	7.8	5.8	9.5	2.5	2.5	3.5	10.0
Green Ext Time (p_c), s	0.0	0.8	0.0	4.4	0.0	1.0	0.0	4.3

Intersection Summary	
HCM 2010 Ctrl Delay	17.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	954	2	8	856	32	58	220	297	44	72	9
Future Volume (veh/h)	46	954	2	8	856	32	58	220	297	44	72	9
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	46	954	2	8	856	32	58	220	297	44	72	9
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	54	1350	3	11	1211	45	70	460	391	52	441	375
Arrive On Green	0.03	0.38	0.38	0.01	0.35	0.35	0.04	0.25	0.25	0.03	0.24	0.24
Sat Flow, veh/h	1757	3588	8	1757	3446	129	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	46	466	490	8	435	453	58	220	297	44	72	9
Grp Sat Flow(s),veh/h/ln	1757	1752	1843	1757	1752	1822	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	1.2	10.7	10.7	0.2	10.1	10.1	1.6	4.8	8.3	1.2	1.5	0.2
Cycle Q Clear(g_c), s	1.2	10.7	10.7	0.2	10.1	10.1	1.6	4.8	8.3	1.2	1.5	0.2
Prop In Lane	1.00		0.00	1.00		0.07	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	54	659	694	11	616	641	70	460	391	52	441	375
V/C Ratio(X)	0.84	0.71	0.71	0.72	0.71	0.71	0.82	0.48	0.76	0.85	0.16	0.02
Avail Cap(c_a), veh/h	111	704	741	111	704	732	149	702	597	149	702	597
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.8	12.5	12.5	23.5	13.2	13.2	22.5	15.1	16.4	22.8	14.2	13.8
Incr Delay (d2), s/veh	27.8	3.0	2.9	60.6	2.8	2.7	20.5	0.8	3.0	29.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	5.6	5.9	0.3	5.3	5.5	1.1	2.5	3.9	1.0	0.8	0.1
LnGrp Delay(d),s/veh	50.6	15.6	15.4	84.1	16.0	15.9	43.0	15.9	19.5	52.0	14.4	13.8
LnGrp LOS	D	B	B	F	B	B	D	B	B	D	B	B
Approach Vol, veh/h		1002			896			575			125	
Approach Delay, s/veh		17.1			16.6			20.5			27.6	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.4	15.8	4.3	21.8	5.9	15.3	5.5	20.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	18.0	3.0	19.0	4.0	18.0	3.0	19.0
Max Q Clear Time (g_c+I1), s	3.2	10.3	2.2	12.7	3.6	3.5	3.2	12.1
Green Ext Time (p_c), s	0.0	1.5	0.0	4.2	0.0	2.0	0.0	4.5

Intersection Summary	
HCM 2010 Ctrl Delay	18.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	908	101	168	756	351	110	558	190	331	352	27
Future Volume (veh/h)	25	908	101	168	756	351	110	558	190	331	352	27
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	25	908	101	168	756	351	110	558	190	331	352	27
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	31	905	101	161	831	385	135	519	441	314	707	601
Arrive On Green	0.02	0.28	0.28	0.09	0.36	0.36	0.08	0.28	0.28	0.18	0.38	0.38
Sat Flow, veh/h	1757	3181	354	1757	2328	1079	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	25	500	509	168	569	538	110	558	190	331	352	27
Grp Sat Flow(s),veh/h/ln	1757	1752	1782	1757	1752	1654	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	1.7	34.2	34.2	11.0	37.2	37.3	7.4	33.8	11.9	21.5	17.5	1.3
Cycle Q Clear(g_c), s	1.7	34.2	34.2	11.0	37.2	37.3	7.4	33.8	11.9	21.5	17.5	1.3
Prop In Lane	1.00		0.20	1.00		0.65	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	31	499	507	161	625	590	135	519	441	314	707	601
V/C Ratio(X)	0.82	1.00	1.00	1.04	0.91	0.91	0.82	1.08	0.43	1.05	0.50	0.04
Avail Cap(c_a), veh/h	47	499	507	161	625	590	221	519	441	314	707	601
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.9	43.0	43.0	54.6	36.8	36.8	54.7	43.2	35.3	49.3	28.2	23.3
Incr Delay (d2), s/veh	27.9	41.1	40.8	83.4	17.0	18.1	4.5	61.4	0.2	65.5	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	22.2	22.5	9.0	20.8	20.0	3.8	26.0	5.2	16.1	8.9	0.6
LnGrp Delay(d),s/veh	86.8	84.1	83.8	138.1	53.8	54.9	59.2	104.6	35.6	114.8	28.4	23.3
LnGrp LOS	F	F	F	F	D	D	E	F	D	F	C	C
Approach Vol, veh/h		1034			1275			858			710	
Approach Delay, s/veh		84.0			65.4			83.5			68.5	
Approach LOS		F			E			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	47.7	14.7	50.5	16.0	39.0	27.0	38.2
Change Period (Y+Rc), s	* 5.2	4.8	5.5	* 4.4	5.0	* 4.8	5.5	* 4.4
Max Green Setting (Gmax), s	* 3.2	41.6	15.1	* 40	11.0	* 34	21.5	* 34
Max Q Clear Time (g_c+I1), s	3.7	39.3	9.4	19.5	13.0	36.2	23.5	35.8
Green Ext Time (p_c), s	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	74.9
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	256	1831	231	197	1786	3	161	1198	322	2	1098	96
Future Volume (veh/h)	256	1831	231	197	1786	3	161	1198	322	2	1098	96
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1792	1845	1845	1792	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	256	1831	231	197	1786	3	161	1198	322	2	1098	96
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	6	3	3	6	3	3	3	3	3	3	3
Cap, veh/h	266	1802	577	228	1747	560	190	1348	603	6	1159	518
Arrive On Green	0.08	0.37	0.37	0.07	0.36	0.36	0.06	0.38	0.38	0.00	0.33	0.33
Sat Flow, veh/h	3408	4893	1568	3408	4893	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	256	1831	231	197	1786	3	161	1198	322	2	1098	96
Grp Sat Flow(s),veh/h/ln	1704	1631	1568	1704	1631	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	6.7	33.0	9.8	5.1	32.0	0.1	4.2	28.6	14.3	0.1	27.4	3.9
Cycle Q Clear(g_c), s	6.7	33.0	9.8	5.1	32.0	0.1	4.2	28.6	14.3	0.1	27.4	3.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	266	1802	577	228	1747	560	190	1348	603	6	1159	518
V/C Ratio(X)	0.96	1.02	0.40	0.86	1.02	0.01	0.85	0.89	0.53	0.36	0.95	0.19
Avail Cap(c_a), veh/h	266	1802	577	228	1747	560	190	1348	603	152	1173	525
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.2	28.3	21.0	41.4	28.8	18.6	41.9	25.8	21.3	44.7	29.2	21.4
Incr Delay (d2), s/veh	44.5	25.4	0.4	27.2	27.4	0.0	28.2	7.6	0.9	35.3	15.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	18.9	4.3	3.3	18.7	0.0	2.7	15.2	6.2	0.1	15.6	1.7
LnGrp Delay(d),s/veh	85.7	53.7	21.4	68.6	56.2	18.6	70.1	33.4	22.3	80.0	44.6	21.6
LnGrp LOS	F	F	C	E	F	B	E	C	C	E	D	C
Approach Vol, veh/h		2318			1986			1681			1196	
Approach Delay, s/veh		54.0			57.3			34.8			42.8	
Approach LOS		D			E			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.1	38.5	10.0	37.0	9.0	33.6	11.0	36.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	31.0	6.0	33.0	5.0	30.0	7.0	32.0
Max Q Clear Time (g_c+I1), s	2.1	30.6	7.1	35.0	6.2	29.4	8.7	34.0
Green Ext Time (p_c), s	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	48.6
HCM 2010 LOS	D

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	788	74	47	830	779	552
Future Volume (veh/h)	788	74	47	830	779	552
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	788	74	47	830	779	552
Adj No. of Lanes	2	1	2	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1043	480	100	1840	1442	645
Arrive On Green	0.31	0.31	0.03	0.53	0.41	0.41
Sat Flow, veh/h	3408	1568	3408	3597	3597	1568
Grp Volume(v), veh/h	788	74	47	830	779	552
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1752	1752	1568
Q Serve(g_s), s	9.9	1.6	0.6	7.0	8.0	15.2
Cycle Q Clear(g_c), s	9.9	1.6	0.6	7.0	8.0	15.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1043	480	100	1840	1442	645
V/C Ratio(X)	0.76	0.15	0.47	0.45	0.54	0.86
Avail Cap(c_a), veh/h	1366	629	288	2071	1479	662
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.8	12.0	22.6	7.0	10.6	12.7
Incr Delay (d2), s/veh	1.8	0.1	3.4	0.2	0.4	10.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	1.7	0.3	3.4	3.9	8.3
LnGrp Delay(d),s/veh	16.6	12.1	26.1	7.2	10.9	23.2
LnGrp LOS	B	B	C	A	B	C
Approach Vol, veh/h	862			877	1331	
Approach Delay, s/veh	16.2			8.2	16.0	
Approach LOS	B			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		28.9		18.5	5.4	23.5		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		28.0		19.0	4.0	20.0		
Max Q Clear Time (g_c+I1), s		9.0		11.9	2.6	17.2		
Green Ext Time (p_c), s		10.9		2.6	0.0	2.3		

Intersection Summary	
HCM 2010 Ctrl Delay	13.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	895	412	6	1	465	274	4	0	1	106	0	526
Future Volume (veh/h)	895	412	6	1	465	274	4	0	1	106	0	526
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1845	1845	1845	1900	1845	1900	1900	1845	1900
Adj Flow Rate, veh/h	895	412	6	1	465	274	4	0	1	106	0	526
Adj No. of Lanes	0	1	0	1	1	1	0	1	0	0	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	589	271	4	348	365	310	5	0	1	55	0	272
Arrive On Green	0.48	0.48	0.48	0.20	0.20	0.20	0.00	0.00	0.00	0.20	0.00	0.20
Sat Flow, veh/h	1215	559	8	1757	1845	1568	1372	0	343	268	0	1329
Grp Volume(v), veh/h	1313	0	0	1	465	274	5	0	0	632	0	0
Grp Sat Flow(s),veh/h/ln	1782	0	0	1757	1845	1568	1715	0	0	1597	0	0
Q Serve(g_s), s	71.0	0.0	0.0	0.1	29.0	24.9	0.4	0.0	0.0	30.0	0.0	0.0
Cycle Q Clear(g_c), s	71.0	0.0	0.0	0.1	29.0	24.9	0.4	0.0	0.0	30.0	0.0	0.0
Prop In Lane	0.68		0.00	1.00		1.00	0.80		0.20	0.17		0.83
Lane Grp Cap(c), veh/h	864	0	0	348	365	310	6	0	0	327	0	0
V/C Ratio(X)	1.52	0.00	0.00	0.00	1.27	0.88	0.77	0.00	0.00	1.93	0.00	0.00
Avail Cap(c_a), veh/h	864	0	0	348	365	310	47	0	0	327	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	37.8	0.0	0.0	47.2	58.8	57.1	72.9	0.0	0.0	58.3	0.0	0.0
Incr Delay (d2), s/veh	240.1	0.0	0.0	0.0	143.0	24.4	102.3	0.0	0.0	431.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	92.4	0.0	0.0	0.0	29.2	12.9	0.4	0.0	0.0	52.3	0.0	0.0
LnGrp Delay(d),s/veh	277.9	0.0	0.0	47.2	201.8	81.6	175.3	0.0	0.0	489.5	0.0	0.0
LnGrp LOS	F			D	F	F	F			F		
Approach Vol, veh/h		1313			740			5			632	
Approach Delay, s/veh		277.9			157.1			175.3			489.5	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		4.6		75.0		34.0		33.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		4.0		71.0		30.0		29.0
Max Q Clear Time (g_c+I1), s		2.4		73.0		32.0		31.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	294.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	40	32	9	30	234	57	2633	72	543	2091	59
Future Volume (veh/h)	76	40	32	9	30	234	57	2633	72	543	2091	59
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	76	40	32	9	30	234	57	2633	72	543	2091	59
Adj No. of Lanes	1	1	0	2	1	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	81	44	35	545	295	251	72	2480	772	513	3044	86
Arrive On Green	0.05	0.05	0.05	0.16	0.16	0.16	0.04	0.50	0.50	0.15	0.61	0.61
Sat Flow, veh/h	1757	950	760	3408	1845	1568	1740	4988	1553	3375	4987	140
Grp Volume(v), veh/h	76	0	72	9	30	234	57	2633	72	543	1393	757
Grp Sat Flow(s),veh/h/ln	1757	0	1711	1704	1845	1568	1740	1663	1553	1688	1663	1802
Q Serve(g_s), s	6.5	0.0	6.3	0.3	2.1	22.1	4.9	74.6	3.7	22.8	42.1	42.3
Cycle Q Clear(g_c), s	6.5	0.0	6.3	0.3	2.1	22.1	4.9	74.6	3.7	22.8	42.1	42.3
Prop In Lane	1.00		0.44	1.00		1.00	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	81	0	79	545	295	251	72	2480	772	513	2030	1100
V/C Ratio(X)	0.94	0.00	0.92	0.02	0.10	0.93	0.79	1.06	0.09	1.06	0.69	0.69
Avail Cap(c_a), veh/h	81	0	79	545	295	251	123	2480	772	513	2030	1100
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.3	0.0	71.3	53.1	53.8	62.2	71.2	37.7	19.9	63.6	19.6	19.6
Incr Delay (d2), s/veh	79.2	0.0	72.1	0.0	0.1	38.4	6.9	37.0	0.0	56.1	0.8	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	0.0	4.6	0.2	1.1	12.2	2.5	42.7	1.6	14.6	19.4	21.5
LnGrp Delay(d),s/veh	150.5	0.0	143.3	53.1	53.9	100.6	78.1	74.7	19.9	119.7	20.4	21.2
LnGrp LOS	F		F	D	D	F	E	F	B	F	C	C
Approach Vol, veh/h		148			273			2762			2693	
Approach Delay, s/veh		147.0			93.9			73.4			40.6	
Approach LOS		F			F			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.3	96.8		12.4	28.3	79.8		29.5
Change Period (Y+Rc), s	* 5.1	* 5.2		5.5	5.5	* 5.2		5.5
Max Green Setting (Gmax), s	* 11	* 87		6.9	22.8	* 75		24.0
Max Q Clear Time (g_c+I1), s	6.9	44.3		8.5	24.8	76.6		24.1
Green Ext Time (p_c), s	0.0	16.0		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	61.2
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	204	1166	473	188	1092	942	350	1491	300	484	873	139
Future Volume (veh/h)	204	1166	473	188	1092	942	350	1491	300	484	873	139
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	204	1166	473	188	1092	942	350	1491	300	484	873	139
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	182	1316	589	231	1365	611	377	1400	436	397	994	445
Arrive On Green	0.05	0.38	0.38	0.07	0.39	0.39	0.11	0.28	0.28	0.12	0.29	0.29
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1553	3375	3471	1553
Grp Volume(v), veh/h	204	1166	473	188	1092	942	350	1491	300	484	873	139
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1553	1688	1736	1553
Q Serve(g_s), s	7.5	43.7	37.9	7.6	38.8	54.7	14.4	39.4	24.2	16.5	33.7	9.9
Cycle Q Clear(g_c), s	7.5	43.7	37.9	7.6	38.8	54.7	14.4	39.4	24.2	16.5	33.7	9.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	182	1316	589	231	1365	611	377	1400	436	397	994	445
V/C Ratio(X)	1.12	0.89	0.80	0.82	0.80	1.54	0.93	1.07	0.69	1.22	0.88	0.31
Avail Cap(c_a), veh/h	182	1316	589	231	1365	611	377	1400	436	397	999	447
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.5	41.0	39.2	64.6	38.0	42.9	61.8	50.5	45.0	62.0	47.8	39.3
Incr Delay (d2), s/veh	102.7	7.4	7.4	18.6	3.2	252.0	28.3	43.5	3.8	119.8	8.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	22.6	17.6	4.2	19.4	66.5	8.2	23.7	10.8	14.3	17.3	4.2
LnGrp Delay(d),s/veh	169.2	48.4	46.6	83.2	41.2	294.9	90.0	94.0	48.8	181.8	56.4	39.4
LnGrp LOS	F	D	D	F	D	F	F	F	D	F	E	D
Approach Vol, veh/h		1843			2222			2141			1496	
Approach Delay, s/veh		61.3			152.3			87.0			95.4	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.2	45.8	13.0	60.4	22.0	45.0	15.0	58.4
Change Period (Y+Rc), s	5.5	* 5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	15.7	* 40	7.5	* 55	16.5	* 39	9.5	* 52
Max Q Clear Time (g_c+I1), s	16.4	35.7	9.5	56.7	18.5	41.4	9.6	45.7
Green Ext Time (p_c), s	0.0	2.5	0.0	0.0	0.0	0.0	0.0	3.6

Intersection Summary	
HCM 2010 Ctrl Delay	101.3
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	335	1406	450	120	1570	664	370	1436	107	674	648	90
Future Volume (veh/h)	335	1406	450	120	1570	664	370	1436	107	674	648	90
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1845	1845	1792	1792	1845	1845	1845	1827	1845	1827
Adj Flow Rate, veh/h	335	1406	450	120	1570	664	370	1436	107	674	648	0
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	3	3	6	6	3	3	3	4	3	4
Cap, veh/h	329	1674	536	169	1449	451	424	1340	417	623	1628	502
Arrive On Green	0.10	0.34	0.34	0.05	0.30	0.30	0.12	0.27	0.27	0.18	0.32	0.00
Sat Flow, veh/h	3312	4893	1568	3408	4893	1524	3408	5036	1568	3375	5036	1553
Grp Volume(v), veh/h	335	1406	450	120	1570	664	370	1436	107	674	648	0
Grp Sat Flow(s),veh/h/ln	1656	1631	1568	1704	1631	1524	1704	1679	1568	1688	1679	1553
Q Serve(g_s), s	12.9	34.5	34.4	4.5	38.5	38.5	13.9	34.6	7.0	24.0	13.0	0.0
Cycle Q Clear(g_c), s	12.9	34.5	34.4	4.5	38.5	38.5	13.9	34.6	7.0	24.0	13.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	329	1674	536	169	1449	451	424	1340	417	623	1628	502
V/C Ratio(X)	1.02	0.84	0.84	0.71	1.08	1.47	0.87	1.07	0.26	1.08	0.40	0.00
Avail Cap(c_a), veh/h	329	1675	537	181	1449	451	558	1340	417	623	1628	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	58.6	39.5	39.5	60.9	45.8	45.8	55.9	47.7	37.6	53.0	34.2	0.0
Incr Delay (d2), s/veh	54.7	3.8	10.7	11.4	49.7	224.0	9.5	46.1	0.3	60.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	16.1	16.5	2.4	24.0	44.3	7.1	21.7	3.1	16.4	6.0	0.0
LnGrp Delay(d),s/veh	113.3	43.3	50.2	72.2	95.4	269.8	65.4	93.8	37.9	113.1	34.2	0.0
LnGrp LOS	F	D	D	E	F	F	E	F	D	F	C	
Approach Vol, veh/h		2191			2354			1913			1322	
Approach Delay, s/veh		55.4			143.4			85.2			74.4	
Approach LOS		E			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.6	47.1	17.2	44.1	29.0	39.7	11.2	50.1
Change Period (Y+Rc), s	* 5.4	5.1	* 4.3	5.6	5.0	5.1	* 4.8	* 5.6
Max Green Setting (Gmax), s	* 21	36.9	* 13	38.5	24.0	34.6	* 6.9	* 45
Max Q Clear Time (g_c+I1), s	15.9	15.0	14.9	40.5	26.0	36.6	6.5	36.5
Green Ext Time (p_c), s	0.3	10.2	0.0	0.0	0.0	0.0	0.0	4.8

Intersection Summary	
HCM 2010 Ctrl Delay	92.6
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	410	96	287	560	123	231	1668	202	37	357	57
Future Volume (veh/h)	9	410	96	287	560	123	231	1668	202	37	357	57
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	9	410	96	287	560	123	231	1668	202	37	357	57
Adj No. of Lanes	2	1	0	2	2	1	1	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	21	310	73	310	1048	469	253	1682	200	65	1429	639
Arrive On Green	0.01	0.21	0.21	0.09	0.30	0.30	0.14	0.53	0.53	0.02	0.41	0.41
Sat Flow, veh/h	3408	1446	339	3408	3505	1568	1757	3155	376	3408	3505	1568
Grp Volume(v), veh/h	9	0	506	287	560	123	231	914	956	37	357	57
Grp Sat Flow(s),veh/h/ln	1704	0	1785	1704	1752	1568	1757	1752	1778	1704	1752	1568
Q Serve(g_s), s	0.4	0.0	31.8	12.4	19.8	8.9	19.2	75.5	79.1	1.6	10.0	3.3
Cycle Q Clear(g_c), s	0.4	0.0	31.8	12.4	19.8	8.9	19.2	75.5	79.1	1.6	10.0	3.3
Prop In Lane	1.00		0.19	1.00		1.00	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	21	0	382	310	1048	469	253	934	948	65	1429	639
V/C Ratio(X)	0.42	0.00	1.32	0.93	0.53	0.26	0.91	0.98	1.01	0.57	0.25	0.09
Avail Cap(c_a), veh/h	239	0	382	310	1048	469	273	934	948	101	1429	639
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.5	0.0	58.3	67.0	43.4	39.6	62.6	33.8	34.7	72.2	29.0	27.0
Incr Delay (d2), s/veh	12.7	0.0	162.6	32.5	0.5	0.3	31.2	24.1	31.5	7.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	32.9	7.3	9.6	3.9	11.6	42.6	47.0	0.8	4.8	1.4
LnGrp Delay(d),s/veh	86.1	0.0	220.9	99.4	43.9	39.9	93.8	58.0	66.1	79.9	29.0	27.0
LnGrp LOS	F		F	F	D	D	F	E	F	E	C	C
Approach Vol, veh/h		515			970			2101			451	
Approach Delay, s/veh		218.6			59.8			65.6			32.9	
Approach LOS		F			E			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.9	65.5	19.0	37.0	8.3	84.1	6.4	49.6
Change Period (Y+Rc), s	5.5	5.0	5.5	* 5.2	5.5	5.0	5.5	* 5.2
Max Green Setting (Gmax), s	23.1	60.4	13.5	* 32	4.4	79.1	10.4	* 35
Max Q Clear Time (g_c+I1), s	21.2	12.0	14.4	33.8	3.6	81.1	2.4	21.8
Green Ext Time (p_c), s	0.2	17.4	0.0	0.0	0.0	0.0	0.0	4.8

Intersection Summary	
HCM 2010 Ctrl Delay	80.1
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	427	34	96	247	19	9	1987	465	20	492	186
Future Volume (veh/h)	170	427	34	96	247	19	9	1987	465	20	492	186
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1828	1900	1845	1796	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	170	427	34	96	247	19	9	1987	465	20	492	186
Adj No. of Lanes	2	1	0	2	1	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	4	4	3	6	6	3	3	3	3	3	3
Cap, veh/h	149	370	29	103	342	26	11	1686	380	25	1498	563
Arrive On Green	0.04	0.22	0.22	0.03	0.21	0.21	0.01	0.59	0.59	0.01	0.60	0.60
Sat Flow, veh/h	3408	1672	133	3408	1647	127	1757	2844	640	1757	2494	937
Grp Volume(v), veh/h	170	0	461	96	0	266	9	1195	1257	20	345	333
Grp Sat Flow(s),veh/h/ln	1704	0	1805	1704	0	1774	1757	1752	1732	1757	1752	1679
Q Serve(g_s), s	6.5	0.0	33.0	4.2	0.0	20.8	0.8	88.4	88.4	1.7	14.6	14.7
Cycle Q Clear(g_c), s	6.5	0.0	33.0	4.2	0.0	20.8	0.8	88.4	88.4	1.7	14.6	14.7
Prop In Lane	1.00		0.07	1.00		0.07	1.00		0.37	1.00		0.56
Lane Grp Cap(c), veh/h	149	0	399	103	0	369	11	1039	1027	25	1053	1009
V/C Ratio(X)	1.14	0.00	1.15	0.93	0.00	0.72	0.82	1.15	1.22	0.82	0.33	0.33
Avail Cap(c_a), veh/h	149	0	399	103	0	369	41	1039	1027	35	1053	1009
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.3	0.0	58.0	72.1	0.0	55.0	74.0	30.3	30.3	73.3	14.8	14.8
Incr Delay (d2), s/veh	117.8	0.0	94.1	67.4	0.0	5.9	80.3	78.7	109.9	60.2	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	0.0	26.9	2.9	0.0	10.8	0.6	65.1	73.3	1.2	7.0	6.9
LnGrp Delay(d),s/veh	189.0	0.0	152.2	139.6	0.0	60.9	154.3	109.0	140.2	133.5	15.0	15.0
LnGrp LOS	F		F	F		E	F	F	F	F	B	B
Approach Vol, veh/h		631			362			2461			698	
Approach Delay, s/veh		162.1			81.8			125.1			18.4	
Approach LOS		F			F			F			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	93.5	12.0	36.0	6.4	94.6	10.0	38.0
Change Period (Y+Rc), s	5.5	* 5.1	5.5	* 5	5.5	* 5.1	5.5	* 5
Max Green Setting (Gmax), s	3.0	* 88	6.5	* 31	3.5	* 88	4.5	* 33
Max Q Clear Time (g_c+I1), s	3.7	90.4	8.5	22.8	2.8	16.7	6.2	35.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.6	0.0	48.6	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	109.0
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

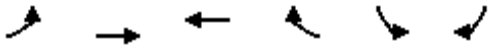
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	498	250	135	22	211	173	110	1665	89	35	486	92
Future Volume (veh/h)	498	250	135	22	211	173	110	1665	89	35	486	92
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1827	1844	1900	1845	1845	1900
Adj Flow Rate, veh/h	498	250	135	22	211	173	110	1665	89	35	486	92
Adj No. of Lanes	2	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	3	3	3	3	3
Cap, veh/h	491	370	200	27	187	153	131	1644	87	45	1279	241
Arrive On Green	0.14	0.33	0.33	0.02	0.20	0.20	0.08	0.49	0.49	0.03	0.43	0.43
Sat Flow, veh/h	3408	1128	609	1757	939	770	1740	3384	180	1757	2945	555
Grp Volume(v), veh/h	498	0	385	22	0	384	110	857	897	35	288	290
Grp Sat Flow(s),veh/h/ln	1704	0	1737	1757	0	1709	1740	1752	1812	1757	1752	1747
Q Serve(g_s), s	20.9	0.0	27.8	1.8	0.0	28.9	9.1	70.5	70.5	2.9	16.2	16.3
Cycle Q Clear(g_c), s	20.9	0.0	27.8	1.8	0.0	28.9	9.1	70.5	70.5	2.9	16.2	16.3
Prop In Lane	1.00		0.35	1.00		0.45	1.00		0.10	1.00		0.32
Lane Grp Cap(c), veh/h	491	0	569	27	0	340	131	851	880	45	761	759
V/C Ratio(X)	1.01	0.00	0.68	0.81	0.00	1.13	0.84	1.01	1.02	0.78	0.38	0.38
Avail Cap(c_a), veh/h	491	0	569	52	0	340	203	851	880	47	761	759
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.1	0.0	42.1	71.2	0.0	58.1	66.2	37.3	37.3	70.3	27.8	27.8
Incr Delay (d2), s/veh	44.3	0.0	2.6	18.6	0.0	88.1	9.8	32.6	35.0	50.5	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.8	0.0	13.8	1.0	0.0	21.9	4.7	41.8	43.8	2.0	7.9	8.0
LnGrp Delay(d),s/veh	106.4	0.0	44.7	89.9	0.0	146.2	76.0	69.9	72.3	120.8	28.1	28.1
LnGrp LOS	F		D	F		F	E	F	F	F	C	C
Approach Vol, veh/h		883			406			1864			613	
Approach Delay, s/veh		79.5			143.2			71.4			33.4	
Approach LOS		E			F			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	75.6	26.4	34.3	16.3	68.1	7.7	53.0
Change Period (Y+Rc), s	* 5.1	5.1	5.5	* 5.4	* 5.3	5.1	5.5	* 5.4
Max Green Setting (Gmax), s	* 3.9	70.5	20.9	* 29	* 17	57.3	4.3	* 45
Max Q Clear Time (g_c+I1), s	4.9	72.5	22.9	30.9	11.1	18.3	3.8	29.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	18.5	0.0	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	74.9
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	309	1079	1981	876	708	197
Future Volume (veh/h)	309	1079	1981	876	708	197
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	309	1079	1981	876	708	197
Adj No. of Lanes	2	3	3	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	358	3001	2118	660	899	414
Arrive On Green	0.11	0.60	0.42	0.42	0.26	0.26
Sat Flow, veh/h	3408	5202	5202	1568	3408	1568
Grp Volume(v), veh/h	309	1079	1981	876	708	197
Grp Sat Flow(s),veh/h/ln	1704	1679	1679	1568	1704	1568
Q Serve(g_s), s	5.1	6.3	21.4	24.0	11.0	6.0
Cycle Q Clear(g_c), s	5.1	6.3	21.4	24.0	11.0	6.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	358	3001	2118	660	899	414
V/C Ratio(X)	0.86	0.36	0.94	1.33	0.79	0.48
Avail Cap(c_a), veh/h	358	3001	2118	660	1075	495
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.1	5.9	15.8	16.5	19.5	17.7
Incr Delay (d2), s/veh	18.9	0.1	8.5	158.0	3.3	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	2.9	11.4	45.4	5.5	5.5
LnGrp Delay(d),s/veh	44.0	6.0	24.3	174.5	22.8	18.5
LnGrp LOS	D	A	C	F	C	B
Approach Vol, veh/h		1388	2857		905	
Approach Delay, s/veh		14.5	70.4		21.9	
Approach LOS		B	E		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				38.0		19.1	10.0	28.0
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				34.0		18.0	6.0	24.0
Max Q Clear Time (g_c+I1), s				8.3		13.0	7.1	26.0
Green Ext Time (p_c), s				23.0		2.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	46.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	833	133	562	1244	311	177	695	784	339	283	49
Future Volume (veh/h)	117	833	133	562	1244	311	177	695	784	339	283	49
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1792	1845	1845	1792	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	117	833	133	562	1244	311	177	695	784	339	283	49
Adj No. of Lanes	1	2	1	1	2	1	1	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	6	3	3	6	3	3	3	3	3	3	3
Cap, veh/h	70	695	320	281	1103	508	202	365	411	182	1397	625
Arrive On Green	0.04	0.20	0.20	0.16	0.32	0.32	0.11	0.46	0.46	0.05	0.40	0.40
Sat Flow, veh/h	1757	3406	1568	1757	3406	1568	1757	793	894	3408	3505	1568
Grp Volume(v), veh/h	117	833	133	562	1244	311	177	0	1479	339	283	49
Grp Sat Flow(s),veh/h/ln	1757	1703	1568	1757	1703	1568	1757	0	1687	1704	1752	1568
Q Serve(g_s), s	6.0	30.6	11.1	24.0	48.6	25.1	14.9	0.0	69.0	8.0	7.9	2.9
Cycle Q Clear(g_c), s	6.0	30.6	11.1	24.0	48.6	25.1	14.9	0.0	69.0	8.0	7.9	2.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.53	1.00		1.00
Lane Grp Cap(c), veh/h	70	695	320	281	1103	508	202	0	776	182	1397	625
V/C Ratio(X)	1.66	1.20	0.42	2.00	1.13	0.61	0.88	0.00	1.91	1.86	0.20	0.08
Avail Cap(c_a), veh/h	70	695	320	281	1103	508	281	0	776	182	1397	625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.0	59.7	51.9	63.0	50.7	42.8	65.4	0.0	40.5	71.0	29.5	28.0
Incr Delay (d2), s/veh	353.5	103.1	1.2	462.2	69.3	2.6	19.8	0.0	412.5	409.5	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.8	24.3	4.9	47.7	33.5	11.2	8.3	0.0	121.0	14.1	3.9	1.3
LnGrp Delay(d),s/veh	425.5	162.8	53.2	525.2	120.0	45.3	85.1	0.0	453.0	480.5	29.6	28.1
LnGrp LOS	F	F	D	F	F	D	F		F	F	C	C
Approach Vol, veh/h		1083			2117			1656			671	
Approach Delay, s/veh		177.7			216.6			413.7			257.3	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.0	37.0	21.2	63.8	10.0	55.0	12.0	73.0
Change Period (Y+Rc), s	4.0	6.4	4.0	4.0	4.0	6.4	4.0	4.0
Max Green Setting (Gmax), s	24.0	30.6	24.0	53.0	6.0	48.6	8.0	69.0
Max Q Clear Time (g_c+I1), s	26.0	32.6	16.9	9.9	8.0	50.6	10.0	71.0
Green Ext Time (p_c), s	0.0	0.0	0.4	24.1	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	273.0
HCM 2010 LOS	F



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	664	22	69	981	259	554
Future Volume (veh/h)	664	22	69	981	259	554
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	664	22	69	981	259	554
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	664	592	89	984	809	687
Arrive On Green	0.38	0.38	0.05	0.53	0.44	0.44
Sat Flow, veh/h	1757	1568	1757	1845	1845	1568
Grp Volume(v), veh/h	664	22	69	981	259	554
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1845	1845	1568
Q Serve(g_s), s	34.0	0.8	3.5	47.7	8.3	27.6
Cycle Q Clear(g_c), s	34.0	0.8	3.5	47.7	8.3	27.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	664	592	89	984	809	687
V/C Ratio(X)	1.00	0.04	0.78	1.00	0.32	0.81
Avail Cap(c_a), veh/h	664	592	176	984	809	687
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.0	17.7	42.2	20.9	16.5	22.0
Incr Delay (d2), s/veh	35.0	0.0	13.4	28.0	0.2	7.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.9	0.9	2.0	31.6	4.2	13.2
LnGrp Delay(d),s/veh	63.0	17.7	55.6	48.9	16.7	29.0
LnGrp LOS	F	B	E	D	B	C
Approach Vol, veh/h	686			1050	813	
Approach Delay, s/veh	61.6			49.3	25.1	
Approach LOS	E			D	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		52.0		38.0	8.6	43.4		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		48.0		34.0	9.0	35.0		
Max Q Clear Time (g_c+I1), s		49.7		36.0	5.5	29.6		
Green Ext Time (p_c), s		0.0		0.0	0.0	3.8		

Intersection Summary	
HCM 2010 Ctrl Delay	44.9
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	221	21	46	193	8	125	956	171	7	161	14
Future Volume (veh/h)	55	221	21	46	193	8	125	956	171	7	161	14
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1759	1759	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	55	221	21	46	193	8	125	956	171	7	161	14
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	8	8	8	3	3	3	3	3	3
Cap, veh/h	82	241	23	72	243	10	154	990	177	55	993	86
Arrive On Green	0.05	0.15	0.15	0.04	0.14	0.14	0.09	0.65	0.65	0.03	0.59	0.59
Sat Flow, veh/h	1707	1612	153	1675	1677	70	1757	1524	273	1757	1673	146
Grp Volume(v), veh/h	55	0	242	46	0	201	125	0	1127	7	0	175
Grp Sat Flow(s),veh/h/ln	1707	0	1765	1675	0	1747	1757	0	1797	1757	0	1819
Q Serve(g_s), s	4.0	0.0	17.1	3.4	0.0	14.1	8.9	0.0	74.9	0.5	0.0	5.5
Cycle Q Clear(g_c), s	4.0	0.0	17.1	3.4	0.0	14.1	8.9	0.0	74.9	0.5	0.0	5.5
Prop In Lane	1.00		0.09	1.00		0.04	1.00		0.15	1.00		0.08
Lane Grp Cap(c), veh/h	82	0	264	72	0	253	154	0	1167	55	0	1079
V/C Ratio(X)	0.67	0.00	0.92	0.64	0.00	0.79	0.81	0.00	0.97	0.13	0.00	0.16
Avail Cap(c_a), veh/h	188	0	264	185	0	262	263	0	1232	194	0	1175
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.4	0.0	53.2	59.7	0.0	52.4	56.9	0.0	20.9	59.7	0.0	11.6
Incr Delay (d2), s/veh	9.1	0.0	33.8	8.9	0.0	15.0	9.8	0.0	17.6	1.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	10.8	1.8	0.0	7.9	4.7	0.0	42.3	0.3	0.0	2.7
LnGrp Delay(d),s/veh	68.5	0.0	87.0	68.6	0.0	67.4	66.7	0.0	38.6	60.8	0.0	11.7
LnGrp LOS	E		F	E		E	E		D	E		B
Approach Vol, veh/h		297			247			1252			182	
Approach Delay, s/veh		83.6			67.6			41.4			13.6	
Approach LOS		F			E			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	86.4	9.5	23.0	15.1	79.3	10.1	22.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	14.0	87.0	14.0	19.0	19.0	82.0	14.0	19.0
Max Q Clear Time (g_c+I1), s	2.5	76.9	5.4	19.1	10.9	7.5	6.0	16.1
Green Ext Time (p_c), s	0.0	5.5	0.1	0.0	0.2	11.1	0.1	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	48.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	173	154	35	128	118	199	37	1215	61	600	1708	628
Future Volume (veh/h)	173	154	35	128	118	199	37	1215	61	600	1708	628
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	173	154	35	128	118	199	37	1215	61	600	1708	628
Adj No. of Lanes	2	3	0	2	1	2	2	3	0	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	217	424	91	206	179	933	75	1591	80	682	2528	787
Arrive On Green	0.06	0.10	0.10	0.06	0.10	0.10	0.02	0.32	0.32	0.20	0.50	0.50
Sat Flow, veh/h	3408	4150	894	3514	1845	3136	3408	4912	247	3408	5036	1568
Grp Volume(v), veh/h	173	123	66	128	118	199	37	830	446	600	1708	628
Grp Sat Flow(s),veh/h/ln	1704	1679	1687	1757	1845	1568	1704	1679	1801	1704	1679	1568
Q Serve(g_s), s	3.5	2.4	2.6	2.5	4.4	3.4	0.8	15.7	15.7	12.1	18.1	23.5
Cycle Q Clear(g_c), s	3.5	2.4	2.6	2.5	4.4	3.4	0.8	15.7	15.7	12.1	18.1	23.5
Prop In Lane	1.00		0.53	1.00		1.00	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	217	343	172	206	179	933	75	1087	583	682	2528	787
V/C Ratio(X)	0.80	0.36	0.38	0.62	0.66	0.21	0.50	0.76	0.76	0.88	0.68	0.80
Avail Cap(c_a), veh/h	217	1400	703	238	782	1957	145	1385	743	698	2875	895
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.7	29.6	29.7	32.5	30.8	18.6	34.2	21.5	21.5	27.5	13.3	14.6
Incr Delay (d2), s/veh	17.3	0.2	0.5	2.1	1.5	0.0	1.9	1.4	2.6	11.7	0.4	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	1.1	1.2	1.3	2.3	1.5	0.4	7.5	8.2	6.8	8.3	10.8
LnGrp Delay(d),s/veh	50.0	29.8	30.2	34.6	32.3	18.7	36.1	22.9	24.1	39.2	13.6	18.5
LnGrp LOS	D	C	C	C	C	B	D	C	C	D	B	B
Approach Vol, veh/h		362			445			1313			2936	
Approach Delay, s/veh		39.5			26.9			23.7			19.9	
Approach LOS		D			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.1	41.1	10.0	12.6	19.7	28.5	9.7	12.9
Change Period (Y+Rc), s	5.5	5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	3.0	40.4	4.5	* 30	14.5	* 29	4.8	* 30
Max Q Clear Time (g_c+I1), s	2.8	25.5	5.5	6.4	14.1	17.7	4.5	4.6
Green Ext Time (p_c), s	0.0	5.8	0.0	0.5	0.1	5.2	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	22.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	64	13	38	46	66	37	1177	63	133	1191	215
Future Volume (veh/h)	105	64	13	38	46	66	37	1177	63	133	1191	215
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	91	84	13	38	46	66	37	1177	63	133	1191	215
Adj No. of Lanes	1	1	0	1	1	1	1	3	0	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	154	137	21	127	133	113	43	1595	85	198	1760	318
Arrive On Green	0.09	0.09	0.09	0.07	0.07	0.07	0.02	0.33	0.33	0.11	0.41	0.41
Sat Flow, veh/h	1757	1561	242	1757	1845	1568	1757	4894	262	1757	4291	775
Grp Volume(v), veh/h	91	0	97	38	46	66	37	807	433	133	932	474
Grp Sat Flow(s),veh/h/ln	1757	0	1802	1757	1845	1568	1757	1679	1798	1757	1679	1708
Q Serve(g_s), s	2.5	0.0	2.6	1.0	1.2	2.1	1.1	10.9	10.9	3.7	11.5	11.5
Cycle Q Clear(g_c), s	2.5	0.0	2.6	1.0	1.2	2.1	1.1	10.9	10.9	3.7	11.5	11.5
Prop In Lane	1.00		0.13	1.00		1.00	1.00		0.15	1.00		0.45
Lane Grp Cap(c), veh/h	154	0	158	127	133	113	43	1094	586	198	1377	700
V/C Ratio(X)	0.59	0.00	0.61	0.30	0.34	0.58	0.86	0.74	0.74	0.67	0.68	0.68
Avail Cap(c_a), veh/h	967	0	992	933	979	833	117	1703	913	304	2047	1041
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.3	0.0	22.4	22.4	22.4	22.8	24.7	15.2	15.2	21.7	12.2	12.2
Incr Delay (d2), s/veh	1.3	0.0	1.4	0.5	0.6	1.8	16.1	0.4	0.7	1.5	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	1.4	0.5	0.6	1.0	0.7	5.0	5.4	1.9	5.3	5.5
LnGrp Delay(d),s/veh	23.6	0.0	23.8	22.8	23.0	24.6	40.8	15.6	15.9	23.1	12.5	12.7
LnGrp LOS	C		C	C	C	C	D	B	B	C	B	B
Approach Vol, veh/h		188			150			1277			1539	
Approach Delay, s/veh		23.7			23.7			16.4			13.5	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.0	25.7		9.2	10.3	21.4		10.0
Change Period (Y+Rc), s	* 4.8	4.8		5.5	* 4.6	4.8		5.5
Max Green Setting (Gmax), s	* 3.4	31.0		27.0	* 8.8	25.8		28.0
Max Q Clear Time (g_c+I1), s	3.1	13.5		4.1	5.7	12.9		4.6
Green Ext Time (p_c), s	0.0	4.0		0.1	0.0	3.7		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	15.8
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	390	272	87	372	71	330	1105	136	123	614	241
Future Volume (veh/h)	89	390	272	87	372	71	330	1105	136	123	614	241
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	89	390	272	87	372	71	330	1105	136	123	614	241
Adj No. of Lanes	2	3	0	2	3	1	2	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	155	744	347	152	1112	346	373	1493	465	205	885	340
Arrive On Green	0.05	0.22	0.22	0.04	0.22	0.22	0.11	0.30	0.30	0.06	0.25	0.25
Sat Flow, veh/h	3408	3357	1568	3408	5036	1568	3408	5036	1568	3408	3583	1376
Grp Volume(v), veh/h	89	390	272	87	372	71	330	1105	136	123	575	280
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1679	1568	1704	1679	1602
Q Serve(g_s), s	1.5	6.1	9.7	1.5	3.7	2.2	5.7	11.7	4.0	2.1	9.2	9.5
Cycle Q Clear(g_c), s	1.5	6.1	9.7	1.5	3.7	2.2	5.7	11.7	4.0	2.1	9.2	9.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.86
Lane Grp Cap(c), veh/h	155	744	347	152	1112	346	373	1493	465	205	829	396
V/C Ratio(X)	0.57	0.52	0.78	0.57	0.33	0.21	0.88	0.74	0.29	0.60	0.69	0.71
Avail Cap(c_a), veh/h	172	1623	758	189	2459	766	373	2569	800	304	1645	785
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.8	20.4	21.8	27.8	19.5	18.9	26.1	18.8	16.1	27.2	20.3	20.4
Incr Delay (d2), s/veh	1.7	0.2	1.5	1.2	0.1	0.1	20.8	0.3	0.1	1.1	0.4	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	2.8	4.3	0.7	1.7	1.0	3.7	5.5	1.7	1.0	4.3	4.3
LnGrp Delay(d),s/veh	29.5	20.6	23.2	29.1	19.5	19.0	46.9	19.1	16.2	28.3	20.7	21.3
LnGrp LOS	C	C	C	C	B	B	D	B	B	C	C	C
Approach Vol, veh/h		751			530			1571			978	
Approach Delay, s/veh		22.6			21.0			24.7			21.8	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	20.3	8.2	18.9	9.1	23.2	8.2	19.0
Change Period (Y+Rc), s	5.5	* 5.6	5.5	5.8	5.5	* 5.6	5.5	5.8
Max Green Setting (Gmax), s	6.5	* 29	3.0	29.0	5.3	* 30	3.3	28.7
Max Q Clear Time (g_c+I1), s	7.7	11.5	3.5	5.7	4.1	13.7	3.5	11.7
Green Ext Time (p_c), s	0.0	3.2	0.0	1.5	0.0	3.2	0.0	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	23.0
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	157	167	33	94	223	205	48	800	102	44	648	26
Future Volume (veh/h)	157	167	33	94	223	205	48	800	102	44	648	26
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	157	167	33	94	223	205	48	800	102	44	648	26
Adj No. of Lanes	1	2	0	1	1	1	1	1	0	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	186	569	110	118	280	238	61	829	106	79	932	792
Arrive On Green	0.11	0.19	0.19	0.07	0.15	0.15	0.03	0.52	0.52	0.02	0.51	0.51
Sat Flow, veh/h	1757	2930	567	1757	1845	1568	1757	1604	205	3408	1845	1568
Grp Volume(v), veh/h	157	98	102	94	223	205	48	0	902	44	648	26
Grp Sat Flow(s),veh/h/ln	1757	1752	1745	1757	1845	1568	1757	0	1809	1704	1845	1568
Q Serve(g_s), s	9.1	5.0	5.2	5.5	12.1	13.2	2.8	0.0	49.9	1.3	27.8	0.9
Cycle Q Clear(g_c), s	9.1	5.0	5.2	5.5	12.1	13.2	2.8	0.0	49.9	1.3	27.8	0.9
Prop In Lane	1.00		0.33	1.00		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	186	341	339	118	280	238	61	0	935	79	932	792
V/C Ratio(X)	0.84	0.29	0.30	0.79	0.80	0.86	0.79	0.00	0.96	0.56	0.70	0.03
Avail Cap(c_a), veh/h	215	613	610	184	608	516	110	0	1122	102	1078	917
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.6	35.7	35.8	47.7	42.5	43.0	49.7	0.0	24.2	50.2	19.6	12.9
Incr Delay (d2), s/veh	20.3	0.2	0.2	5.4	2.0	3.6	8.0	0.0	16.6	2.3	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	2.4	2.5	2.8	6.3	6.0	1.5	0.0	29.1	0.6	14.3	0.4
LnGrp Delay(d),s/veh	65.8	35.9	36.0	53.1	44.5	46.5	57.7	0.0	40.7	52.5	20.8	12.9
LnGrp LOS	E	D	D	D	D	D	E		D	D	C	B
Approach Vol, veh/h		357			522			950			718	
Approach Delay, s/veh		49.1			46.8			41.6			22.4	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.5	20.7	9.1	57.5	12.1	25.1	7.9	58.8
Change Period (Y+Rc), s	5.5	* 4.9	5.5	* 5.1	* 5.1	* 4.9	5.5	* 5.1
Max Green Setting (Gmax), s	12.7	* 34	6.5	* 61	* 11	* 36	3.1	* 64
Max Q Clear Time (g_c+I1), s	11.1	15.2	4.8	29.8	7.5	7.2	3.3	51.9
Green Ext Time (p_c), s	0.0	0.5	0.0	1.8	0.0	0.5	0.0	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	38.3
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	332	607	53	39	638	47	148	262	230	84	144	440
Future Volume (veh/h)	332	607	53	39	638	47	148	262	230	84	144	440
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	332	607	53	39	638	47	148	262	230	84	144	440
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	442	1206	539	110	864	387	236	1035	463	175	972	435
Arrive On Green	0.13	0.34	0.34	0.03	0.25	0.25	0.07	0.30	0.30	0.05	0.28	0.28
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	332	607	53	39	638	47	148	262	230	84	144	440
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	5.4	7.9	1.3	0.6	9.7	1.3	2.4	3.3	7.0	1.4	1.8	16.0
Cycle Q Clear(g_c), s	5.4	7.9	1.3	0.6	9.7	1.3	2.4	3.3	7.0	1.4	1.8	16.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	442	1206	539	110	864	387	236	1035	463	175	972	435
V/C Ratio(X)	0.75	0.50	0.10	0.36	0.74	0.12	0.63	0.25	0.50	0.48	0.15	1.01
Avail Cap(c_a), veh/h	472	1214	543	236	972	435	236	1035	463	236	972	435
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.2	15.0	12.9	27.3	20.0	16.9	26.1	15.5	16.8	26.6	15.7	20.9
Incr Delay (d2), s/veh	6.2	0.3	0.1	1.9	2.7	0.1	5.1	0.1	0.8	2.0	0.1	46.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	3.8	0.6	0.3	4.9	0.6	1.3	1.6	3.1	0.7	0.9	12.4
LnGrp Delay(d),s/veh	30.4	15.3	12.9	29.3	22.7	17.0	31.3	15.6	17.6	28.7	15.8	67.2
LnGrp LOS	C	B	B	C	C	B	C	B	B	C	B	F
Approach Vol, veh/h		992			724			640			668	
Approach Delay, s/veh		20.3			22.7			20.0			51.3	
Approach LOS		C			C			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	21.0	5.9	23.9	8.0	20.0	11.5	18.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	4.0	20.0	4.0	16.0	8.0	16.0
Max Q Clear Time (g_c+I1), s	3.4	9.0	2.6	9.9	4.4	18.0	7.4	11.7
Green Ext Time (p_c), s	0.0	2.7	0.0	4.8	0.0	0.0	0.1	2.6

Intersection Summary	
HCM 2010 Ctrl Delay	27.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	531	28	29	1070	103	112	378	39	59	144	178
Future Volume (veh/h)	102	531	28	29	1070	103	112	378	39	59	144	178
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	102	531	28	29	1070	103	112	378	39	59	144	178
Adj No. of Lanes	2	2	0	1	2	1	1	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	198	1265	67	46	1197	536	130	479	407	148	423	359
Arrive On Green	0.06	0.37	0.37	0.03	0.34	0.34	0.07	0.26	0.26	0.04	0.23	0.23
Sat Flow, veh/h	3408	3387	178	1757	3505	1568	1757	1845	1568	3408	1845	1568
Grp Volume(v), veh/h	102	274	285	29	1070	103	112	378	39	59	144	178
Grp Sat Flow(s),veh/h/ln	1704	1752	1813	1757	1752	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	1.6	6.3	6.3	0.9	15.6	2.5	3.4	10.3	1.0	0.9	3.5	5.3
Cycle Q Clear(g_c), s	1.6	6.3	6.3	0.9	15.6	2.5	3.4	10.3	1.0	0.9	3.5	5.3
Prop In Lane	1.00		0.10	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	198	655	677	46	1197	536	130	479	407	148	423	359
V/C Ratio(X)	0.52	0.42	0.42	0.63	0.89	0.19	0.86	0.79	0.10	0.40	0.34	0.50
Avail Cap(c_a), veh/h	253	655	677	130	1236	553	130	582	495	253	582	495
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	12.5	12.5	26.0	16.8	12.5	24.7	18.6	15.1	25.1	17.4	18.1
Incr Delay (d2), s/veh	2.1	0.4	0.4	13.4	8.5	0.2	40.1	5.9	0.1	1.7	0.5	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	3.0	3.2	0.6	8.8	1.1	3.1	5.9	0.4	0.5	1.9	2.4
LnGrp Delay(d),s/veh	26.7	13.0	13.0	39.4	25.3	12.7	64.8	24.5	15.2	26.8	17.8	19.1
LnGrp LOS	C	B	B	D	C	B	E	C	B	C	B	B
Approach Vol, veh/h		661			1202			529			381	
Approach Delay, s/veh		15.1			24.5			32.3			19.8	
Approach LOS		B			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	18.0	5.4	24.1	8.0	16.3	7.1	22.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	17.0	4.0	19.0	4.0	17.0	4.0	19.0
Max Q Clear Time (g_c+I1), s	2.9	12.3	2.9	8.3	5.4	7.3	3.6	17.6
Green Ext Time (p_c), s	0.0	1.7	0.0	7.5	0.0	2.8	0.0	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	23.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	99	71	481	396	162	101	1269	113	210	1966	364
Future Volume (veh/h)	117	99	71	481	396	162	101	1269	113	210	1966	364
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	117	99	71	481	396	162	101	1269	113	210	1966	364
Adj No. of Lanes	2	2	1	2	2	1	2	4	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	177	458	205	546	864	495	147	2594	641	276	2250	700
Arrive On Green	0.05	0.13	0.13	0.16	0.23	0.23	0.04	0.41	0.41	0.08	0.45	0.45
Sat Flow, veh/h	3408	3505	1568	3514	3689	1568	3375	6285	1553	3375	4988	1553
Grp Volume(v), veh/h	117	99	71	481	396	162	101	1269	113	210	1966	364
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1757	1845	1568	1688	1571	1553	1688	1663	1553
Q Serve(g_s), s	3.4	2.6	4.2	13.5	9.3	8.0	3.0	15.0	4.7	6.2	36.1	17.0
Cycle Q Clear(g_c), s	3.4	2.6	4.2	13.5	9.3	8.0	3.0	15.0	4.7	6.2	36.1	17.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	177	458	205	546	864	495	147	2594	641	276	2250	700
V/C Ratio(X)	0.66	0.22	0.35	0.88	0.46	0.33	0.69	0.49	0.18	0.76	0.87	0.52
Avail Cap(c_a), veh/h	286	1005	450	594	1368	709	147	2594	641	430	2337	728
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.1	39.3	40.0	41.8	33.2	26.4	47.7	21.8	18.8	45.5	25.2	19.9
Incr Delay (d2), s/veh	1.6	0.3	1.5	12.8	1.0	1.1	10.7	0.1	0.0	1.6	4.7	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	1.3	1.9	7.5	4.9	3.6	1.6	6.5	2.0	2.9	17.5	7.6
LnGrp Delay(d),s/veh	48.7	39.7	41.5	54.6	34.3	27.4	58.4	21.9	18.9	47.1	29.9	22.0
LnGrp LOS	D	D	D	D	C	C	E	C	B	D	C	C
Approach Vol, veh/h		287			1039			1483			2540	
Approach Delay, s/veh		43.8			42.6			24.2			30.2	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.9	51.0	10.7	29.5	13.8	47.2	21.2	19.0
Change Period (Y+Rc), s	5.5	* 5.4	5.5	5.8	5.5	* 5.4	5.5	* 5.8
Max Green Setting (Gmax), s	4.4	* 47	8.5	37.5	12.9	* 39	17.1	* 29
Max Q Clear Time (g_c+I1), s	5.0	38.1	5.4	11.3	8.2	17.0	15.5	6.2
Green Ext Time (p_c), s	0.0	7.5	0.0	7.4	0.1	21.1	0.2	7.0

Intersection Summary	
HCM 2010 Ctrl Delay	31.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	273	118	88	345	130	316	1371	45	246	1132	335
Future Volume (veh/h)	138	273	118	88	345	130	316	1371	45	246	1132	335
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1827	1827	1827	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	138	273	118	88	345	130	316	1371	45	246	1132	335
Adj No. of Lanes	2	2	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	4	4	4	4	4	4
Cap, veh/h	193	638	286	136	828	258	372	2509	781	303	2406	749
Arrive On Green	0.06	0.18	0.18	0.04	0.17	0.17	0.11	0.50	0.50	0.09	0.48	0.48
Sat Flow, veh/h	3408	3505	1568	3375	4988	1553	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	138	273	118	88	345	130	316	1371	45	246	1132	335
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1688	1663	1553	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	4.9	8.5	8.2	3.2	7.7	9.4	11.3	23.3	1.8	8.8	18.8	17.6
Cycle Q Clear(g_c), s	4.9	8.5	8.2	3.2	7.7	9.4	11.3	23.3	1.8	8.8	18.8	17.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	193	638	286	136	828	258	372	2509	781	303	2406	749
V/C Ratio(X)	0.72	0.43	0.41	0.64	0.42	0.50	0.85	0.55	0.06	0.81	0.47	0.45
Avail Cap(c_a), veh/h	538	965	432	533	1382	430	533	2602	810	533	2594	808
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.3	44.8	44.6	58.4	46.1	46.9	53.9	21.0	15.7	55.2	21.4	21.1
Incr Delay (d2), s/veh	1.9	0.9	1.9	1.9	1.2	5.2	6.2	0.4	0.1	2.0	0.3	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	4.2	3.7	1.5	3.6	4.4	5.6	10.8	0.8	4.2	8.7	7.7
LnGrp Delay(d),s/veh	59.1	45.7	46.6	60.2	47.3	52.0	60.1	21.4	15.8	57.2	21.7	21.9
LnGrp LOS	E	D	D	E	D	D	E	C	B	E	C	C
Approach Vol, veh/h		529			563			1732			1713	
Approach Delay, s/veh		49.4			50.4			28.3			26.8	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.1	65.4	12.5	26.5	16.6	67.9	10.5	28.5
Change Period (Y+Rc), s	5.5	* 5.8	5.5	* 6	5.5	* 5.8	5.5	6.0
Max Green Setting (Gmax), s	19.5	* 64	19.5	* 34	19.5	* 64	19.5	34.0
Max Q Clear Time (g_c+I1), s	13.3	20.8	6.9	11.4	10.8	25.3	5.2	10.5
Green Ext Time (p_c), s	0.3	38.8	0.1	9.1	0.2	35.3	0.1	9.2

Intersection Summary	
HCM 2010 Ctrl Delay	33.0
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	70	143	12	30	14	336	1682	5	51	934	153
Future Volume (veh/h)	22	70	143	12	30	14	336	1682	5	51	934	153
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	22	70	143	12	30	14	336	1682	5	51	934	153
Adj No. of Lanes	2	1	2	1	1	0	2	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	54	169	252	16	101	47	475	2126	6	62	1540	480
Arrive On Green	0.02	0.09	0.09	0.01	0.08	0.08	0.14	0.41	0.41	0.04	0.31	0.31
Sat Flow, veh/h	3408	1845	2760	1757	1191	556	3375	5134	15	1740	4988	1553
Grp Volume(v), veh/h	22	70	143	12	0	44	336	1089	598	51	934	153
Grp Sat Flow(s),veh/h/ln	1704	1845	1380	1757	0	1747	1688	1663	1824	1740	1663	1553
Q Serve(g_s), s	0.3	1.8	2.6	0.4	0.0	1.2	4.9	14.7	14.7	1.5	8.2	3.9
Cycle Q Clear(g_c), s	0.3	1.8	2.6	0.4	0.0	1.2	4.9	14.7	14.7	1.5	8.2	3.9
Prop In Lane	1.00		1.00	1.00		0.32	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	54	169	252	16	0	148	475	1377	755	62	1540	480
V/C Ratio(X)	0.41	0.41	0.57	0.74	0.00	0.30	0.71	0.79	0.79	0.83	0.61	0.32
Avail Cap(c_a), veh/h	1294	1217	1821	667	0	1170	1281	4182	2294	661	6214	1935
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.0	22.0	22.4	25.4	0.0	22.1	21.1	13.1	13.1	24.6	15.1	13.6
Incr Delay (d2), s/veh	1.9	0.6	0.7	21.7	0.0	0.4	0.7	0.4	0.7	9.9	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.0	1.0	0.3	0.0	0.6	2.3	6.7	7.5	0.9	3.7	1.7
LnGrp Delay(d),s/veh	26.9	22.6	23.1	47.1	0.0	22.5	21.8	13.5	13.8	34.5	15.2	13.8
LnGrp LOS	C	C	C	D		C	C	B	B	C	B	B
Approach Vol, veh/h		235			56			2023			1138	
Approach Delay, s/veh		23.3			27.7			15.0			15.9	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	21.9	6.3	10.5	7.3	27.3	6.0	10.8
Change Period (Y+Rc), s	5.5	6.0	5.5	* 6.1	5.5	* 6	5.5	* 6.1
Max Green Setting (Gmax), s	19.5	64.0	19.5	* 34	19.5	* 65	19.5	* 34
Max Q Clear Time (g_c+I1), s	6.9	10.2	2.3	3.2	3.5	16.7	2.4	4.6
Green Ext Time (p_c), s	0.4	4.6	0.0	0.2	0.0	4.6	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	16.1
HCM 2010 LOS	B

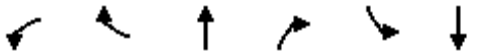
Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	192	41	50	126	194	329	331	1676	81	50	723	84
Future Volume (veh/h)	192	41	50	126	194	329	331	1676	81	50	723	84
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1759	1759	1759	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	192	41	50	126	194	329	331	1676	81	50	723	84
Adj No. of Lanes	2	2	0	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	8	8	8	4	4	4	4	4	4
Cap, veh/h	242	448	400	195	817	366	384	1812	564	90	1377	429
Arrive On Green	0.07	0.26	0.26	0.06	0.24	0.24	0.11	0.36	0.36	0.03	0.28	0.28
Sat Flow, veh/h	3408	1752	1568	3250	3343	1495	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	192	41	50	126	194	329	331	1676	81	50	723	84
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1625	1671	1495	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	4.1	1.3	1.8	2.8	3.5	15.9	7.2	24.1	2.6	1.1	9.2	3.1
Cycle Q Clear(g_c), s	4.1	1.3	1.8	2.8	3.5	15.9	7.2	24.1	2.6	1.1	9.2	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	242	448	400	195	817	366	384	1812	564	90	1377	429
V/C Ratio(X)	0.79	0.09	0.12	0.65	0.24	0.90	0.86	0.93	0.14	0.55	0.53	0.20
Avail Cap(c_a), veh/h	242	519	464	226	985	441	384	1850	576	136	1483	462
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.1	21.2	21.4	34.3	22.6	27.3	32.5	22.8	16.0	35.9	22.9	20.7
Incr Delay (d2), s/veh	15.2	0.0	0.1	3.0	0.1	17.1	17.0	8.2	0.0	2.0	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.6	0.8	1.3	1.6	8.3	4.3	12.4	1.1	0.5	4.2	1.3
LnGrp Delay(d),s/veh	49.4	21.2	21.4	37.4	22.7	44.5	49.5	31.0	16.0	37.9	23.0	20.8
LnGrp LOS	D	C	C	D	C	D	D	C	B	D	C	C
Approach Vol, veh/h		283			649			2088			857	
Approach Delay, s/veh		40.4			36.6			33.3			23.6	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	26.1	10.8	23.8	7.5	32.6	10.0	24.6
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	8.5	22.2	5.3	22.0	3.0	27.7	5.2	22.1
Max Q Clear Time (g_c+I1), s	9.2	11.2	6.1	17.9	3.1	26.1	4.8	3.8
Green Ext Time (p_c), s	0.0	3.9	0.0	0.3	0.0	1.1	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	32.3
HCM 2010 LOS	C



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	294	179	1681	77	41	774
Future Volume (veh/h)	294	179	1681	77	41	774
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1827	1827	1827	1827
Adj Flow Rate, veh/h	294	179	1681	77	41	774
Adj No. of Lanes	2	1	3	1	2	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	4	4	4	4
Cap, veh/h	537	247	2166	674	92	2056
Arrive On Green	0.16	0.16	0.43	0.43	0.03	0.59
Sat Flow, veh/h	3408	1568	5152	1553	3375	3563
Grp Volume(v), veh/h	294	179	1681	77	41	774
Grp Sat Flow(s),veh/h/ln	1704	1568	1663	1553	1688	1736
Q Serve(g_s), s	3.3	4.6	12.1	1.2	0.5	4.9
Cycle Q Clear(g_c), s	3.3	4.6	12.1	1.2	0.5	4.9
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	537	247	2166	674	92	2056
V/C Ratio(X)	0.55	0.72	0.78	0.11	0.45	0.38
Avail Cap(c_a), veh/h	609	280	3266	1017	1527	4298
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.3	16.8	10.1	7.1	20.1	4.5
Incr Delay (d2), s/veh	0.3	6.1	0.3	0.0	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.4	5.5	0.5	0.2	2.3
LnGrp Delay(d),s/veh	16.6	23.0	10.4	7.1	21.4	4.5
LnGrp LOS	B	C	B	A	C	A
Approach Vol, veh/h	473		1758			815
Approach Delay, s/veh	19.0		10.3			5.4
Approach LOS	B		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		29.9		12.1	6.6	23.2		
Change Period (Y+Rc), s		5.0		5.5	5.5	5.0		
Max Green Setting (Gmax), s		52.0		7.5	19.0	27.5		
Max Q Clear Time (g_c+I1), s		6.9		6.6	2.5	14.1		
Green Ext Time (p_c), s		4.8		0.1	0.0	4.2		

Intersection Summary	
HCM 2010 Ctrl Delay	10.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	644	3	92	34	33	123	224	877	29	55	450	574
Future Volume (veh/h)	644	3	92	34	33	123	224	877	29	55	450	574
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845	1845	1827	1827	1827	1837	1900
Adj Flow Rate, veh/h	644	3	92	34	33	123	224	877	29	55	450	574
Adj No. of Lanes	2	2	1	0	1	1	1	2	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	4	4	4	4	4
Cap, veh/h	739	760	340	96	93	165	263	1397	625	98	499	446
Arrive On Green	0.22	0.22	0.22	0.11	0.11	0.11	0.15	0.40	0.40	0.03	0.29	0.29
Sat Flow, veh/h	3408	3505	1568	913	886	1568	1757	3471	1553	3375	1745	1561
Grp Volume(v), veh/h	644	3	92	67	0	123	224	877	29	55	450	574
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1799	0	1568	1757	1736	1553	1688	1745	1561
Q Serve(g_s), s	14.3	0.1	3.8	2.7	0.0	6.0	9.7	15.8	0.9	1.3	19.5	22.4
Cycle Q Clear(g_c), s	14.3	0.1	3.8	2.7	0.0	6.0	9.7	15.8	0.9	1.3	19.5	22.4
Prop In Lane	1.00		1.00	0.51		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	739	760	340	190	0	165	263	1397	625	98	499	446
V/C Ratio(X)	0.87	0.00	0.27	0.35	0.00	0.74	0.85	0.63	0.05	0.56	0.90	1.29
Avail Cap(c_a), veh/h	783	805	360	413	0	360	282	1397	625	142	499	446
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.6	24.1	25.5	32.6	0.0	34.0	32.5	18.7	14.3	37.6	26.9	28.0
Incr Delay (d2), s/veh	10.2	0.0	0.4	1.1	0.0	6.5	20.4	0.9	0.0	4.9	19.5	145.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	0.0	1.7	1.4	0.0	2.9	6.2	7.7	0.4	0.7	12.1	27.5
LnGrp Delay(d),s/veh	39.8	24.1	26.0	33.7	0.0	40.5	52.9	19.6	14.3	42.5	46.5	173.0
LnGrp LOS	D	C	C	C		D	D	B	B	D	D	F
Approach Vol, veh/h		739			190			1130			1079	
Approach Delay, s/veh		38.0			38.1			26.1			113.6	
Approach LOS		D			D			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.3	27.4		13.7	7.2	36.6		21.0
Change Period (Y+Rc), s	* 4.6	5.0		* 5.4	* 4.9	5.0		4.0
Max Green Setting (Gmax), s	* 13	22.4		* 18	* 3.3	31.4		18.0
Max Q Clear Time (g_c+I1), s	11.7	24.4		8.0	3.3	17.8		16.3
Green Ext Time (p_c), s	0.1	0.0		0.4	0.0	8.2		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	59.7
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	193	386	38	45	870	120	88	753	31	106	298	214
Future Volume (veh/h)	193	386	38	45	870	120	88	753	31	106	298	214
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1792	1845	1845	1900	1827	1845	1845
Adj Flow Rate, veh/h	193	386	38	45	870	120	88	753	31	106	298	214
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	6	3	3	3	4	3	3
Cap, veh/h	145	830	705	58	738	683	109	582	24	84	585	627
Arrive On Green	0.08	0.45	0.45	0.03	0.40	0.40	0.06	0.33	0.33	0.05	0.32	0.32
Sat Flow, veh/h	1757	1845	1568	1757	1845	1524	1757	1759	72	1740	1845	1568
Grp Volume(v), veh/h	193	386	38	45	870	120	88	0	784	106	298	214
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1524	1757	0	1832	1740	1845	1568
Q Serve(g_s), s	12.0	21.1	2.0	3.7	58.0	6.8	7.2	0.0	48.0	7.0	19.1	13.7
Cycle Q Clear(g_c), s	12.0	21.1	2.0	3.7	58.0	6.8	7.2	0.0	48.0	7.0	19.1	13.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	145	830	705	58	738	683	109	0	606	84	585	627
V/C Ratio(X)	1.33	0.47	0.05	0.78	1.18	0.18	0.81	0.00	1.29	1.26	0.51	0.34
Avail Cap(c_a), veh/h	145	830	705	109	738	683	158	0	606	84	585	627
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.5	27.8	22.5	69.6	43.5	24.0	67.2	0.0	48.5	69.0	40.3	30.2
Incr Delay (d2), s/veh	186.9	0.4	0.0	19.6	94.3	0.1	17.9	0.0	143.8	184.0	0.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.4	10.8	0.9	2.1	48.8	2.9	4.0	0.0	48.5	7.7	9.8	6.0
LnGrp Delay(d),s/veh	253.4	28.2	22.5	89.2	137.8	24.1	85.0	0.0	192.3	253.0	41.0	30.5
LnGrp LOS	F	C	C	F	F	C	F		F	F	D	C
Approach Vol, veh/h		617			1035			872			618	
Approach Delay, s/veh		98.3			122.5			181.5			73.8	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	71.2	13.0	52.0	16.0	64.0	11.0	54.0
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	9.0	61.0	13.0	42.0	12.0	58.0	7.0	48.0
Max Q Clear Time (g_c+I1), s	5.7	23.1	9.2	21.1	14.0	60.0	9.0	50.0
Green Ext Time (p_c), s	0.0	8.6	0.1	6.4	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	124.5
HCM 2010 LOS	F

Notes

User approved changes to right turn type.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	143	8	36	720	258	128
Future Volume (veh/h)	143	8	36	720	258	128
Number	7	14	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1900	1827	1827	1827	1900
Adj Flow Rate, veh/h	143	8	36	720	258	128
Adj No. of Lanes	0	0	1	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	4	4	4	4
Cap, veh/h	174	10	46	980	359	178
Arrive On Green	0.11	0.11	0.03	0.54	0.31	0.31
Sat Flow, veh/h	1538	86	1740	1827	1154	572
Grp Volume(v), veh/h	152	0	36	720	0	386
Grp Sat Flow(s),veh/h/ln	1635	0	1740	1827	0	1726
Q Serve(g_s), s	2.5	0.0	0.6	8.3	0.0	5.5
Cycle Q Clear(g_c), s	2.5	0.0	0.6	8.3	0.0	5.5
Prop In Lane	0.94	0.05	1.00			0.33
Lane Grp Cap(c), veh/h	185	0	46	980	0	537
V/C Ratio(X)	0.82	0.00	0.79	0.73	0.00	0.72
Avail Cap(c_a), veh/h	296	0	377	2027	0	1173
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.0	0.0	13.4	4.9	0.0	8.5
Incr Delay (d2), s/veh	9.6	0.0	10.6	0.4	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.4	4.1	0.0	2.7
LnGrp Delay(d),s/veh	21.6	0.0	24.0	5.3	0.0	9.1
LnGrp LOS	C		C	A		A
Approach Vol, veh/h	152			756	386	
Approach Delay, s/veh	21.6			6.2	9.1	
Approach LOS	C			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	6.2	14.3		7.1		20.5		
Change Period (Y+Rc), s	5.5	* 5.7		4.0		* 5.7		
Max Green Setting (Gmax), s	6.0	* 19		5.0		* 31		
Max Q Clear Time (g_c+I1), s	2.6	7.5		4.5		10.3		
Green Ext Time (p_c), s	0.0	1.1		0.0		1.2		

Intersection Summary	
HCM 2010 Ctrl Delay	8.9
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	112	15	21	569	331	12	27	3	312	225	717
Future Volume (veh/h)	135	112	15	21	569	331	12	27	3	312	225	717
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1792	1792	1900	1792	1792	1792
Adj Flow Rate, veh/h	135	112	15	21	569	331	12	27	3	208	326	747
Adj No. of Lanes	2	2	0	1	1	1	1	1	0	1	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	6	6	6	6	6	6
Cap, veh/h	210	1202	158	25	614	522	44	41	5	470	493	839
Arrive On Green	0.06	0.39	0.39	0.01	0.33	0.33	0.03	0.03	0.03	0.28	0.28	0.28
Sat Flow, veh/h	3408	3115	410	1757	1845	1568	1707	1585	176	1707	1792	3047
Grp Volume(v), veh/h	135	62	65	21	569	331	12	0	30	208	326	747
Grp Sat Flow(s),veh/h/ln	1704	1752	1772	1757	1845	1568	1707	0	1761	1707	1792	1524
Q Serve(g_s), s	2.8	1.7	1.7	0.9	21.9	13.1	0.5	0.0	1.2	7.4	11.9	17.3
Cycle Q Clear(g_c), s	2.8	1.7	1.7	0.9	21.9	13.1	0.5	0.0	1.2	7.4	11.9	17.3
Prop In Lane	1.00		0.23	1.00		1.00	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	210	676	684	25	614	522	44	0	45	470	493	839
V/C Ratio(X)	0.64	0.09	0.09	0.84	0.93	0.63	0.28	0.00	0.67	0.44	0.66	0.89
Avail Cap(c_a), veh/h	213	676	684	131	730	620	487	0	503	557	585	994
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.7	14.4	14.4	36.2	23.7	20.7	35.2	0.0	35.5	22.0	23.6	25.6
Incr Delay (d2), s/veh	4.8	0.0	0.0	22.9	15.1	0.8	1.2	0.0	6.1	0.2	1.3	8.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.8	0.8	0.6	13.6	5.7	0.3	0.0	0.7	3.5	6.1	8.1
LnGrp Delay(d),s/veh	38.6	14.4	14.4	59.1	38.8	21.6	36.4	0.0	41.7	22.2	24.9	33.7
LnGrp LOS	D	B	B	E	D	C	D		D	C	C	C
Approach Vol, veh/h		262			921			42			1281	
Approach Delay, s/veh		26.9			33.1			40.2			29.6	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	30.4		25.7	6.1	34.3		7.4
Change Period (Y+Rc), s	5.5	* 5.9		5.5	* 5.1	* 5.9		5.5
Max Green Setting (Gmax), s	4.6	* 29		24.0	* 5.5	* 28		21.0
Max Q Clear Time (g_c+I1), s	4.8	23.9		19.3	2.9	3.7		3.2
Green Ext Time (p_c), s	0.0	0.6		0.9	0.0	0.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	30.8
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	169	14	248	401	305	138
Future Volume (veh/h)	169	14	248	401	305	138
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1792	1792	1810	1810
Adj Flow Rate, veh/h	169	14	248	401	305	138
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	8	8	6	6	5	5
Cap, veh/h	233	208	200	966	551	468
Arrive On Green	0.14	0.14	0.12	0.54	0.30	0.30
Sat Flow, veh/h	1675	1495	1707	1792	1810	1538
Grp Volume(v), veh/h	169	14	248	401	305	138
Grp Sat Flow(s),veh/h/ln	1675	1495	1707	1792	1810	1538
Q Serve(g_s), s	3.3	0.3	4.0	4.5	4.8	2.3
Cycle Q Clear(g_c), s	3.3	0.3	4.0	4.5	4.8	2.3
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	233	208	200	966	551	468
V/C Ratio(X)	0.73	0.07	1.24	0.42	0.55	0.29
Avail Cap(c_a), veh/h	761	679	200	1496	1511	1284
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.1	12.8	15.1	4.7	9.9	9.1
Incr Delay (d2), s/veh	4.3	0.1	143.0	0.3	0.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.3	9.8	2.3	2.5	1.0
LnGrp Delay(d),s/veh	18.3	12.9	158.1	5.0	10.8	9.4
LnGrp LOS	B	B	F	A	B	A
Approach Vol, veh/h	183			649	443	
Approach Delay, s/veh	17.9			63.5	10.4	
Approach LOS	B			E	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		23.9		10.2	8.0	15.9		
Change Period (Y+Rc), s		5.5		5.5	4.0	5.5		
Max Green Setting (Gmax), s		28.5		15.5	4.0	28.5		
Max Q Clear Time (g_c+I1), s		6.5		5.3	6.0	6.8		
Green Ext Time (p_c), s		3.6		0.5	0.0	3.6		

Intersection Summary	
HCM 2010 Ctrl Delay	38.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	291	5	39	768	40	2	107	9	13	150	187
Future Volume (veh/h)	203	291	5	39	768	40	2	107	9	13	150	187
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1900	1900	1810	1900	1900	1810	1900
Adj Flow Rate, veh/h	203	291	5	39	768	40	2	107	9	13	150	187
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	5	5	5	5	5	5
Cap, veh/h	207	957	16	49	763	40	2	131	11	11	126	157
Arrive On Green	0.12	0.54	0.54	0.03	0.45	0.45	0.08	0.08	0.08	0.18	0.18	0.18
Sat Flow, veh/h	1707	1757	30	1707	1689	88	30	1618	136	61	707	882
Grp Volume(v), veh/h	203	0	296	39	0	808	118	0	0	350	0	0
Grp Sat Flow(s),veh/h/ln	1707	0	1787	1707	0	1777	1784	0	0	1651	0	0
Q Serve(g_s), s	16.0	0.0	12.2	3.1	0.0	61.0	8.8	0.0	0.0	24.0	0.0	0.0
Cycle Q Clear(g_c), s	16.0	0.0	12.2	3.1	0.0	61.0	8.8	0.0	0.0	24.0	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.05	0.02		0.08	0.04		0.53
Lane Grp Cap(c), veh/h	207	0	973	49	0	803	145	0	0	294	0	0
V/C Ratio(X)	0.98	0.00	0.30	0.79	0.00	1.01	0.81	0.00	0.00	1.19	0.00	0.00
Avail Cap(c_a), veh/h	207	0	973	116	0	803	344	0	0	294	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	59.1	0.0	16.8	65.1	0.0	37.0	61.0	0.0	0.0	55.5	0.0	0.0
Incr Delay (d2), s/veh	56.0	0.0	0.4	10.0	0.0	33.3	10.4	0.0	0.0	115.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.8	0.0	6.1	1.6	0.0	37.3	4.7	0.0	0.0	20.3	0.0	0.0
LnGrp Delay(d),s/veh	115.1	0.0	17.2	75.1	0.0	70.3	71.4	0.0	0.0	170.6	0.0	0.0
LnGrp LOS	F		B	E		F	E			F		
Approach Vol, veh/h		499			847			118			350	
Approach Delay, s/veh		57.0			70.5			71.4			170.6	
Approach LOS		E			E			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	21.0	67.0		30.0	8.5	79.5		17.0
Change Period (Y+Rc), s	4.6	6.0		6.0	4.6	6.0		6.0
Max Green Setting (Gmax), s	16.4	61.0		24.0	9.2	68.2		26.0
Max Q Clear Time (g_c+I1), s	18.0	63.0		26.0	5.1	14.2		10.8
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	17.3		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	86.2
HCM 2010 LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	153	698	91	140	680	239	31	1081	190	125	593	80
Future Volume (veh/h)	153	698	91	140	680	239	31	1081	190	125	593	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	153	698	91	140	680	239	31	1081	190	125	593	80
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	163	772	101	163	868	388	46	1173	525	136	1352	605
Arrive On Green	0.09	0.25	0.25	0.09	0.25	0.25	0.03	0.33	0.33	0.08	0.39	0.39
Sat Flow, veh/h	1757	3119	406	1757	3505	1568	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	153	392	397	140	680	239	31	1081	190	125	593	80
Grp Sat Flow(s),veh/h/ln	1757	1752	1773	1757	1752	1568	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	5.6	14.0	14.0	5.1	11.7	8.7	1.1	19.2	5.9	4.6	8.1	2.1
Cycle Q Clear(g_c), s	5.6	14.0	14.0	5.1	11.7	8.7	1.1	19.2	5.9	4.6	8.1	2.1
Prop In Lane	1.00		0.23	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	163	434	439	163	868	388	46	1173	525	136	1352	605
V/C Ratio(X)	0.94	0.90	0.90	0.86	0.78	0.62	0.67	0.92	0.36	0.92	0.44	0.13
Avail Cap(c_a), veh/h	163	434	439	163	868	388	136	1193	534	136	1352	605
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	23.6	23.6	28.9	22.7	21.6	31.2	20.7	16.3	29.6	14.7	12.9
Incr Delay (d2), s/veh	52.4	21.9	21.9	34.0	4.7	2.9	15.3	11.6	0.4	53.5	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	9.4	9.5	4.0	6.2	4.1	0.7	11.0	2.6	4.2	3.9	0.9
LnGrp Delay(d),s/veh	81.6	45.5	45.5	62.9	27.4	24.5	46.5	32.3	16.7	83.1	14.9	13.0
LnGrp LOS	F	D	D	E	C	C	D	C	B	F	B	B
Approach Vol, veh/h		942			1059			1302			798	
Approach Delay, s/veh		51.3			31.5			30.3			25.4	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	25.6	10.0	20.0	5.7	28.9	10.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	22.0	6.0	16.0	5.0	22.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	6.6	21.2	7.1	16.0	3.1	10.1	7.6	13.7
Green Ext Time (p_c), s	0.0	0.5	0.0	0.0	0.0	7.4	0.0	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	34.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	637	131	12	519	216	88	1055	123	147	411	32
Future Volume (veh/h)	90	637	131	12	519	216	88	1055	123	147	411	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	90	637	131	12	519	216	88	1055	123	147	411	32
Adj No. of Lanes	1	2	1	1	2	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	103	982	439	21	565	234	113	1166	136	178	1336	104
Arrive On Green	0.06	0.28	0.28	0.01	0.23	0.23	0.07	0.37	0.37	0.10	0.41	0.41
Sat Flow, veh/h	1757	3505	1568	1757	2418	1002	1740	3133	365	1740	3265	253
Grp Volume(v), veh/h	90	637	131	12	376	359	88	584	594	147	218	225
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1668	1740	1736	1763	1740	1736	1782
Q Serve(g_s), s	3.5	10.9	4.5	0.5	14.3	14.4	3.4	21.8	21.9	5.7	5.8	5.9
Cycle Q Clear(g_c), s	3.5	10.9	4.5	0.5	14.3	14.4	3.4	21.8	21.9	5.7	5.8	5.9
Prop In Lane	1.00		1.00	1.00		0.60	1.00		0.21	1.00		0.14
Lane Grp Cap(c), veh/h	103	982	439	21	409	390	113	646	656	178	710	729
V/C Ratio(X)	0.88	0.65	0.30	0.57	0.92	0.92	0.78	0.90	0.91	0.83	0.31	0.31
Avail Cap(c_a), veh/h	103	982	439	103	409	390	229	684	695	178	710	729
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	21.7	19.4	33.7	25.6	25.6	31.5	20.3	20.4	30.1	13.7	13.7
Incr Delay (d2), s/veh	52.0	1.5	0.4	22.3	25.2	27.1	10.8	15.1	15.1	26.3	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	5.5	2.0	0.4	9.8	9.5	2.0	13.1	13.3	4.0	2.8	2.9
LnGrp Delay(d),s/veh	84.0	23.2	19.7	56.0	50.8	52.8	42.4	35.4	35.4	56.4	13.9	13.9
LnGrp LOS	F	C	B	E	D	D	D	D	D	E	B	B
Approach Vol, veh/h		858			747			1266			590	
Approach Delay, s/veh		29.0			51.8			35.9			24.5	
Approach LOS		C			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	29.5	4.8	23.2	8.5	32.0	8.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	27.0	4.0	16.0	9.0	25.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	7.7	23.9	2.5	12.9	5.4	7.9	5.5	16.4
Green Ext Time (p_c), s	0.0	1.6	0.0	2.0	0.1	7.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	35.7
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	872	159	218	891	125	51	1005	543	92	351	114
Future Volume (veh/h)	160	872	159	218	891	125	51	1005	543	92	351	114
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1827	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	160	872	159	218	891	125	51	1005	543	92	351	114
Adj No. of Lanes	1	3	0	1	2	1	1	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	158	926	168	221	884	395	65	1002	525	95	1637	732
Arrive On Green	0.09	0.22	0.22	0.13	0.25	0.25	0.04	0.45	0.45	0.05	0.47	0.47
Sat Flow, veh/h	1740	4246	770	1740	3471	1553	1740	2204	1154	1740	3471	1553
Grp Volume(v), veh/h	160	682	349	218	891	125	51	785	763	92	351	114
Grp Sat Flow(s),veh/h/ln	1740	1663	1691	1740	1736	1553	1740	1736	1623	1740	1736	1553
Q Serve(g_s), s	10.0	22.2	22.4	13.8	28.0	7.2	3.2	49.5	50.0	5.8	6.5	4.6
Cycle Q Clear(g_c), s	10.0	22.2	22.4	13.8	28.0	7.2	3.2	49.5	50.0	5.8	6.5	4.6
Prop In Lane	1.00		0.46	1.00		1.00	1.00		0.71	1.00		1.00
Lane Grp Cap(c), veh/h	158	725	369	221	884	395	65	789	738	95	1637	732
V/C Ratio(X)	1.01	0.94	0.95	0.98	1.01	0.32	0.78	0.99	1.03	0.97	0.21	0.16
Avail Cap(c_a), veh/h	158	725	369	221	884	395	127	789	738	95	1637	732
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.0	42.3	42.4	47.9	41.0	33.2	52.5	29.9	30.0	51.9	17.1	16.6
Incr Delay (d2), s/veh	74.6	20.2	33.1	55.9	32.4	0.5	18.1	30.6	42.4	82.1	0.1	0.1
Initial Q Delay(d3),s/veh	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	12.2	13.9	10.0	17.3	3.1	1.9	30.2	31.0	5.0	3.1	2.0
LnGrp Delay(d),s/veh	124.7	62.5	75.5	103.8	73.4	33.7	70.6	60.5	72.4	134.0	17.1	16.7
LnGrp LOS	F	E	E	F	F	C	E	E	F	F	B	B
Approach Vol, veh/h		1191			1234			1599			557	
Approach Delay, s/veh		74.6			74.7			66.5			36.4	
Approach LOS		E			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	54.0	18.0	28.0	8.1	55.9	14.0	32.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	50.0	14.0	24.0	8.0	48.0	10.0	28.0
Max Q Clear Time (g_c+I1), s	7.8	52.0	15.8	24.4	5.2	8.5	12.0	30.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	15.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	67.2
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	352	966	106	89	933	136	175	722	125	19	178	123
Future Volume (veh/h)	352	966	106	89	933	136	175	722	125	19	178	123
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	352	966	106	89	933	136	175	722	125	19	178	123
Adj No. of Lanes	1	2	0	1	2	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	3	3	3	3	3	3
Cap, veh/h	386	1522	167	114	991	144	208	862	386	30	507	227
Arrive On Green	0.22	0.48	0.48	0.07	0.33	0.33	0.12	0.25	0.25	0.02	0.14	0.14
Sat Flow, veh/h	1740	3155	346	1740	3041	443	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	352	531	541	89	532	537	175	722	125	19	178	123
Grp Sat Flow(s),veh/h/ln	1740	1736	1766	1740	1736	1749	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	16.7	19.3	19.3	4.3	25.2	25.2	8.2	16.5	5.5	0.9	3.9	6.2
Cycle Q Clear(g_c), s	16.7	19.3	19.3	4.3	25.2	25.2	8.2	16.5	5.5	0.9	3.9	6.2
Prop In Lane	1.00		0.20	1.00		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	386	837	852	114	566	570	208	862	386	30	507	227
V/C Ratio(X)	0.91	0.63	0.64	0.78	0.94	0.94	0.84	0.84	0.32	0.64	0.35	0.54
Avail Cap(c_a), veh/h	391	837	852	185	575	579	208	954	427	83	705	315
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.1	16.3	16.3	38.9	27.7	27.7	36.5	30.3	26.1	41.3	32.6	33.5
Incr Delay (d2), s/veh	25.1	1.6	1.6	11.0	23.7	23.6	25.5	6.1	0.5	20.1	0.4	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.7	9.5	9.7	2.4	15.7	15.8	5.5	8.8	2.4	0.6	1.9	2.8
LnGrp Delay(d),s/veh	57.2	17.9	17.9	49.9	51.4	51.3	62.0	36.4	26.6	61.4	33.0	35.6
LnGrp LOS	E	B	B	D	D	D	E	D	C	E	C	D
Approach Vol, veh/h		1424			1158			1022			320	
Approach Delay, s/veh		27.6			51.2			39.6			35.7	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.4	24.8	9.5	44.8	14.0	16.2	22.7	31.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	23.0	9.0	38.0	10.0	17.0	19.0	28.0
Max Q Clear Time (g_c+I1), s	2.9	18.5	6.3	21.3	10.2	8.2	18.7	27.2
Green Ext Time (p_c), s	0.0	2.3	0.1	9.8	0.0	3.7	0.1	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	38.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	656	504	17	65	494	254	40	542	43	116	269	368
Future Volume (veh/h)	656	504	17	65	494	254	40	542	43	116	269	368
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1827	1900	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	656	504	17	65	494	254	40	542	43	116	269	368
Adj No. of Lanes	2	2	1	2	2	0	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	700	1439	644	146	557	285	108	751	59	192	886	396
Arrive On Green	0.21	0.41	0.41	0.04	0.25	0.25	0.03	0.23	0.23	0.06	0.26	0.26
Sat Flow, veh/h	3375	3471	1553	3375	2224	1138	3375	3259	258	3375	3471	1553
Grp Volume(v), veh/h	656	504	17	65	385	363	40	288	297	116	269	368
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1688	1736	1626	1688	1736	1781	1688	1736	1553
Q Serve(g_s), s	12.0	6.2	0.4	1.2	13.4	13.5	0.7	9.6	9.7	2.1	3.9	14.5
Cycle Q Clear(g_c), s	12.0	6.2	0.4	1.2	13.4	13.5	0.7	9.6	9.7	2.1	3.9	14.5
Prop In Lane	1.00		1.00	1.00		0.70	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	700	1439	644	146	435	407	108	400	410	192	886	396
V/C Ratio(X)	0.94	0.35	0.03	0.45	0.89	0.89	0.37	0.72	0.72	0.61	0.30	0.93
Avail Cap(c_a), veh/h	700	1439	644	215	443	415	215	443	455	215	886	396
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.5	12.6	10.9	29.3	22.6	22.7	29.7	22.3	22.3	28.9	18.9	22.8
Incr Delay (d2), s/veh	20.2	0.1	0.0	2.1	18.8	20.5	2.1	5.0	5.0	3.9	0.2	28.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	3.0	0.2	0.6	8.7	8.4	0.4	5.1	5.3	1.1	1.9	9.3
LnGrp Delay(d),s/veh	44.7	12.7	10.9	31.4	41.4	43.2	31.8	27.3	27.3	32.8	19.0	50.9
LnGrp LOS	D	B	B	C	D	D	C	C	C	C	B	D
Approach Vol, veh/h		1177			813			625			753	
Approach Delay, s/veh		30.5			41.4			27.6			36.7	
Approach LOS		C			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	18.4	6.7	30.0	6.0	20.0	17.0	19.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	4.0	25.0	4.0	16.0	13.0	16.0
Max Q Clear Time (g_c+I1), s	4.1	11.7	3.2	8.2	2.7	16.5	14.0	15.5
Green Ext Time (p_c), s	0.0	2.2	0.0	5.8	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	34.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	1	88	110	3	1	281	879	37	0	397	0
Future Volume (veh/h)	11	1	88	110	3	1	281	879	37	0	397	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1759	1900	1845	1845	1900	1792	1792	1792	1792	1792	1900
Adj Flow Rate, veh/h	11	1	88	110	3	1	281	879	37	0	397	0
Adj No. of Lanes	0	1	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	8	8	8	3	3	3	6	6	6	6	6	6
Cap, veh/h	14	1	109	149	112	37	361	1021	868	4	504	0
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.21	0.57	0.57	0.00	0.28	0.00
Sat Flow, veh/h	167	15	1334	1757	1325	442	1707	1792	1524	1707	1792	0
Grp Volume(v), veh/h	100	0	0	110	0	4	281	879	37	0	397	0
Grp Sat Flow(s),veh/h/ln	1516	0	0	1757	0	1767	1707	1792	1524	1707	1792	0
Q Serve(g_s), s	3.0	0.0	0.0	2.9	0.0	0.1	7.3	19.4	0.5	0.0	9.6	0.0
Cycle Q Clear(g_c), s	3.0	0.0	0.0	2.9	0.0	0.1	7.3	19.4	0.5	0.0	9.6	0.0
Prop In Lane	0.11		0.88	1.00		0.25	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	124	0	0	149	0	149	361	1021	868	4	504	0
V/C Ratio(X)	0.81	0.00	0.00	0.74	0.00	0.03	0.78	0.86	0.04	0.00	0.79	0.00
Avail Cap(c_a), veh/h	516	0	0	599	0	602	763	1832	1557	145	1183	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	21.2	0.0	0.0	21.0	0.0	19.7	17.5	8.5	4.5	0.0	15.6	0.0
Incr Delay (d2), s/veh	11.5	0.0	0.0	7.0	0.0	0.1	3.7	2.3	0.0	0.0	2.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.0	1.7	0.0	0.1	3.8	9.9	0.2	0.0	5.1	0.0
LnGrp Delay(d),s/veh	32.6	0.0	0.0	28.0	0.0	19.8	21.1	10.8	4.5	0.0	18.3	0.0
LnGrp LOS	C			C		B	C	B	A		B	
Approach Vol, veh/h		100			114			1197			397	
Approach Delay, s/veh		32.6			27.8			13.0			18.3	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.4	30.8		7.8	13.9	17.2		8.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	48.0		16.0	21.0	31.0		16.0
Max Q Clear Time (g_c+I1), s	0.0	21.4		5.0	9.3	11.6		4.9
Green Ext Time (p_c), s	0.0	5.3		0.2	0.9	1.6		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	16.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1	1	260	0	432	2	882	131	181	568	5
Future Volume (veh/h)	5	1	1	260	0	432	2	882	131	181	568	5
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	5	1	1	260	0	432	2	882	131	181	568	5
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	9	74	74	275	0	374	4	845	126	192	1178	10
Arrive On Green	0.01	0.09	0.09	0.16	0.00	0.24	0.00	0.54	0.54	0.11	0.65	0.65
Sat Flow, veh/h	1757	848	848	1757	0	1568	1757	1570	233	1757	1826	16
Grp Volume(v), veh/h	5	0	2	260	0	432	2	0	1013	181	0	573
Grp Sat Flow(s),veh/h/ln	1757	0	1695	1757	0	1568	1757	0	1804	1757	0	1842
Q Serve(g_s), s	0.4	0.0	0.2	21.5	0.0	35.0	0.2	0.0	79.0	15.0	0.0	23.5
Cycle Q Clear(g_c), s	0.4	0.0	0.2	21.5	0.0	35.0	0.2	0.0	79.0	15.0	0.0	23.5
Prop In Lane	1.00		0.50	1.00		1.00	1.00		0.13	1.00		0.01
Lane Grp Cap(c), veh/h	9	0	147	275	0	374	4	0	971	192	0	1188
V/C Ratio(X)	0.57	0.00	0.01	0.94	0.00	1.16	0.53	0.00	1.04	0.94	0.00	0.48
Avail Cap(c_a), veh/h	48	0	185	275	0	374	48	0	971	192	0	1188
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	72.8	0.0	61.3	61.2	0.0	55.9	73.1	0.0	33.9	64.9	0.0	13.4
Incr Delay (d2), s/veh	46.4	0.0	0.0	39.3	0.0	95.9	84.6	0.0	40.8	49.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.1	13.5	0.0	25.0	0.2	0.0	50.1	9.9	0.0	12.0
LnGrp Delay(d),s/veh	119.3	0.0	61.3	100.6	0.0	151.8	157.7	0.0	74.7	114.2	0.0	13.7
LnGrp LOS	F		E	F		F	F		F	F		B
Approach Vol, veh/h		7			692			1015			754	
Approach Delay, s/veh		102.7			132.5			74.8			37.8	
Approach LOS		F			F			E			D	

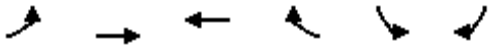
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	83.0	27.0	16.7	4.3	98.7	4.7	39.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	79.0	23.0	16.0	4.0	91.0	4.0	35.0
Max Q Clear Time (g_c+I1), s	17.0	81.0	23.5	2.2	2.2	25.5	2.4	37.0
Green Ext Time (p_c), s	0.0	0.0	0.0	1.8	0.0	12.6	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	79.8
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	315	6	4	1	5	7	3	516	1	0	547	269
Future Volume (veh/h)	315	6	4	1	5	7	3	516	1	0	547	269
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1900	1845	1900	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	315	6	4	1	5	7	3	516	1	0	547	0
Adj No. of Lanes	0	1	1	0	1	0	1	1	0	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	397	8	361	2	9	12	6	886	2	4	713	606
Arrive On Green	0.23	0.23	0.23	0.01	0.01	0.01	0.00	0.48	0.48	0.00	0.39	0.00
Sat Flow, veh/h	1726	33	1568	129	646	904	1757	1840	4	1757	1845	1568
Grp Volume(v), veh/h	321	0	4	13	0	0	3	0	517	0	547	0
Grp Sat Flow(s),veh/h/ln	1758	0	1568	1679	0	0	1757	0	1844	1757	1845	1568
Q Serve(g_s), s	7.5	0.0	0.1	0.3	0.0	0.0	0.1	0.0	8.8	0.0	11.3	0.0
Cycle Q Clear(g_c), s	7.5	0.0	0.1	0.3	0.0	0.0	0.1	0.0	8.8	0.0	11.3	0.0
Prop In Lane	0.98		1.00	0.08		0.54	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	405	0	361	22	0	0	6	0	888	4	713	606
V/C Ratio(X)	0.79	0.00	0.01	0.58	0.00	0.00	0.52	0.00	0.58	0.00	0.77	0.00
Avail Cap(c_a), veh/h	644	0	574	615	0	0	161	0	971	161	971	826
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	15.8	0.0	13.0	21.4	0.0	0.0	21.7	0.0	8.2	0.0	11.7	0.0
Incr Delay (d2), s/veh	3.5	0.0	0.0	21.5	0.0	0.0	58.1	0.0	0.8	0.0	2.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	0.0	0.0	0.3	0.0	0.0	0.1	0.0	4.6	0.0	6.1	0.0
LnGrp Delay(d),s/veh	19.4	0.0	13.0	42.9	0.0	0.0	79.8	0.0	8.9	0.0	14.2	0.0
LnGrp LOS	B		B	D			E		A		B	
Approach Vol, veh/h		325			13			520			547	
Approach Delay, s/veh		19.3			42.9			9.3			14.2	
Approach LOS		B			D			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	25.0		14.1	4.1	20.9		4.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	23.0		16.0	4.0	23.0		16.0
Max Q Clear Time (g_c+I1), s	0.0	10.8		9.5	2.1	13.3		2.3
Green Ext Time (p_c), s	0.0	4.1		0.7	0.0	3.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.8
HCM 2010 LOS	B



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	251	643	551	87	15	116
Future Volume (veh/h)	251	643	551	87	15	116
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845
Adj Flow Rate, veh/h	251	643	551	87	15	116
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	238	2208	1088	171	174	155
Arrive On Green	0.14	0.63	0.36	0.36	0.10	0.10
Sat Flow, veh/h	1757	3597	3127	478	1757	1568
Grp Volume(v), veh/h	251	643	317	321	15	116
Grp Sat Flow(s),veh/h/ln	1757	1752	1752	1760	1757	1568
Q Serve(g_s), s	4.0	2.5	4.2	4.2	0.2	2.1
Cycle Q Clear(g_c), s	4.0	2.5	4.2	4.2	0.2	2.1
Prop In Lane	1.00			0.27	1.00	1.00
Lane Grp Cap(c), veh/h	238	2208	628	631	174	155
V/C Ratio(X)	1.05	0.29	0.51	0.51	0.09	0.75
Avail Cap(c_a), veh/h	238	2852	951	955	1072	957
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.7	2.5	7.4	7.4	12.1	12.9
Incr Delay (d2), s/veh	73.0	0.1	0.6	0.6	0.2	7.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	1.2	2.0	2.2	0.1	2.1
LnGrp Delay(d),s/veh	85.8	2.5	8.0	8.0	12.3	20.0
LnGrp LOS	F	A	A	A	B	B
Approach Vol, veh/h		894	638		131	
Approach Delay, s/veh		25.9	8.0		19.1	
Approach LOS		C	A		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				22.6		6.9	8.0	14.6
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				24.0		18.0	4.0	16.0
Max Q Clear Time (g_c+I1), s				4.5		4.1	6.0	6.2
Green Ext Time (p_c), s				6.1		0.3	0.0	4.4

Intersection Summary	
HCM 2010 Ctrl Delay	18.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	264	1924	0	58	2372	0	1	2	29	52	0	0
Future Volume (veh/h)	264	1924	0	58	2372	0	1	2	29	52	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	264	1924	0	58	2372	0	1	2	29	52	0	0
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	303	3343	0	74	2686	0	2	83	71	65	150	127
Arrive On Green	0.17	0.66	0.00	0.04	0.53	0.00	0.00	0.04	0.04	0.04	0.00	0.00
Sat Flow, veh/h	1757	5202	0	1757	5202	0	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	264	1924	0	58	2372	0	1	2	29	52	0	0
Grp Sat Flow(s),veh/h/ln	1757	1679	0	1757	1679	0	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	11.0	15.7	0.0	2.5	31.3	0.0	0.0	0.1	1.4	2.2	0.0	0.0
Cycle Q Clear(g_c), s	11.0	15.7	0.0	2.5	31.3	0.0	0.0	0.1	1.4	2.2	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	303	3343	0	74	2686	0	2	83	71	65	150	127
V/C Ratio(X)	0.87	0.58	0.00	0.79	0.88	0.00	0.43	0.02	0.41	0.80	0.00	0.00
Avail Cap(c_a), veh/h	303	3343	0	163	2806	0	70	392	333	70	392	333
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	30.4	6.9	0.0	35.8	15.5	0.0	37.6	34.4	35.0	36.0	0.0	0.0
Incr Delay (d2), s/veh	23.2	0.2	0.0	16.7	3.6	0.0	92.3	0.1	3.8	44.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	7.2	0.0	1.5	15.2	0.0	0.1	0.0	0.7	1.9	0.0	0.0
LnGrp Delay(d),s/veh	53.5	7.1	0.0	52.5	19.1	0.0	129.9	34.5	38.8	80.0	0.0	0.0
LnGrp LOS	D	A		D	B		F	C	D	F		
Approach Vol, veh/h		2188			2430			32			52	
Approach Delay, s/veh		12.7			19.9			41.4			80.0	
Approach LOS		B			B			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	7.4	7.2	54.0	4.1	10.1	17.0	44.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	16.0	7.0	48.0	3.0	16.0	13.0	42.0
Max Q Clear Time (g_c+I1), s	4.2	3.4	4.5	17.7	2.0	0.0	13.0	33.3
Green Ext Time (p_c), s	0.0	0.0	0.0	28.4	0.0	0.0	0.0	6.9

Intersection Summary	
HCM 2010 Ctrl Delay	17.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	387	1026	501	127	1364	0	824	266	117	42	225	227
Future Volume (veh/h)	387	1026	501	127	1364	0	824	266	117	42	225	227
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	387	1026	501	127	1364	0	824	266	117	42	225	227
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	368	2068	644	185	1286	400	777	662	562	53	297	253
Arrive On Green	0.21	0.41	0.41	0.05	0.26	0.00	0.23	0.36	0.36	0.03	0.16	0.16
Sat Flow, veh/h	1757	5036	1568	3408	5036	1568	3408	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	387	1026	501	127	1364	0	824	266	117	42	225	227
Grp Sat Flow(s),veh/h/ln	1757	1679	1568	1704	1679	1568	1704	1845	1568	1757	1845	1568
Q Serve(g_s), s	23.0	16.5	30.4	4.0	28.0	0.0	25.0	11.9	5.7	2.6	12.8	15.6
Cycle Q Clear(g_c), s	23.0	16.5	30.4	4.0	28.0	0.0	25.0	11.9	5.7	2.6	12.8	15.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	368	2068	644	185	1286	400	777	662	562	53	297	253
V/C Ratio(X)	1.05	0.50	0.78	0.68	1.06	0.00	1.06	0.40	0.21	0.79	0.76	0.90
Avail Cap(c_a), veh/h	368	2068	644	249	1286	400	777	662	562	96	303	257
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.3	23.9	28.0	50.9	40.8	0.0	42.3	26.3	24.4	52.8	43.9	45.1
Incr Delay (d2), s/veh	60.7	0.2	6.0	4.8	43.0	0.0	49.6	0.4	0.2	22.0	10.3	30.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.3	7.6	14.1	2.0	18.0	0.0	17.0	6.1	2.5	1.6	7.4	8.9
LnGrp Delay(d),s/veh	104.1	24.1	34.0	55.7	83.8	0.0	91.9	26.7	24.6	74.8	54.2	75.8
LnGrp LOS	F	C	C	E	F		F	C	C	E	D	E
Approach Vol, veh/h		1914			1491			1207			494	
Approach Delay, s/veh		42.9			81.4			71.0			65.9	
Approach LOS		D			F			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	43.3	10.0	49.0	29.0	21.7	27.0	32.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	37.0	8.0	43.0	25.0	18.0	23.0	28.0
Max Q Clear Time (g_c+I1), s	4.6	13.9	6.0	32.4	27.0	17.6	25.0	30.0
Green Ext Time (p_c), s	0.0	3.3	0.1	8.9	0.0	0.1	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	63.0
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	991	18	47	1339	2	150	0	0	4	1	61
Future Volume (veh/h)	12	991	18	47	1339	2	150	0	0	4	1	61
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	12	991	18	47	1339	2	150	0	0	4	1	61
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	16	1927	35	55	2080	3	192	359	305	6	163	139
Arrive On Green	0.01	0.38	0.38	0.03	0.40	0.40	0.11	0.00	0.00	0.00	0.09	0.09
Sat Flow, veh/h	1757	5093	92	1757	5193	8	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	12	653	356	47	866	475	150	0	0	4	1	61
Grp Sat Flow(s),veh/h/ln	1757	1679	1828	1757	1679	1843	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	0.3	6.1	6.1	1.1	8.5	8.5	3.4	0.0	0.0	0.1	0.0	1.5
Cycle Q Clear(g_c), s	0.3	6.1	6.1	1.1	8.5	8.5	3.4	0.0	0.0	0.1	0.0	1.5
Prop In Lane	1.00		0.05	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	16	1270	692	55	1344	738	192	359	305	6	163	139
V/C Ratio(X)	0.73	0.51	0.51	0.85	0.64	0.64	0.78	0.00	0.00	0.70	0.01	0.44
Avail Cap(c_a), veh/h	129	1317	717	215	1482	814	302	905	769	129	724	615
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.2	9.8	9.8	19.7	9.9	9.9	17.7	0.0	0.0	20.3	17.0	17.6
Incr Delay (d2), s/veh	46.4	0.3	0.6	28.5	0.8	1.5	6.7	0.0	0.0	93.3	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.9	3.2	0.9	4.0	4.5	2.0	0.0	0.0	0.2	0.0	0.7
LnGrp Delay(d),s/veh	66.6	10.1	10.4	48.2	10.7	11.4	24.4	0.0	0.0	113.6	17.0	19.8
LnGrp LOS	E	B	B	D	B	B	C			F	B	B
Approach Vol, veh/h		1021			1388			150			66	
Approach Delay, s/veh		10.9			12.2			24.4			25.5	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.1	11.9	5.3	19.4	8.5	7.6	4.4	20.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	20.0	5.0	16.0	7.0	16.0	3.0	18.0
Max Q Clear Time (g_c+I1), s	2.1	0.0	3.1	8.1	5.4	3.5	2.3	10.5
Green Ext Time (p_c), s	0.0	0.0	0.0	6.1	0.1	0.1	0.0	5.8

Intersection Summary	
HCM 2010 Ctrl Delay	12.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	917	29	82	1233	32	88	6	61	51	7	67
Future Volume (veh/h)	49	917	29	82	1233	32	88	6	61	51	7	67
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	49	917	29	82	1233	32	88	6	61	51	7	67
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	57	1881	59	102	2021	52	109	235	199	60	183	155
Arrive On Green	0.03	0.37	0.37	0.06	0.40	0.40	0.06	0.13	0.13	0.03	0.10	0.10
Sat Flow, veh/h	1757	5016	158	1757	5048	131	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	49	613	333	82	820	445	88	6	61	51	7	67
Grp Sat Flow(s),veh/h/ln	1757	1679	1817	1757	1679	1822	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	1.1	5.5	5.5	1.8	7.6	7.6	2.0	0.1	1.4	1.1	0.1	1.6
Cycle Q Clear(g_c), s	1.1	5.5	5.5	1.8	7.6	7.6	2.0	0.1	1.4	1.1	0.1	1.6
Prop In Lane	1.00		0.09	1.00		0.07	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	57	1259	681	102	1344	729	109	235	199	60	183	155
V/C Ratio(X)	0.85	0.49	0.49	0.80	0.61	0.61	0.80	0.03	0.31	0.85	0.04	0.43
Avail Cap(c_a), veh/h	178	1362	737	267	1532	831	223	795	676	223	795	676
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.0	9.4	9.4	18.4	9.4	9.4	18.3	15.1	15.6	18.9	16.1	16.7
Incr Delay (d2), s/veh	27.8	0.3	0.5	13.6	0.6	1.0	12.7	0.0	0.9	26.1	0.1	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	2.5	2.9	1.3	3.6	4.0	1.3	0.1	0.6	1.0	0.1	0.8
LnGrp Delay(d),s/veh	46.8	9.7	10.0	32.0	10.0	10.4	31.0	15.1	16.5	45.0	16.2	18.6
LnGrp LOS	D	A	A	C	A	B	C	B	B	D	B	B
Approach Vol, veh/h		995			1347			155			125	
Approach Delay, s/veh		11.6			11.5			24.7			29.2	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.4	9.0	6.3	18.8	6.5	7.9	5.3	19.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	17.0	6.0	16.0	5.0	17.0	4.0	18.0
Max Q Clear Time (g_c+I1), s	3.1	3.4	3.8	7.5	4.0	3.6	3.1	9.6
Green Ext Time (p_c), s	0.0	0.3	0.0	6.2	0.0	0.3	0.0	6.1

Intersection Summary	
HCM 2010 Ctrl Delay	13.1
HCM 2010 LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	109	25	74	1546	883	95
Future Volume (veh/h)	109	25	74	1546	883	95
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	109	25	74	1546	883	95
Adj No. of Lanes	1	1	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	137	122	95	1579	2457	264
Arrive On Green	0.08	0.08	0.05	0.86	0.77	0.77
Sat Flow, veh/h	1757	1568	1757	1845	3285	344
Grp Volume(v), veh/h	109	25	74	1546	485	493
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1845	1752	1784
Q Serve(g_s), s	7.4	1.8	5.1	90.6	10.7	10.7
Cycle Q Clear(g_c), s	7.4	1.8	5.1	90.6	10.7	10.7
Prop In Lane	1.00	1.00	1.00			0.19
Lane Grp Cap(c), veh/h	137	122	95	1579	1348	1373
V/C Ratio(X)	0.79	0.20	0.78	0.98	0.36	0.36
Avail Cap(c_a), veh/h	217	193	173	1622	1348	1373
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.1	52.5	56.9	7.8	4.5	4.5
Incr Delay (d2), s/veh	10.1	0.8	13.1	17.3	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	1.6	2.8	51.8	5.2	5.3
LnGrp Delay(d),s/veh	65.2	53.4	69.9	25.1	4.6	4.6
LnGrp LOS	E	D	E	C	A	A
Approach Vol, veh/h	134			1620	978	
Approach Delay, s/veh	63.0			27.2	4.6	
Approach LOS	E			C	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		108.2		13.5	10.5	97.6		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		107.0		15.0	12.0	91.0		
Max Q Clear Time (g_c+I1), s		92.6		9.4	7.1	12.7		
Green Ext Time (p_c), s		11.6		0.2	0.1	44.6		

Intersection Summary	
HCM 2010 Ctrl Delay	20.9
HCM 2010 LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	28	124	204	1912	975	20
Future Volume (veh/h)	28	124	204	1912	975	20
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	28	124	204	1912	975	20
Adj No. of Lanes	1	1	1	3	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	193	173	262	3341	2035	42
Arrive On Green	0.11	0.11	0.15	0.66	0.40	0.40
Sat Flow, veh/h	1757	1568	1757	5202	5245	104
Grp Volume(v), veh/h	28	124	204	1912	644	351
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1679	1679	1826
Q Serve(g_s), s	0.5	2.7	3.9	7.3	5.0	5.0
Cycle Q Clear(g_c), s	0.5	2.7	3.9	7.3	5.0	5.0
Prop In Lane	1.00	1.00	1.00			0.06
Lane Grp Cap(c), veh/h	193	173	262	3341	1345	732
V/C Ratio(X)	0.14	0.72	0.78	0.57	0.48	0.48
Avail Cap(c_a), veh/h	746	666	398	3851	1426	776
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.2	15.2	14.5	3.2	7.8	7.8
Incr Delay (d2), s/veh	0.3	5.5	5.4	0.2	0.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.6	2.3	3.2	2.3	2.6
LnGrp Delay(d),s/veh	14.5	20.7	19.8	3.4	8.1	8.3
LnGrp LOS	B	C	B	A	A	A
Approach Vol, veh/h	152			2116	995	
Approach Delay, s/veh	19.6			5.0	8.2	
Approach LOS	B			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		27.4		7.9	9.3	18.1		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		27.0		15.0	8.0	15.0		
Max Q Clear Time (g_c+I1), s		9.3		4.7	5.9	7.0		
Green Ext Time (p_c), s		14.1		0.3	0.2	7.0		

Intersection Summary	
HCM 2010 Ctrl Delay	6.6
HCM 2010 LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	90	14	80	1106	625	219
Future Volume (veh/h)	90	14	80	1106	625	219
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	90	14	80	1106	625	219
Adj No. of Lanes	1	1	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	120	107	97	2307	1189	416
Arrive On Green	0.07	0.07	0.05	0.66	0.47	0.47
Sat Flow, veh/h	1757	1568	1757	3597	2640	892
Grp Volume(v), veh/h	90	14	80	1106	430	414
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1752	1752	1687
Q Serve(g_s), s	1.5	0.2	1.3	4.6	5.1	5.1
Cycle Q Clear(g_c), s	1.5	0.2	1.3	4.6	5.1	5.1
Prop In Lane	1.00	1.00	1.00			0.53
Lane Grp Cap(c), veh/h	120	107	97	2307	818	787
V/C Ratio(X)	0.75	0.13	0.83	0.48	0.53	0.53
Avail Cap(c_a), veh/h	300	268	360	3233	1018	980
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.4	12.8	13.7	2.5	5.5	5.5
Incr Delay (d2), s/veh	8.9	0.5	16.0	0.2	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.2	1.1	2.2	2.5	2.4
LnGrp Delay(d),s/veh	22.3	13.4	29.7	2.7	6.0	6.1
LnGrp LOS	C	B	C	A	A	A
Approach Vol, veh/h	104			1186	844	
Approach Delay, s/veh	21.1			4.5	6.1	
Approach LOS	C			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		23.3		6.0	5.6	17.7		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		27.0		5.0	6.0	17.0		
Max Q Clear Time (g_c+I1), s		6.6		3.5	3.3	7.1		
Green Ext Time (p_c), s		10.6		0.0	0.0	6.6		

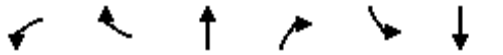
Intersection Summary	
HCM 2010 Ctrl Delay	5.9
HCM 2010 LOS	A



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	230	9	214	1393	701	136
Future Volume (veh/h)	230	9	214	1393	701	136
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	230	9	214	1393	701	136
Adj No. of Lanes	1	1	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	303	271	279	2265	1163	226
Arrive On Green	0.17	0.17	0.16	0.65	0.40	0.40
Sat Flow, veh/h	1757	1568	1757	3597	3021	568
Grp Volume(v), veh/h	230	9	214	1393	419	418
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1752	1752	1744
Q Serve(g_s), s	5.5	0.2	5.2	10.3	8.4	8.4
Cycle Q Clear(g_c), s	5.5	0.2	5.2	10.3	8.4	8.4
Prop In Lane	1.00	1.00	1.00			0.33
Lane Grp Cap(c), veh/h	303	271	279	2265	696	693
V/C Ratio(X)	0.76	0.03	0.77	0.61	0.60	0.60
Avail Cap(c_a), veh/h	597	533	517	2936	794	790
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.4	15.2	17.8	4.6	10.5	10.6
Incr Delay (d2), s/veh	3.9	0.0	4.4	0.3	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.2	2.8	4.9	4.2	4.1
LnGrp Delay(d),s/veh	21.3	15.3	22.2	4.9	11.6	11.6
LnGrp LOS	C	B	C	A	B	B
Approach Vol, veh/h	239			1607	837	
Approach Delay, s/veh	21.1			7.2	11.6	
Approach LOS	C			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		32.5		11.6	11.0	21.5		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		37.0		15.0	13.0	20.0		
Max Q Clear Time (g_c+I1), s		12.3		7.5	7.2	10.4		
Green Ext Time (p_c), s		13.9		0.5	0.4	7.2		

Intersection Summary	
HCM 2010 Ctrl Delay	9.8
HCM 2010 LOS	A



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	140	2579	0	144	1223
Future Volume (veh/h)	0	140	2579	0	144	1223
Number	3	18	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845
Adj Flow Rate, veh/h	0	140	2579	0	144	1223
Adj No. of Lanes	1	1	3	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	196	175	3035	0	180	2686
Arrive On Green	0.00	0.11	0.60	0.00	0.10	0.77
Sat Flow, veh/h	1757	1568	5368	0	1757	3597
Grp Volume(v), veh/h	0	140	2579	0	144	1223
Grp Sat Flow(s),veh/h/ln	1757	1568	1679	0	1757	1752
Q Serve(g_s), s	0.0	5.7	27.4	0.0	5.3	8.2
Cycle Q Clear(g_c), s	0.0	5.7	27.4	0.0	5.3	8.2
Prop In Lane	1.00	1.00		0.00	1.00	
Lane Grp Cap(c), veh/h	196	175	3035	0	180	2686
V/C Ratio(X)	0.00	0.80	0.85	0.00	0.80	0.46
Avail Cap(c_a), veh/h	429	382	3071	0	187	2725
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	28.4	10.6	0.0	28.8	2.8
Incr Delay (d2), s/veh	0.0	8.1	2.4	0.0	20.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.8	13.1	0.0	3.6	4.0
LnGrp Delay(d),s/veh	0.0	36.5	13.0	0.0	49.3	2.9
LnGrp LOS		D	B		D	A
Approach Vol, veh/h	140		2579			1367
Approach Delay, s/veh	36.5		13.0			7.8
Approach LOS	D		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		54.3			10.7	43.5		11.3
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		51.0			7.0	40.0		16.0
Max Q Clear Time (g_c+I1), s		10.2			7.3	29.4		7.7
Green Ext Time (p_c), s		35.4			0.0	10.2		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	12.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	716	534	40	544	522	0	131	1640	583	31	871	565
Future Volume (veh/h)	716	534	40	544	522	0	131	1640	583	31	871	565
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	716	534	40	544	522	0	131	1640	583	31	871	565
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	780	770	344	637	623	279	203	1870	582	64	1665	518
Arrive On Green	0.23	0.22	0.22	0.19	0.18	0.00	0.06	0.37	0.37	0.02	0.33	0.33
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	716	534	40	544	522	0	131	1640	583	31	871	565
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	16.1	11.0	1.6	12.1	11.3	0.0	3.0	23.9	29.2	0.7	11.0	26.0
Cycle Q Clear(g_c), s	16.1	11.0	1.6	12.1	11.3	0.0	3.0	23.9	29.2	0.7	11.0	26.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	780	770	344	637	623	279	203	1870	582	64	1665	518
V/C Ratio(X)	0.92	0.69	0.12	0.85	0.84	0.00	0.65	0.88	1.00	0.48	0.52	1.09
Avail Cap(c_a), veh/h	780	770	344	693	668	299	217	1870	582	130	1665	518
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.6	28.3	24.6	30.9	31.2	0.0	36.2	23.1	24.7	38.2	21.3	26.3
Incr Delay (d2), s/veh	15.8	2.7	0.1	9.6	8.8	0.0	6.0	5.1	37.7	5.6	0.3	66.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.3	5.6	0.7	6.5	6.2	0.0	1.6	11.8	18.6	0.4	5.1	20.7
LnGrp Delay(d),s/veh	45.4	31.0	24.7	40.5	40.0	0.0	42.1	28.1	62.4	43.8	21.6	92.5
LnGrp LOS	D	C	C	D	D		D	C	F	D	C	F
Approach Vol, veh/h		1290			1066			2354			1467	
Approach Delay, s/veh		38.8			40.3			37.4			49.4	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	33.2	18.7	21.3	8.7	30.0	22.0	18.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	28.0	16.0	17.0	5.0	26.0	18.0	15.0
Max Q Clear Time (g_c+I1), s	2.7	31.2	14.1	13.0	5.0	28.0	18.1	13.3
Green Ext Time (p_c), s	0.0	0.0	0.6	2.0	0.0	0.0	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	41.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	733	19	23	666	13	117	2	73	22	2	69
Future Volume (veh/h)	67	733	19	23	666	13	117	2	73	22	2	69
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	67	733	19	23	666	13	117	2	73	22	2	69
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	80	1235	32	30	1143	22	149	321	273	29	194	165
Arrive On Green	0.05	0.35	0.35	0.02	0.33	0.33	0.08	0.17	0.17	0.02	0.11	0.11
Sat Flow, veh/h	1757	3491	90	1757	3516	69	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	67	368	384	23	332	347	117	2	73	22	2	69
Grp Sat Flow(s),veh/h/ln	1757	1752	1829	1757	1752	1833	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	1.4	6.3	6.3	0.5	5.7	5.8	2.4	0.0	1.5	0.5	0.0	1.5
Cycle Q Clear(g_c), s	1.4	6.3	6.3	0.5	5.7	5.8	2.4	0.0	1.5	0.5	0.0	1.5
Prop In Lane	1.00		0.05	1.00		0.04	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	80	620	647	30	570	596	149	321	273	29	194	165
V/C Ratio(X)	0.83	0.59	0.59	0.77	0.58	0.58	0.78	0.01	0.27	0.76	0.01	0.42
Avail Cap(c_a), veh/h	193	817	853	145	769	804	337	1062	903	145	860	731
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.3	9.6	9.6	17.8	10.2	10.2	16.4	12.5	13.1	17.9	14.6	15.3
Incr Delay (d2), s/veh	19.2	0.9	0.9	32.4	0.9	0.9	8.7	0.0	0.5	33.0	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	3.1	3.3	0.5	2.9	3.0	1.5	0.0	0.7	0.5	0.0	0.7
LnGrp Delay(d),s/veh	36.5	10.5	10.5	50.2	11.2	11.2	25.0	12.5	13.6	50.8	14.6	16.9
LnGrp LOS	D	B	B	D	B	B	C	B	B	D	B	B
Approach Vol, veh/h		819			702			192			93	
Approach Delay, s/veh		12.7			12.4			20.5			24.9	
Approach LOS		B			B			C			C	

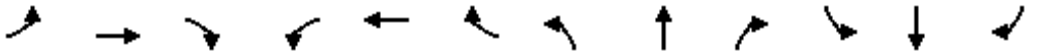
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.6	10.3	4.6	16.9	7.1	7.8	5.7	15.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	21.0	3.0	17.0	7.0	17.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	2.5	3.5	2.5	8.3	4.4	3.5	3.4	7.8
Green Ext Time (p_c), s	0.0	0.4	0.0	4.3	0.1	0.3	0.0	4.1

Intersection Summary	
HCM 2010 Ctrl Delay	14.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	232	1539	180	71	2023	59	69	5	0	54	3	54
Future Volume (veh/h)	232	1539	180	71	2023	59	69	5	0	54	3	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	232	1539	180	71	2023	59	69	5	0	54	3	54
Adj No. of Lanes	1	3	0	1	3	0	1	1	0	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	278	2821	330	91	2569	75	88	93	0	99	105	89
Arrive On Green	0.16	0.62	0.62	0.05	0.51	0.51	0.05	0.05	0.00	0.06	0.06	0.06
Sat Flow, veh/h	1757	4573	534	1757	5030	146	1757	1845	0	1757	1845	1568
Grp Volume(v), veh/h	232	1129	590	71	1349	733	69	5	0	54	3	54
Grp Sat Flow(s),veh/h/ln	1757	1679	1750	1757	1679	1819	1757	1845	0	1757	1845	1568
Q Serve(g_s), s	9.1	13.8	13.9	2.8	23.4	23.5	2.8	0.2	0.0	2.1	0.1	2.4
Cycle Q Clear(g_c), s	9.1	13.8	13.9	2.8	23.4	23.5	2.8	0.2	0.0	2.1	0.1	2.4
Prop In Lane	1.00		0.31	1.00		0.08	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	278	2071	1080	91	1715	929	88	93	0	99	105	89
V/C Ratio(X)	0.84	0.55	0.55	0.78	0.79	0.79	0.79	0.05	0.00	0.55	0.03	0.61
Avail Cap(c_a), veh/h	345	2071	1080	222	1791	970	99	466	0	99	466	396
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	7.9	7.9	33.4	14.3	14.3	33.5	32.2	0.0	32.7	31.7	32.8
Incr Delay (d2), s/veh	13.5	0.3	0.6	13.2	2.3	4.3	30.6	0.2	0.0	6.2	0.1	6.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	6.4	6.7	1.7	11.2	12.7	2.1	0.1	0.0	1.2	0.1	1.2
LnGrp Delay(d),s/veh	42.6	8.2	8.5	46.6	16.6	18.6	64.1	32.4	0.0	39.0	31.8	39.3
LnGrp LOS	D	A	A	D	B	B	E	C		D	C	D
Approach Vol, veh/h		1951			2153			74			111	
Approach Delay, s/veh		12.4			18.2			61.9			38.9	
Approach LOS		B			B			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	7.6	7.7	47.9	7.6	8.0	15.3	40.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	18.0	9.0	43.0	4.0	18.0	14.0	38.0
Max Q Clear Time (g_c+I1), s	4.1	2.2	4.8	15.9	4.8	4.4	11.1	25.5
Green Ext Time (p_c), s	0.0	0.1	0.1	23.6	0.0	0.1	0.2	10.9

Intersection Summary	
HCM 2010 Ctrl Delay	16.9
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	263	752	772	20	1276	24	1484	124	38	18	45	96
Future Volume (veh/h)	263	752	772	20	1276	24	1484	124	38	18	45	96
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	263	752	772	20	1276	24	1484	124	38	18	45	96
Adj No. of Lanes	1	3	1	2	2	1	2	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	230	2196	684	39	1110	497	1244	793	674	22	143	121
Arrive On Green	0.13	0.44	0.44	0.01	0.32	0.32	0.36	0.43	0.43	0.01	0.08	0.08
Sat Flow, veh/h	1757	5036	1568	3408	3505	1568	3408	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	263	752	772	20	1276	24	1484	124	38	18	45	96
Grp Sat Flow(s),veh/h/ln	1757	1679	1568	1704	1752	1568	1704	1845	1568	1757	1845	1568
Q Serve(g_s), s	19.0	14.4	63.3	0.8	46.0	1.5	53.0	6.0	2.1	1.5	3.4	8.7
Cycle Q Clear(g_c), s	19.0	14.4	63.3	0.8	46.0	1.5	53.0	6.0	2.1	1.5	3.4	8.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	230	2196	684	39	1110	497	1244	793	674	22	143	121
V/C Ratio(X)	1.14	0.34	1.13	0.51	1.15	0.05	1.19	0.16	0.06	0.83	0.31	0.79
Avail Cap(c_a), veh/h	230	2196	684	70	1110	497	1244	813	691	60	203	173
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.1	27.2	41.0	71.4	49.6	34.4	46.1	25.3	24.2	71.6	63.4	65.8
Incr Delay (d2), s/veh	103.8	0.1	75.8	10.1	78.1	0.0	95.2	0.1	0.0	51.3	1.2	14.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.8	6.7	41.7	0.5	34.2	0.7	41.3	3.1	0.9	1.0	1.8	4.3
LnGrp Delay(d),s/veh	167.0	27.2	116.7	81.4	127.7	34.5	141.3	25.4	24.2	122.9	64.6	80.5
LnGrp LOS	F	C	F	F	F	C	F	C	C	F	E	F
Approach Vol, veh/h		1787			1320			1646			159	
Approach Delay, s/veh		86.5			125.3			129.8			80.8	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.8	66.5	5.7	67.3	57.0	15.3	23.0	50.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	64.0	3.0	62.0	53.0	16.0	19.0	46.0
Max Q Clear Time (g_c+I1), s	3.5	8.0	2.8	65.3	55.0	10.7	21.0	48.0
Green Ext Time (p_c), s	0.0	1.2	0.0	0.0	0.0	0.5	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		111.2
HCM 2010 LOS		F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	144	401	32	20	560	276	119	572	92	109	245	201
Future Volume (veh/h)	144	401	32	20	560	276	119	572	92	109	245	201
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	144	401	32	20	560	276	119	572	92	109	245	201
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	243	1130	505	50	932	417	207	899	402	192	884	395
Arrive On Green	0.07	0.32	0.32	0.01	0.27	0.27	0.06	0.26	0.26	0.06	0.25	0.25
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	144	401	32	20	560	276	119	572	92	109	245	201
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	1.9	4.0	0.6	0.3	6.4	7.2	1.6	6.6	2.1	1.4	2.6	5.0
Cycle Q Clear(g_c), s	1.9	4.0	0.6	0.3	6.4	7.2	1.6	6.6	2.1	1.4	2.6	5.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	243	1130	505	50	932	417	207	899	402	192	884	395
V/C Ratio(X)	0.59	0.35	0.06	0.40	0.60	0.66	0.57	0.64	0.23	0.57	0.28	0.51
Avail Cap(c_a), veh/h	298	1226	548	224	1149	514	298	1226	548	298	1226	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	11.9	10.7	22.3	14.7	15.0	20.9	15.1	13.4	21.0	13.7	14.7
Incr Delay (d2), s/veh	2.3	0.2	0.1	5.0	0.6	2.3	2.5	0.8	0.3	2.6	0.2	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	1.9	0.3	0.2	3.1	3.3	0.8	3.3	1.0	0.7	1.2	2.2
LnGrp Delay(d),s/veh	22.9	12.0	10.8	27.4	15.3	17.2	23.4	15.9	13.7	23.6	13.9	15.7
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		577			856			783			555	
Approach Delay, s/veh		14.7			16.2			16.7			16.5	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.6	15.7	4.7	18.7	6.8	15.5	7.3	16.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	3.0	16.0	4.0	16.0	4.0	15.0
Max Q Clear Time (g_c+I1), s	3.4	8.6	2.3	6.0	3.6	7.0	3.9	9.2
Green Ext Time (p_c), s	0.0	3.1	0.0	4.3	0.0	3.5	0.0	3.0

Intersection Summary	
HCM 2010 Ctrl Delay	16.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	1304	99	182	1974	6	12	848	115	13	1009	160
Future Volume (veh/h)	220	1304	99	182	1974	6	12	848	115	13	1009	160
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	220	1304	99	182	1974	6	12	848	115	13	1009	160
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	238	2040	635	260	2074	646	40	1122	502	42	1125	503
Arrive On Green	0.07	0.41	0.41	0.08	0.41	0.41	0.01	0.32	0.32	0.01	0.32	0.32
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	220	1304	99	182	1974	6	12	848	115	13	1009	160
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	5.5	17.9	3.4	4.5	32.6	0.2	0.3	18.7	4.6	0.3	23.6	6.6
Cycle Q Clear(g_c), s	5.5	17.9	3.4	4.5	32.6	0.2	0.3	18.7	4.6	0.3	23.6	6.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	238	2040	635	260	2074	646	40	1122	502	42	1125	503
V/C Ratio(X)	0.93	0.64	0.16	0.70	0.95	0.01	0.30	0.76	0.23	0.31	0.90	0.32
Avail Cap(c_a), veh/h	238	2040	635	357	2107	656	158	1141	510	158	1141	510
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.8	20.5	16.2	38.8	24.5	14.9	42.2	26.2	21.5	42.1	27.9	22.1
Incr Delay (d2), s/veh	38.6	0.7	0.1	3.6	10.5	0.0	4.2	2.9	0.2	4.0	9.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	8.3	1.5	2.2	17.0	0.1	0.2	9.4	2.0	0.2	12.8	2.9
LnGrp Delay(d),s/veh	78.4	21.2	16.4	42.4	34.9	14.9	46.4	29.1	21.7	46.1	37.3	22.4
LnGrp LOS	E	C	B	D	C	B	D	C	C	D	D	C
Approach Vol, veh/h		1623			2162			975			1182	
Approach Delay, s/veh		28.7			35.5			28.5			35.4	
Approach LOS		C			D			C			D	

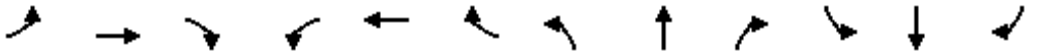
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.1	31.5	10.6	38.9	5.0	31.6	10.0	39.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	28.0	9.0	33.0	4.0	28.0	6.0	36.0
Max Q Clear Time (g_c+I1), s	2.3	20.7	6.5	19.9	2.3	25.6	7.5	34.6
Green Ext Time (p_c), s	0.0	5.5	0.2	11.8	0.0	2.0	0.0	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	32.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	224	829	0	600	1185	0	0	107	763	0	117	120
Future Volume (veh/h)	224	829	0	600	1185	0	0	107	763	0	117	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	224	829	0	600	1185	0	0	107	763	0	117	120
Adj No. of Lanes	2	2	0	2	2	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	288	969	0	691	1385	0	2	1233	551	2	1233	551
Arrive On Green	0.08	0.28	0.00	0.20	0.40	0.00	0.00	0.35	0.35	0.00	0.35	0.35
Sat Flow, veh/h	3408	3597	0	3408	3597	0	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	224	829	0	600	1185	0	0	107	763	0	117	120
Grp Sat Flow(s),veh/h/ln	1704	1752	0	1704	1752	0	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	4.6	15.9	0.0	12.1	22.0	0.0	0.0	1.5	25.0	0.0	1.6	3.8
Cycle Q Clear(g_c), s	4.6	15.9	0.0	12.1	22.0	0.0	0.0	1.5	25.0	0.0	1.6	3.8
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	288	969	0	691	1385	0	2	1233	551	2	1233	551
V/C Ratio(X)	0.78	0.86	0.00	0.87	0.86	0.00	0.00	0.09	1.38	0.00	0.09	0.22
Avail Cap(c_a), veh/h	288	986	0	719	1430	0	99	1233	551	99	1233	551
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	24.4	0.0	27.4	19.7	0.0	0.0	15.4	23.0	0.0	15.5	16.2
Incr Delay (d2), s/veh	12.7	7.4	0.0	10.7	5.2	0.0	0.0	0.0	183.7	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	8.7	0.0	6.7	11.5	0.0	0.0	0.7	38.9	0.0	0.8	1.7
LnGrp Delay(d),s/veh	44.6	31.7	0.0	38.1	24.9	0.0	0.0	15.4	206.7	0.0	15.5	16.4
LnGrp LOS	D	C		D	C			B	F		B	B
Approach Vol, veh/h		1053			1785			870			237	
Approach Delay, s/veh		34.5			29.3			183.2			15.9	
Approach LOS		C			C			F			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	29.0	18.4	23.7	0.0	29.0	10.0	32.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	25.0	15.0	20.0	4.0	25.0	6.0	29.0
Max Q Clear Time (g_c+I1), s	0.0	27.0	14.1	17.9	0.0	5.8	6.6	24.0
Green Ext Time (p_c), s	0.0	0.0	0.3	1.7	0.0	4.9	0.0	3.9

Intersection Summary	
HCM 2010 Ctrl Delay	63.8
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	140	0	1326	199	125	0	305	1328	147	561	88
Future Volume (veh/h)	18	140	0	1326	199	125	0	305	1328	147	561	88
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	18	140	0	1326	199	125	0	305	1328	147	561	88
Adj No. of Lanes	1	1	1	2	1	1	1	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	25	174	148	1245	821	698	1	1331	596	149	1587	710
Arrive On Green	0.01	0.09	0.00	0.37	0.44	0.44	0.00	0.38	0.38	0.04	0.45	0.45
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	18	140	0	1326	199	125	0	305	1328	147	561	88
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1752	1568	1704	1752	1568
Q Serve(g_s), s	1.4	10.2	0.0	50.0	9.2	6.6	0.0	8.1	52.0	5.9	14.3	4.5
Cycle Q Clear(g_c), s	1.4	10.2	0.0	50.0	9.2	6.6	0.0	8.1	52.0	5.9	14.3	4.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	25	174	148	1245	821	698	1	1331	596	149	1587	710
V/C Ratio(X)	0.71	0.81	0.00	1.07	0.24	0.18	0.00	0.23	2.23	0.98	0.35	0.12
Avail Cap(c_a), veh/h	64	216	183	1245	822	699	51	1331	596	149	1587	710
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.2	60.8	0.0	43.4	23.6	22.9	0.0	28.8	42.4	65.4	24.4	21.7
Incr Delay (d2), s/veh	30.1	16.4	0.0	44.8	0.2	0.1	0.0	0.1	558.7	68.6	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	6.0	0.0	31.1	4.7	2.9	0.0	3.9	114.9	4.2	6.9	1.9
LnGrp Delay(d),s/veh	97.2	77.1	0.0	88.2	23.8	23.0	0.0	28.9	601.2	134.0	24.5	21.8
LnGrp LOS	F	E		F	C	C		C	F	F	C	C
Approach Vol, veh/h		158			1650			1633			796	
Approach Delay, s/veh		79.4			75.5			494.3			44.4	
Approach LOS		E			E			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	56.0	54.0	16.9	0.0	66.0	6.0	64.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	52.0	50.0	16.0	4.0	54.0	5.0	61.0
Max Q Clear Time (g_c+I1), s	7.9	54.0	52.0	12.2	0.0	16.3	3.4	11.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.0	19.9	0.0	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	231.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	1	9	10	2	42	6	207	2	12	172	81
Future Volume (veh/h)	56	1	9	10	2	42	6	207	2	12	172	81
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	56	1	9	10	2	42	6	207	2	12	172	81
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	69	137	117	14	80	68	9	821	8	17	553	250
Arrive On Green	0.04	0.07	0.07	0.01	0.04	0.04	0.00	0.23	0.23	0.01	0.24	0.24
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	3557	34	1757	2349	1061
Grp Volume(v), veh/h	56	1	9	10	2	42	6	102	107	12	126	127
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1839	1757	1752	1658
Q Serve(g_s), s	0.7	0.0	0.1	0.1	0.0	0.6	0.1	1.1	1.1	0.2	1.4	1.5
Cycle Q Clear(g_c), s	0.7	0.0	0.1	0.1	0.0	0.6	0.1	1.1	1.1	0.2	1.4	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.02	1.00		0.64
Lane Grp Cap(c), veh/h	69	137	117	14	80	68	9	404	424	17	413	390
V/C Ratio(X)	0.82	0.01	0.08	0.71	0.02	0.62	0.70	0.25	0.25	0.71	0.31	0.32
Avail Cap(c_a), veh/h	446	1405	1194	223	1171	995	223	1112	1167	223	1112	1052
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.3	10.1	10.2	11.7	10.8	11.1	11.7	7.4	7.4	11.7	7.4	7.5
Incr Delay (d2), s/veh	20.2	0.0	0.3	48.2	0.1	8.7	68.9	0.3	0.3	42.6	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.1	0.3	0.0	0.4	0.2	0.6	0.6	0.3	0.7	0.7
LnGrp Delay(d),s/veh	31.5	10.1	10.5	59.9	10.9	19.8	80.6	7.7	7.7	54.2	7.9	8.0
LnGrp LOS	C	B	B	E	B	B	F	A	A	D	A	A
Approach Vol, veh/h		66			54			215			265	
Approach Delay, s/veh		28.3			26.9			9.8			10.0	
Approach LOS		C			C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.2	9.5	4.2	5.8	4.1	9.6	4.9	5.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	15.0	3.0	18.0	3.0	15.0	6.0	15.0
Max Q Clear Time (g_c+I1), s	2.2	3.1	2.1	2.1	2.1	3.5	2.7	2.6
Green Ext Time (p_c), s	0.0	2.1	0.0	0.1	0.0	2.1	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	13.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	0	10	0	0	0	4	567	0	0	304	5
Future Volume (veh/h)	25	0	10	0	0	0	4	567	0	0	304	5
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	25	0	10	0	0	0	4	567	0	0	304	5
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	34	49	41	9	9	8	9	2040	0	9	1351	22
Arrive On Green	0.02	0.00	0.03	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.38	0.38
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	3597	0	1757	3529	58
Grp Volume(v), veh/h	25	0	10	0	0	0	4	567	0	0	151	158
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	0	1757	1752	1834
Q Serve(g_s), s	0.3	0.0	0.1	0.0	0.0	0.0	0.0	1.6	0.0	0.0	1.2	1.2
Cycle Q Clear(g_c), s	0.3	0.0	0.1	0.0	0.0	0.0	0.0	1.6	0.0	0.0	1.2	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		0.03
Lane Grp Cap(c), veh/h	34	49	41	9	9	8	9	2040	0	9	671	702
V/C Ratio(X)	0.73	0.00	0.24	0.00	0.00	0.00	0.47	0.28	0.00	0.00	0.22	0.23
Avail Cap(c_a), veh/h	430	1535	1305	258	1354	1151	258	2745	0	258	1373	1437
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	10.0	0.0	9.7	0.0	0.0	0.0	10.2	2.1	0.0	0.0	4.3	4.3
Incr Delay (d2), s/veh	25.7	0.0	3.0	0.0	0.0	0.0	34.4	0.1	0.0	0.0	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.1	0.0	0.0	0.0	0.1	0.8	0.0	0.0	0.6	0.6
LnGrp Delay(d),s/veh	35.7	0.0	12.7	0.0	0.0	0.0	44.6	2.2	0.0	0.0	4.4	4.4
LnGrp LOS	D		B				D	A			A	A
Approach Vol, veh/h		35			0			571			309	
Approach Delay, s/veh		29.1			0.0			2.5			4.4	
Approach LOS		C						A			A	

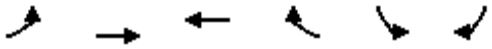
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	15.9	0.0	4.5	4.1	11.8	4.4	0.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	16.0	3.0	17.0	3.0	16.0	5.0	15.0
Max Q Clear Time (g_c+I1), s	0.0	3.6	0.0	2.1	2.0	3.2	2.3	0.0
Green Ext Time (p_c), s	0.0	4.5	0.0	0.0	0.0	4.6	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	4.2
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	38	15	46	12	47	21	451	120	133	247	24
Future Volume (veh/h)	59	38	15	46	12	47	21	451	120	133	247	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	59	38	15	46	12	47	21	451	120	133	247	24
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	69	153	130	55	138	117	28	826	218	168	1230	119
Arrive On Green	0.04	0.08	0.08	0.03	0.07	0.07	0.02	0.30	0.30	0.10	0.38	0.38
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	2744	725	1757	3231	311
Grp Volume(v), veh/h	59	38	15	46	12	47	21	287	284	133	133	138
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1717	1757	1752	1790
Q Serve(g_s), s	1.1	0.6	0.3	0.9	0.2	0.9	0.4	4.5	4.5	2.4	1.7	1.7
Cycle Q Clear(g_c), s	1.1	0.6	0.3	0.9	0.2	0.9	0.4	4.5	4.5	2.4	1.7	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.42	1.00		0.17
Lane Grp Cap(c), veh/h	69	153	130	55	138	117	28	527	517	168	667	682
V/C Ratio(X)	0.86	0.25	0.12	0.84	0.09	0.40	0.75	0.54	0.55	0.79	0.20	0.20
Avail Cap(c_a), veh/h	161	846	719	161	846	719	161	804	787	322	964	985
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.6	14.0	13.9	15.8	14.1	14.4	16.0	9.6	9.6	14.5	6.8	6.8
Incr Delay (d2), s/veh	24.4	0.8	0.4	26.5	0.3	2.2	32.4	0.9	0.9	8.0	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.4	0.1	0.8	0.1	0.5	0.4	2.3	2.3	1.5	0.8	0.8
LnGrp Delay(d),s/veh	40.0	14.9	14.3	42.2	14.4	16.6	48.4	10.4	10.5	22.5	6.9	6.9
LnGrp LOS	D	B	B	D	B	B	D	B	B	C	A	A
Approach Vol, veh/h		112			105			592			404	
Approach Delay, s/veh		28.0			27.6			11.8			12.1	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.1	13.8	5.0	6.7	4.5	16.5	5.3	6.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	15.0	3.0	15.0	3.0	18.0	3.0	15.0
Max Q Clear Time (g_c+I1), s	4.4	6.5	2.9	2.6	2.4	3.7	3.1	2.9
Green Ext Time (p_c), s	0.0	3.3	0.0	0.3	0.0	4.5	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	14.8
HCM 2010 LOS	B



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	116	503	1029	24	66	176
Future Volume (veh/h)	116	503	1029	24	66	176
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845
Adj Flow Rate, veh/h	116	503	1029	24	66	176
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	148	2207	1543	36	284	253
Arrive On Green	0.08	0.63	0.44	0.44	0.16	0.16
Sat Flow, veh/h	1757	3597	3593	82	1757	1568
Grp Volume(v), veh/h	116	503	515	538	66	176
Grp Sat Flow(s),veh/h/ln	1757	1752	1752	1830	1757	1568
Q Serve(g_s), s	2.5	2.4	8.9	8.9	1.3	4.1
Cycle Q Clear(g_c), s	2.5	2.4	8.9	8.9	1.3	4.1
Prop In Lane	1.00			0.04	1.00	1.00
Lane Grp Cap(c), veh/h	148	2207	772	807	284	253
V/C Ratio(X)	0.78	0.23	0.67	0.67	0.23	0.69
Avail Cap(c_a), veh/h	321	3111	1052	1099	825	737
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.2	3.1	8.5	8.5	14.0	15.2
Incr Delay (d2), s/veh	8.7	0.1	1.0	1.0	0.4	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	1.1	4.5	4.7	0.6	3.7
LnGrp Delay(d),s/veh	25.9	3.1	9.5	9.4	14.4	18.6
LnGrp LOS	C	A	A	A	B	B
Approach Vol, veh/h		619	1053		242	
Approach Delay, s/veh		7.4	9.5		17.4	
Approach LOS		A	A		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				28.1		10.2	7.2	20.9
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				34.0		18.0	7.0	23.0
Max Q Clear Time (g_c+I1), s				4.4		6.1	4.5	10.9
Green Ext Time (p_c), s				8.8		0.6	0.1	6.0

Intersection Summary	
HCM 2010 Ctrl Delay	9.8
HCM 2010 LOS	A



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	30	37	601	16	9	226
Future Volume (veh/h)	30	37	601	16	9	226
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845
Adj Flow Rate, veh/h	30	37	601	16	9	226
Adj No. of Lanes	1	1	2	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	108	96	1296	34	17	1987
Arrive On Green	0.06	0.06	0.37	0.37	0.01	0.57
Sat Flow, veh/h	1757	1568	3580	93	1757	3597
Grp Volume(v), veh/h	30	37	302	315	9	226
Grp Sat Flow(s),veh/h/ln	1757	1568	1752	1828	1757	1752
Q Serve(g_s), s	0.4	0.5	2.8	2.8	0.1	0.6
Cycle Q Clear(g_c), s	0.4	0.5	2.8	2.8	0.1	0.6
Prop In Lane	1.00	1.00		0.05	1.00	
Lane Grp Cap(c), veh/h	108	96	651	679	17	1987
V/C Ratio(X)	0.28	0.38	0.46	0.46	0.53	0.11
Avail Cap(c_a), veh/h	1306	1165	1465	1529	326	4233
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.6	9.7	5.1	5.1	10.6	2.2
Incr Delay (d2), s/veh	1.4	2.5	0.5	0.5	22.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.3	1.4	1.5	0.2	0.3
LnGrp Delay(d),s/veh	11.0	12.2	5.7	5.6	33.4	2.2
LnGrp LOS	B	B	A	A	C	A
Approach Vol, veh/h	67		617			235
Approach Delay, s/veh	11.7		5.6			3.4
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	4.2	12.0				16.2		5.3
Change Period (Y+Rc), s	4.0	4.0				4.0		4.0
Max Green Setting (Gmax), s	4.0	18.0				26.0		16.0
Max Q Clear Time (g_c+I1), s	2.1	4.8				2.6		2.5
Green Ext Time (p_c), s	0.0	3.2				3.8		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	5.5
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	139	9	49	129	18	66	64	413	49	19	147	90
Future Volume (veh/h)	139	9	49	129	18	66	64	413	49	19	147	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	139	9	49	129	18	66	64	413	49	19	147	90
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	178	227	193	165	213	181	96	799	94	34	466	270
Arrive On Green	0.10	0.12	0.12	0.09	0.12	0.12	0.05	0.25	0.25	0.02	0.22	0.22
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	3159	373	1757	2141	1238
Grp Volume(v), veh/h	139	9	49	129	18	66	64	228	234	19	119	118
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1779	1757	1752	1626
Q Serve(g_s), s	2.4	0.1	0.9	2.3	0.3	1.2	1.1	3.5	3.5	0.3	1.8	1.9
Cycle Q Clear(g_c), s	2.4	0.1	0.9	2.3	0.3	1.2	1.1	3.5	3.5	0.3	1.8	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		0.76
Lane Grp Cap(c), veh/h	178	227	193	165	213	181	96	443	450	34	382	354
V/C Ratio(X)	0.78	0.04	0.25	0.78	0.08	0.36	0.67	0.51	0.52	0.56	0.31	0.33
Avail Cap(c_a), veh/h	393	942	801	393	942	801	224	951	965	224	951	882
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.7	12.1	12.4	13.9	12.4	12.8	14.5	10.1	10.1	15.2	10.3	10.3
Incr Delay (d2), s/veh	7.2	0.1	0.7	7.9	0.2	1.2	7.8	0.9	0.9	13.3	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.1	0.4	1.4	0.1	0.6	0.7	1.8	1.8	0.3	0.9	0.9
LnGrp Delay(d),s/veh	21.0	12.2	13.1	21.8	12.5	14.0	22.3	11.0	11.0	28.6	10.7	10.9
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		197			213			526			256	
Approach Delay, s/veh		18.6			18.6			12.4			12.1	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.6	11.9	6.9	7.9	5.7	10.8	7.2	7.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	17.0	7.0	16.0	4.0	17.0	7.0	16.0
Max Q Clear Time (g_c+I1), s	2.3	5.5	4.3	2.9	3.1	3.9	4.4	3.2
Green Ext Time (p_c), s	0.0	2.4	0.1	0.3	0.0	2.5	0.1	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	14.5
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	0	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	0	346	266	78
Demand Flow Rate, veh/h	0	357	274	80
Vehicles Circulating, veh/h	88	274	0	68
Vehicles Exiting, veh/h	60	0	88	563
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	9.4	5.5	4.2
Approach LOS	-	A	A	A

Lane	Left	Left	Left
Designated Moves	LTR	LT	TR
Assumed Moves	LTR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	357	274	80
Cap Entry Lane, veh/h	859	1130	1056
Entry HV Adj Factor	0.969	0.972	0.975
Flow Entry, veh/h	346	266	78
Cap Entry, veh/h	832	1098	1030
V/C Ratio	0.416	0.242	0.076
Control Delay, s/veh	9.4	5.5	4.2
LOS	A	A	A
95th %tile Queue, veh	2	1	0

Intersection	
Intersection Delay, s/veh	6.9
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	0	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	44	0	291	265
Demand Flow Rate, veh/h	45	0	300	273
Vehicles Circulating, veh/h	273	274	276	0
Vehicles Exiting, veh/h	0	302	42	274
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.8	0.0	8.4	5.5
Approach LOS	A	-	A	A

Lane	Left	Left	Left
Designated Moves	LTR	TR	LT
Assumed Moves	LTR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	45	300	273
Cap Entry Lane, veh/h	860	857	1130
Entry HV Adj Factor	0.975	0.970	0.970
Flow Entry, veh/h	44	291	265
Cap Entry, veh/h	839	832	1097
V/C Ratio	0.052	0.350	0.242
Control Delay, s/veh	4.8	8.4	5.5
LOS	A	A	A
95th %tile Queue, veh	0	2	1

Intersection	
Intersection Delay, s/veh	21.6
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	0	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	0	130	1778	1537
Demand Flow Rate, veh/h	0	134	1831	1583
Vehicles Circulating, veh/h	1506	1831	0	209
Vehicles Exiting, veh/h	286	0	1506	1756
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	22.5	20.3	22.9
Approach LOS	-	C	C	C

Lane	Left	Left	Right	Left	Right
Designated Moves	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Critical Headway, s	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	134	861	970	744	839
Cap Entry Lane, veh/h	314	1130	1130	966	976
Entry HV Adj Factor	0.972	0.970	0.971	0.971	0.971
Flow Entry, veh/h	130	836	942	723	815
Cap Entry, veh/h	305	1097	1098	938	948
V/C Ratio	0.427	0.762	0.858	0.770	0.859
Control Delay, s/veh	22.5	16.7	23.5	19.3	26.2
LOS	C	C	C	C	D
95th %tile Queue, veh	2	8	11	8	11

Intersection	
Intersection Delay, s/veh	24.5
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	2	0	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	381	0	1703	1462
Demand Flow Rate, veh/h	392	0	1754	1506
Vehicles Circulating, veh/h	1506	1831	223	0
Vehicles Exiting, veh/h	0	146	1675	1831
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	22.3	0.0	34.7	13.1
Approach LOS	C	-	D	B

Lane	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	TR
Assumed Moves	LT	TR	LT	TR	LT	TR
RT Channelized						
Lane Util	0.469	0.531	0.470	0.530	0.470	0.530
Critical Headway, s	4.293	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	184	208	824	930	708	798
Cap Entry Lane, veh/h	365	394	956	967	1130	1130
Entry HV Adj Factor	0.973	0.970	0.971	0.970	0.971	0.971
Flow Entry, veh/h	179	202	800	903	687	775
Cap Entry, veh/h	355	382	929	938	1097	1097
V/C Ratio	0.504	0.528	0.862	0.962	0.627	0.706
Control Delay, s/veh	22.5	22.1	26.8	41.8	11.8	14.3
LOS	C	C	D	E	B	B
95th %tile Queue, veh	3	3	11	16	5	6

Intersection	
Intersection Delay, s/veh	16.8
Intersection LOS	C

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	465	574	754
Demand Flow Rate, veh/h	479	592	777
Vehicles Circulating, veh/h	502	162	90
Vehicles Exiting, veh/h	252	705	891
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	20.6	12.9	17.4
Approach LOS	C	B	C

Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	479	592	777
Cap Entry Lane, veh/h	684	961	1033
Entry HV Adj Factor	0.971	0.970	0.971
Flow Entry, veh/h	465	574	754
Cap Entry, veh/h	664	932	1002
V/C Ratio	0.700	0.616	0.752
Control Delay, s/veh	20.6	12.9	17.4
LOS	C	B	C
95th %tile Queue, veh	6	4	7

Intersection	
Intersection Delay, s/veh	13.8
Intersection LOS	B

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	208	642	684
Demand Flow Rate, veh/h	214	661	704
Vehicles Circulating, veh/h	462	151	85
Vehicles Exiting, veh/h	350	638	591
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	8.9	14.9	14.1
Approach LOS	A	B	B

Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	214	661	704
Cap Entry Lane, veh/h	712	972	1038
Entry HV Adj Factor	0.972	0.971	0.971
Flow Entry, veh/h	208	642	684
Cap Entry, veh/h	692	943	1008
V/C Ratio	0.301	0.680	0.678
Control Delay, s/veh	8.9	14.9	14.1
LOS	A	B	B
95th %tile Queue, veh	1	6	6

Intersection	
Intersection Delay, s/veh	15.2
Intersection LOS	C

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	299	643	620
Demand Flow Rate, veh/h	308	663	638
Vehicles Circulating, veh/h	570	144	216
Vehicles Exiting, veh/h	237	710	662
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	13.5	14.8	16.5
Approach LOS	B	B	C

Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	308	663	638
Cap Entry Lane, veh/h	639	978	910
Entry HV Adj Factor	0.971	0.970	0.971
Flow Entry, veh/h	299	643	620
Cap Entry, veh/h	620	949	884
V/C Ratio	0.482	0.678	0.701
Control Delay, s/veh	13.5	14.8	16.5
LOS	B	B	C
95th %tile Queue, veh	3	6	6

Intersection	
Intersection Delay, s/veh	217.6
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	586	599	5	1	317	6	20	5	3	14	8	70
Future Vol, veh/h	586	599	5	1	317	6	20	5	3	14	8	70
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	4	4	4	4	4	4	3	3	3	3	3	3
Mvmt Flow	586	599	5	1	317	6	20	5	3	14	8	70
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	293.9	13.9	11.4	11.5
HCM LOS	F	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	71%	49%	0%	15%
Vol Thru, %	18%	50%	98%	9%
Vol Right, %	11%	0%	2%	76%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	28	1190	324	92
LT Vol	20	586	1	14
Through Vol	5	599	317	8
RT Vol	3	5	6	70
Lane Flow Rate	28	1190	324	92
Geometry Grp	1	1	1	1
Degree of Util (X)	0.052	1.608	0.469	0.155
Departure Headway (Hd)	7.966	4.865	5.855	7.19
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	452	750	619	502
Service Time	5.966	2.902	3.855	5.19
HCM Lane V/C Ratio	0.062	1.587	0.523	0.183
HCM Control Delay	11.4	293.9	13.9	11.5
HCM Lane LOS	B	F	B	B
HCM 95th-tile Q	0.2	62.9	2.5	0.5

Intersection	
Intersection Delay, s/veh	151.9
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	417	2	9	8	1	1	26	872	2	0	167	50
Future Vol, veh/h	417	2	9	8	1	1	26	872	2	0	167	50
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	417	2	9	8	1	1	26	872	2	0	167	50
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	30.9	12.2	244.1	14.5
HCM LOS	D	B	F	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	97%	80%	0%
Vol Thru, %	97%	0%	10%	77%
Vol Right, %	0%	2%	10%	23%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	900	428	10	217
LT Vol	26	417	8	0
Through Vol	872	2	1	167
RT Vol	2	9	1	50
Lane Flow Rate	900	428	10	217
Geometry Grp	1	1	1	1
Degree of Util (X)	1.485	0.766	0.021	0.388
Departure Headway (Hd)	5.941	7.46	9.018	7.112
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	621	488	399	510
Service Time	3.95	5.46	7.018	5.112
HCM Lane V/C Ratio	1.449	0.877	0.025	0.425
HCM Control Delay	244.1	30.9	12.2	14.5
HCM Lane LOS	F	D	B	B
HCM 95th-tile Q	44.3	6.7	0.1	1.8

Intersection	
Intersection Delay, s/veh	14.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	54	0	244	0	247	292	64	33	0
Future Vol, veh/h	0	0	0	54	0	244	0	247	292	64	33	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	0	54	0	244	0	247	292	64	33	0
Number of Lanes	0	1	0	0	1	0	0	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	0	11.7	17.6	9.7
HCM LOS	-	B	C	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	0%	0%	18%	100%	0%
Vol Thru, %	46%	100%	0%	0%	100%
Vol Right, %	54%	0%	82%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	539	0	298	64	33
LT Vol	0	0	54	64	0
Through Vol	247	0	0	0	33
RT Vol	292	0	244	0	0
Lane Flow Rate	539	0	298	64	33
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.692	0	0.42	0.115	0.055
Departure Headway (Hd)	4.723	6.075	5.07	6.454	5.947
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	771	0	715	557	604
Service Time	2.723	4.094	3.07	4.177	3.669
HCM Lane V/C Ratio	0.699	0	0.417	0.115	0.055
HCM Control Delay	17.6	9.1	11.7	10	9
HCM Lane LOS	C	N	B	A	A
HCM 95th-tile Q	5.7	0	2.1	0.4	0.2

Intersection	
Intersection Delay, s/veh	14.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1	0	8	0	237	0	397	32	10	318	0
Future Vol, veh/h	0	1	0	8	0	237	0	397	32	10	318	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	20	20	20	5	5	5	6	6	6
Mvmt Flow	0	1	0	8	0	237	0	397	32	10	318	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.5	12	16	13.3
HCM LOS	A	B	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	3%	3%
Vol Thru, %	93%	100%	0%	97%
Vol Right, %	7%	0%	97%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	429	1	245	328
LT Vol	0	0	8	10
Through Vol	397	1	0	318
RT Vol	32	0	237	0
Lane Flow Rate	429	1	245	328
Geometry Grp	1	1	1	1
Degree of Util (X)	0.613	0.002	0.379	0.486
Departure Headway (Hd)	5.142	6.443	5.574	5.335
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	704	553	644	676
Service Time	3.173	4.506	3.613	3.369
HCM Lane V/C Ratio	0.609	0.002	0.38	0.485
HCM Control Delay	16	9.5	12	13.3
HCM Lane LOS	C	A	B	B
HCM 95th-tile Q	4.2	0	1.8	2.7

Intersection	
Intersection Delay, s/veh	106.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	189	310	40	3	155	23	32	620	26	20	129	28
Future Vol, veh/h	189	310	40	3	155	23	32	620	26	20	129	28
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	3	3	3
Mvmt Flow	189	310	40	3	155	23	32	620	26	20	129	28
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	81.7	17.9	173.5	17.4
HCM LOS	F	C	F	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	35%	2%	11%
Vol Thru, %	91%	58%	86%	73%
Vol Right, %	4%	7%	13%	16%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	678	539	181	177
LT Vol	32	189	3	20
Through Vol	620	310	155	129
RT Vol	26	40	23	28
Lane Flow Rate	678	539	181	177
Geometry Grp	1	1	1	1
Degree of Util (X)	1.305	1.043	0.399	0.391
Departure Headway (Hd)	7.223	7.791	9.017	8.845
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	509	469	402	409
Service Time	5.223	5.791	7.017	6.845
HCM Lane V/C Ratio	1.332	1.149	0.45	0.433
HCM Control Delay	173.5	81.7	17.9	17.4
HCM Lane LOS	F	F	C	C
HCM 95th-tile Q	27.8	14.7	1.9	1.8

Intersection	
Int Delay, s/veh	2.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	88	102	575	52	105	399
Future Vol, veh/h	88	102	575	52	105	399
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	70	0	-	-	85	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	4	4	3	3	3	3
Mvmt Flow	88	102	575	52	105	399

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1011	314	0	0	627	0
Stage 1	601	-	-	-	-	-
Stage 2	410	-	-	-	-	-
Critical Hdwy	6.88	6.98	-	-	4.16	-
Critical Hdwy Stg 1	5.88	-	-	-	-	-
Critical Hdwy Stg 2	5.88	-	-	-	-	-
Follow-up Hdwy	3.54	3.34	-	-	2.23	-
Pot Cap-1 Maneuver	232	676	-	-	944	-
Stage 1	505	-	-	-	-	-
Stage 2	633	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	206	676	-	-	944	-
Mov Cap-2 Maneuver	337	-	-	-	-	-
Stage 1	505	-	-	-	-	-
Stage 2	563	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.1	0	1.9
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	337	676	944	-
HCM Lane V/C Ratio	-	-	0.261	0.151	0.111	-
HCM Control Delay (s)	-	-	19.4	11.3	9.3	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	1	0.5	0.4	-

Intersection	
Int Delay, s/veh	4.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	165	10	179	289	36	353
Future Vol, veh/h	165	10	179	289	36	353
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	4	4	4	4
Mvmt Flow	165	10	179	289	36	353

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	749	324	0	0	468	0
Stage 1	324	-	-	-	-	-
Stage 2	425	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.14	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.236	-
Pot Cap-1 Maneuver	378	715	-	-	1083	-
Stage 1	731	-	-	-	-	-
Stage 2	657	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	363	715	-	-	1083	-
Mov Cap-2 Maneuver	363	-	-	-	-	-
Stage 1	731	-	-	-	-	-
Stage 2	630	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.8	0	0.8
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	374	1083	-
HCM Lane V/C Ratio	-	-	0.468	0.033	-
HCM Control Delay (s)	-	-	22.8	8.4	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	2.4	0.1	-

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	27	2157	2474	34	10	93
Future Vol, veh/h	27	2157	2474	34	10	93
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	190	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	6	6	6	6	3	3
Mvmt Flow	27	2157	2474	34	10	93

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2508	0	-	0	3624	1254
Stage 1	-	-	-	-	2491	-
Stage 2	-	-	-	-	1133	-
Critical Hdwy	4.22	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.26	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	167	-	-	-	~ 4	162
Stage 1	-	-	-	-	47	-
Stage 2	-	-	-	-	267	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	167	-	-	-	~ 3	162
Mov Cap-2 Maneuver	-	-	-	-	36	-
Stage 1	-	-	-	-	47	-
Stage 2	-	-	-	-	224	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	113.2
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	167	-	-	-	121
HCM Lane V/C Ratio	0.162	-	-	-	0.851
HCM Control Delay (s)	30.7	-	-	-	113.2
HCM Lane LOS	D	-	-	-	F
HCM 95th %tile Q(veh)	0.6	-	-	-	5.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	1	0	3	1	6	0	565	1	1	76	1
Future Vol, veh/h	3	1	0	3	1	6	0	565	1	1	76	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	3	1	0	3	1	6	0	565	1	1	76	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	648	645	77	645	645	566	77	0	0	566	0	0
Stage 1	79	79	-	566	566	-	-	-	-	-	-	-
Stage 2	569	566	-	79	79	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	382	390	981	384	390	522	1515	-	-	1001	-	-
Stage 1	927	827	-	507	506	-	-	-	-	-	-	-
Stage 2	505	506	-	927	827	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	377	390	981	383	390	522	1515	-	-	1001	-	-
Mov Cap-2 Maneuver	377	390	-	383	390	-	-	-	-	-	-	-
Stage 1	927	826	-	507	506	-	-	-	-	-	-	-
Stage 2	498	506	-	925	826	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.6	13.1	0	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1515	-	-	380	457	1001	-	-
HCM Lane V/C Ratio	-	-	-	0.011	0.022	0.001	-	-
HCM Control Delay (s)	0	-	-	14.6	13.1	8.6	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	75	42	19	845	700	68
Future Vol, veh/h	75	42	19	845	700	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	75	42	19	845	700	68

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1617	734	768	0	-	0
Stage 1	734	-	-	-	-	-
Stage 2	883	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	113	418	841	-	-	-
Stage 1	473	-	-	-	-	-
Stage 2	403	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	110	418	841	-	-	-
Mov Cap-2 Maneuver	110	-	-	-	-	-
Stage 1	473	-	-	-	-	-
Stage 2	394	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	83.8	0.2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	841	-	150	-	-
HCM Lane V/C Ratio	0.023	-	0.78	-	-
HCM Control Delay (s)	9.4	-	83.8	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0.1	-	4.9	-	-

Intersection	
Int Delay, s/veh	6.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	343	195	313	264	42	380
Future Vol, veh/h	343	195	313	264	42	380
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	300	250	-	150	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	343	195	313	264	42	380

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	343	0	1233	343
Stage 1	-	-	-	-	343	-
Stage 2	-	-	-	-	890	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1210	-	194	697
Stage 1	-	-	-	-	716	-
Stage 2	-	-	-	-	400	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1210	-	144	697
Mov Cap-2 Maneuver	-	-	-	-	144	-
Stage 1	-	-	-	-	716	-
Stage 2	-	-	-	-	297	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.9	18.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	144	697	-	-	1210	-
HCM Lane V/C Ratio	0.292	0.545	-	-	0.259	-
HCM Control Delay (s)	40	16.2	-	-	9	-
HCM Lane LOS	E	C	-	-	A	-
HCM 95th %tile Q(veh)	1.1	3.3	-	-	1	-

Intersection	
Int Delay, s/veh	44.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	225	156	0	0	156	7	5	302	0	0	93	109
Future Vol, veh/h	225	156	0	0	156	7	5	302	0	0	93	109
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	8	8	8	10	10	10	8	8	8	8	8	8
Mvmt Flow	225	156	0	0	156	7	5	302	0	0	93	109

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	163	0	0	156	0	0	867	769	156	917	766	160
Stage 1	-	-	-	-	-	-	606	606	-	160	160	-
Stage 2	-	-	-	-	-	-	261	163	-	757	606	-
Critical Hdwy	4.18	-	-	4.2	-	-	7.18	6.58	6.28	7.18	6.58	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Follow-up Hdwy	2.272	-	-	2.29	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	1380	-	-	1377	-	-	267	325	874	246	326	870
Stage 1	-	-	-	-	-	-	474	477	-	828	754	-
Stage 2	-	-	-	-	-	-	731	752	-	391	477	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1380	-	-	1377	-	-	149	~ 267	874	-	268	870
Mov Cap-2 Maneuver	-	-	-	-	-	-	149	~ 267	-	-	268	-
Stage 1	-	-	-	-	-	-	389	392	-	680	754	-
Stage 2	-	-	-	-	-	-	561	752	-	74	392	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.8	0	147.4	
HCM LOS			F	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	264	1380	-	-	1377	-	-	-
HCM Lane V/C Ratio	1.163	0.163	-	-	-	-	-	-
HCM Control Delay (s)	147.4	8.1	0	-	0	-	-	-
HCM Lane LOS	F	A	A	-	A	-	-	-
HCM 95th %tile Q(veh)	13.7	0.6	-	-	0	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	19	42	43	25	137	103
Future Vol, veh/h	19	42	43	25	137	103
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	19	42	43	25	137	103

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	300	189	240	0	-	0
Stage 1	189	-	-	-	-	-
Stage 2	111	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	689	850	1321	-	-	-
Stage 1	841	-	-	-	-	-
Stage 2	911	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	666	850	1321	-	-	-
Mov Cap-2 Maneuver	666	-	-	-	-	-
Stage 1	841	-	-	-	-	-
Stage 2	881	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	4.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1321	-	783	-	-
HCM Lane V/C Ratio	0.033	-	0.078	-	-
HCM Control Delay (s)	7.8	0	10	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	3	12	63	176	7
Future Vol, veh/h	3	3	12	63	176	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	3	3	12	63	176	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	267	180	183	0	-	0
Stage 1	180	-	-	-	-	-
Stage 2	87	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	720	860	1386	-	-	-
Stage 1	849	-	-	-	-	-
Stage 2	934	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	714	860	1386	-	-	-
Mov Cap-2 Maneuver	714	-	-	-	-	-
Stage 1	849	-	-	-	-	-
Stage 2	926	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.7	1.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1386	-	780	-	-
HCM Lane V/C Ratio	0.009	-	0.008	-	-
HCM Control Delay (s)	7.6	0	9.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	86	145	68	47	162	210
Future Vol, veh/h	86	145	68	47	162	210
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	86	145	68	47	162	210

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	450	267	372	0	-	0
Stage 1	267	-	-	-	-	-
Stage 2	183	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	565	769	1181	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	846	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	532	769	1181	-	-	-
Mov Cap-2 Maneuver	532	-	-	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	796	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.4	4.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1181	-	660	-	-
HCM Lane V/C Ratio	0.058	-	0.35	-	-
HCM Control Delay (s)	8.2	0	13.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	1.6	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	26	6	1	104	100	82
Future Vol, veh/h	26	6	1	104	100	82
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	150	0	150	-	-	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	26	6	1	104	100	82

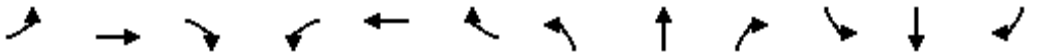
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	206	100	100	0	-	0
Stage 1	100	-	-	-	-	-
Stage 2	106	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	780	953	1486	-	-	-
Stage 1	921	-	-	-	-	-
Stage 2	916	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	779	953	1486	-	-	-
Mov Cap-2 Maneuver	779	-	-	-	-	-
Stage 1	921	-	-	-	-	-
Stage 2	915	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.6	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1486	-	779	953	-	-
HCM Lane V/C Ratio	0.001	-	0.033	0.006	-	-
HCM Control Delay (s)	7.4	-	9.8	8.8	-	-
HCM Lane LOS	A	-	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0	-	-

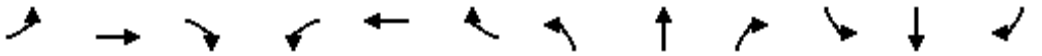
Existing Plus All Projects

PM



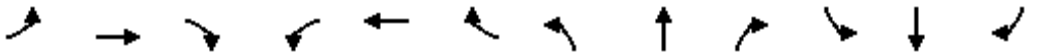
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	724	0	947	0	0	0	0	1745	470	0	1684	841
Future Volume (vph)	724	0	947	0	0	0	0	1745	470	0	1684	841
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	4.0		4.0	4.0
Lane Util. Factor	0.97		0.88					0.91	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3367		2733					4988	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3367		2733					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	724	0	947	0	0	0	0	1745	470	0	1684	841
RTOR Reduction (vph)	0	0	13	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	724	0	934	0	0	0	0	1745	470	0	1684	841
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot		Perm					NA	Free		NA	Free
Protected Phases	4							2			6	
Permitted Phases			4						Free			Free
Actuated Green, G (s)	19.7		19.7					21.7	49.4		21.7	49.4
Effective Green, g (s)	19.7		19.7					21.7	49.4		21.7	49.4
Actuated g/C Ratio	0.40		0.40					0.44	1.00		0.44	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	1342		1089					2191	1553		2191	1553
v/s Ratio Prot	0.22							c0.35			0.34	
v/s Ratio Perm			c0.34						0.30			0.54
v/c Ratio	0.54		0.86					0.80	0.30		0.77	0.54
Uniform Delay, d1	11.4		13.6					11.9	0.0		11.7	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.4		6.8					2.1	0.5		1.7	1.4
Delay (s)	11.8		20.4					14.0	0.5		13.4	1.4
Level of Service	B		C					B	A		B	A
Approach Delay (s)		16.7			0.0			11.2			9.4	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	49.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



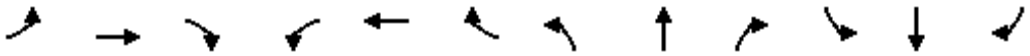
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	256	673	126	271	791	1057	327	900	166	1129	1467	150
Future Volume (vph)	256	673	126	271	791	1057	327	900	166	1129	1467	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		0.97	0.95	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	3389		3367	3471	2733	3367	4988	1553	3367	4988	1553
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	3389		3367	3471	2733	3367	4988	1553	3367	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	256	673	126	271	791	1057	327	900	166	1129	1467	150
RTOR Reduction (vph)	0	17	0	0	0	822	0	0	133	0	0	90
Lane Group Flow (vph)	256	782	0	271	791	235	327	900	33	1129	1467	60
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	7.0	19.0		8.0	20.0	20.0	10.9	18.0	18.0	29.0	36.1	36.1
Effective Green, g (s)	7.0	19.0		8.0	20.0	20.0	10.9	18.0	18.0	29.0	36.1	36.1
Actuated g/C Ratio	0.08	0.21		0.09	0.22	0.22	0.12	0.20	0.20	0.32	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	261	715		299	771	607	407	997	310	1084	2000	622
v/s Ratio Prot	0.08	c0.23		0.08	c0.23		0.10	c0.18		c0.34	0.29	
v/s Ratio Perm						0.09			0.02			0.04
v/c Ratio	0.98	1.09		0.91	1.03	0.39	0.80	0.90	0.11	1.04	0.73	0.10
Uniform Delay, d1	41.4	35.5		40.6	35.0	29.8	38.5	35.1	29.4	30.5	22.9	16.8
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	50.1	61.9		29.0	39.2	0.4	10.9	11.2	0.2	38.8	1.4	0.1
Delay (s)	91.6	97.4		69.6	74.2	30.2	49.4	46.3	29.6	69.3	24.3	16.9
Level of Service	F	F		E	E	C	D	D	C	E	C	B
Approach Delay (s)		96.0			51.7			45.1			42.4	
Approach LOS		F			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	53.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	93.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	434	1521	12	844	19	1045	2	3	14	10	27
Future Volume (vph)	80	434	1521	12	844	19	1045	2	3	14	10	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.97	1.00
Satd. Flow (prot)	1736	3471	1553	1736	3471	1553	1618	1622	1524		1792	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.97	1.00
Satd. Flow (perm)	1736	3471	1553	1736	3471	1553	1618	1622	1524		1792	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	434	1521	12	844	19	1045	2	3	14	10	27
RTOR Reduction (vph)	0	0	185	0	0	14	0	0	2	0	0	26
Lane Group Flow (vph)	80	434	1336	12	844	5	522	525	1	0	24	1
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4	2	3	8		2	2		6	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	6.0	36.0	94.1	1.6	31.6	31.6	58.1	58.1	58.1		5.9	5.9
Effective Green, g (s)	6.0	36.0	94.1	1.6	31.6	31.6	58.1	58.1	58.1		5.9	5.9
Actuated g/C Ratio	0.05	0.31	0.80	0.01	0.27	0.27	0.49	0.49	0.49		0.05	0.05
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	88	1062	1295	23	932	417	799	801	752		89	78
v/s Ratio Prot	c0.05	0.13	c0.51	0.01	0.24		0.32	0.32			c0.01	
v/s Ratio Perm			0.35			0.00			0.00			0.00
v/c Ratio	0.91	0.41	1.03	0.52	0.91	0.01	0.65	0.66	0.00		0.27	0.02
Uniform Delay, d1	55.5	32.4	11.8	57.6	41.6	31.5	22.2	22.3	15.1		53.8	53.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	65.8	0.3	33.5	19.7	12.1	0.0	1.9	1.9	0.0		1.6	0.1
Delay (s)	121.4	32.6	45.2	77.3	53.7	31.6	24.2	24.2	15.1		55.4	53.2
Level of Service	F	C	D	E	D	C	C	C	B		E	D
Approach Delay (s)		45.5			53.5			24.2			54.2	
Approach LOS		D			D			C			D	

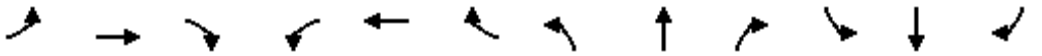
Intersection Summary			
HCM 2000 Control Delay	41.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	117.6	Sum of lost time (s)	20.0
Intersection Capacity Utilization	110.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	384	83	262	500	93	337	231	387	122	208	37
Future Volume (vph)	38	384	83	262	500	93	337	231	387	122	208	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		0.95	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85		0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00		0.98	
Satd. Flow (prot)	1752	3505	1568	1752	3422		1665	1735	1568		3395	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00		0.98	
Satd. Flow (perm)	1752	3505	1568	1752	3422		1665	1735	1568		3395	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	38	384	83	262	500	93	337	231	387	122	208	37
RTOR Reduction (vph)	0	0	65	0	17	0	0	0	303	0	11	0
Lane Group Flow (vph)	38	384	18	262	576	0	280	288	84	0	356	0
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4						2			
Actuated Green, G (s)	2.2	15.1	15.1	11.1	24.0		15.1	15.1	15.1		12.2	
Effective Green, g (s)	2.2	15.1	15.1	11.1	24.0		15.1	15.1	15.1		12.2	
Actuated g/C Ratio	0.03	0.22	0.22	0.16	0.35		0.22	0.22	0.22		0.18	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	55	761	340	279	1181		361	376	340		595	
v/s Ratio Prot	0.02	0.11		c0.15	c0.17		c0.17	0.17			c0.10	
v/s Ratio Perm			0.01						0.05			
v/c Ratio	0.69	0.50	0.05	0.94	0.49		0.78	0.77	0.25		0.60	
Uniform Delay, d1	33.3	23.9	21.5	28.9	17.9		25.6	25.5	22.5		26.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	31.3	0.5	0.1	37.4	0.3		10.0	9.0	0.4		1.6	
Delay (s)	64.6	24.4	21.6	66.2	18.2		35.6	34.5	22.9		28.0	
Level of Service	E	C	C	E	B		D	C	C		C	
Approach Delay (s)		27.0			32.9			30.1			28.0	
Approach LOS		C			C			C			C	

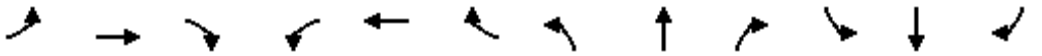
Intersection Summary			
HCM 2000 Control Delay	30.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	69.5	Sum of lost time (s)	20.0
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



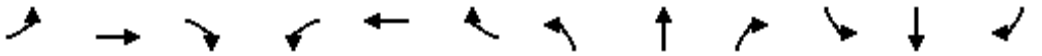
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	1383	322	161	1116	1075	157	1101	85	1011	705	79
Future Volume (vph)	105	1383	322	161	1116	1075	157	1101	85	1011	705	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.1		5.5	5.4	4.0	4.7	4.8	4.8	4.8	4.8	4.8
Lane Util. Factor	1.00	1.00		0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1703	1742		3303	3406	1524	3367	3471	1553	1736	3471	1553
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.14	1.00	1.00
Satd. Flow (perm)	1703	1742		3303	3406	1524	3367	3471	1553	258	3471	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	105	1383	322	161	1116	1075	157	1101	85	1011	705	79
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	36	0	0	48
Lane Group Flow (vph)	105	1699	0	161	1116	1075	157	1101	49	1011	705	31
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Free	Prot	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2		3	8			4	
Permitted Phases						Free			8	4		4
Actuated Green, G (s)	9.0	61.9		3.5	56.6	145.0	3.3	64.2	64.2	56.2	56.2	56.2
Effective Green, g (s)	9.0	61.9		3.5	56.6	145.0	3.3	64.2	64.2	56.2	56.2	56.2
Actuated g/C Ratio	0.06	0.43		0.02	0.39	1.00	0.02	0.44	0.44	0.39	0.39	0.39
Clearance Time (s)	5.0	5.1		5.5	5.4		4.7	4.8	4.8	4.8	4.8	4.8
Vehicle Extension (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lane Grp Cap (vph)	105	743		79	1329	1524	76	1536	687	99	1345	601
v/s Ratio Prot	0.06	c0.98		c0.05	0.33		c0.05	0.32			0.20	
v/s Ratio Perm						0.71			0.03	c3.92		0.02
v/c Ratio	1.00	2.29		2.04	0.84	0.71	2.07	0.72	0.07	10.21	0.52	0.05
Uniform Delay, d1	68.0	41.5		70.8	40.1	0.0	70.8	33.0	23.3	44.4	34.1	27.7
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	87.8	583.4		508.2	4.6	2.8	521.8	1.4	0.0	4165.5	0.2	0.0
Delay (s)	155.8	625.0		579.0	44.7	2.8	592.6	34.3	23.3	4209.9	34.3	27.8
Level of Service	F	F		F	D	A	F	C	C	F	C	C
Approach Delay (s)		597.8			62.1			98.9			2385.8	
Approach LOS		F			E			F			F	

Intersection Summary			
HCM 2000 Control Delay	773.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	5.79		
Actuated Cycle Length (s)	145.0	Sum of lost time (s)	20.1
Intersection Capacity Utilization	191.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



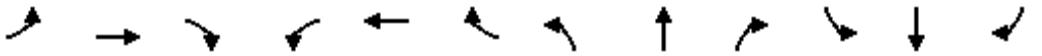
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	670	776	154	592	40	315	160	181	36	80	31
Future Volume (vph)	34	670	776	154	592	40	315	160	181	36	80	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	3.9	3.9	5.5	4.0	4.0	4.3	4.3		5.1	5.1	5.1
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1568	3400	3505	1568	3367	3195		1752	3505	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	3505	1568	3400	3505	1568	3367	3195		1752	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	34	670	776	154	592	40	315	160	181	36	80	31
RTOR Reduction (vph)	0	0	447	0	0	21	0	153	0	0	0	29
Lane Group Flow (vph)	34	670	329	154	592	19	315	188	0	36	80	2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	3%	3%	3%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		8	8		4	4	
Permitted Phases			6			2						4
Actuated Green, G (s)	2.1	28.9	28.9	5.7	32.4	32.4	10.6	10.6		4.1	4.1	4.1
Effective Green, g (s)	2.1	28.9	28.9	5.7	32.4	32.4	10.6	10.6		4.1	4.1	4.1
Actuated g/C Ratio	0.03	0.42	0.42	0.08	0.48	0.48	0.16	0.16		0.06	0.06	0.06
Clearance Time (s)	5.5	3.9	3.9	5.5	4.0	4.0	4.3	4.3		5.1	5.1	5.1
Vehicle Extension (s)	1.0	4.9	4.9	1.0	4.1	4.1	2.0	2.0		1.0	1.0	1.0
Lane Grp Cap (vph)	54	1487	665	284	1667	746	524	497		105	211	94
v/s Ratio Prot	0.02	0.19		c0.05	c0.17		c0.09	0.06		0.02	c0.02	
v/s Ratio Perm			c0.21			0.01						0.00
v/c Ratio	0.63	0.45	0.50	0.54	0.36	0.03	0.60	0.38		0.34	0.38	0.02
Uniform Delay, d1	32.6	13.9	14.3	29.9	11.3	9.5	26.8	25.8		30.7	30.8	30.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	15.4	0.4	1.2	1.1	0.2	0.0	1.3	0.2		0.7	0.4	0.0
Delay (s)	48.0	14.4	15.5	31.1	11.4	9.5	28.1	26.0		31.4	31.2	30.1
Level of Service	D	B	B	C	B	A	C	C		C	C	C
Approach Delay (s)		15.7			15.2			27.0			31.0	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	18.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	68.1	Sum of lost time (s)	22.9
Intersection Capacity Utilization	67.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



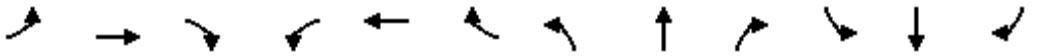
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	1174	0	211	0	503	1603	0	881	626
Future Volume (vph)	0	0	0	1174	0	211	0	503	1603	0	881	626
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.6		4.6		3.5	4.0		5.1	4.0
Lane Util. Factor				0.97		0.88		0.91	1.00		0.91	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3367		2733		4988	1553		4988	1553
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3367		2733		4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	1174	0	211	0	503	1603	0	881	626
RTOR Reduction (vph)	0	0	0	0	0	115	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	1174	0	96	0	503	1603	0	881	626
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type				Prot		Perm		NA	Free		NA	Free
Protected Phases				4				6			2	
Permitted Phases						4			Free			Free
Actuated Green, G (s)				17.7		17.7		13.0	38.8		11.4	38.8
Effective Green, g (s)				17.7		17.7		13.0	38.8		11.4	38.8
Actuated g/C Ratio				0.46		0.46		0.34	1.00		0.29	1.00
Clearance Time (s)				4.6		4.6		3.5			5.1	
Vehicle Extension (s)				1.0		1.0		1.0			1.0	
Lane Grp Cap (vph)				1535		1246		1671	1553		1465	1553
v/s Ratio Prot				0.35				0.10			0.18	
v/s Ratio Perm						0.04			c1.03			0.40
v/c Ratio				0.76		0.08		0.30	1.03		0.60	0.40
Uniform Delay, d1				8.8		5.9		9.5	19.4		11.8	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				2.1		0.0		0.0	31.6		0.5	0.8
Delay (s)				10.9		6.0		9.6	51.0		12.2	0.8
Level of Service				B		A		A	D		B	A
Approach Delay (s)		0.0			10.2			41.1			7.5	
Approach LOS		A			B			D			A	

Intersection Summary			
HCM 2000 Control Delay	22.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.38		
Actuated Cycle Length (s)	38.8	Sum of lost time (s)	9.7
Intersection Capacity Utilization	58.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	280	0	1351	0	0	0	0	1835	1030	0	1631	421
Future Volume (vph)	280	0	1351	0	0	0	0	1835	1030	0	1631	421
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4		6.4					5.1	4.0		4.6	4.0
Lane Util. Factor	0.97		0.88					0.91	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3367		2733					4988	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3367		2733					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	280	0	1351	0	0	0	0	1835	1030	0	1631	421
RTOR Reduction (vph)	0	0	13	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	280	0	1338	0	0	0	0	1835	1030	0	1631	421
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot		Perm					NA	Free		NA	Free
Protected Phases	4							2			6	
Permitted Phases			4						Free			Free
Actuated Green, G (s)	43.6		43.6					34.2	89.3		34.7	89.3
Effective Green, g (s)	43.6		43.6					34.2	89.3		34.7	89.3
Actuated g/C Ratio	0.49		0.49					0.38	1.00		0.39	1.00
Clearance Time (s)	6.4		6.4					5.1			4.6	
Vehicle Extension (s)	1.0		1.0					1.0			1.0	
Lane Grp Cap (vph)	1643		1334					1910	1553		1938	1553
v/s Ratio Prot	0.08							c0.37			0.33	
v/s Ratio Perm			c0.49						0.66			0.27
v/c Ratio	0.17		1.00					0.96	0.66		0.84	0.27
Uniform Delay, d1	12.8		22.8					26.9	0.0		24.8	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0		25.4					12.5	2.2		3.4	0.4
Delay (s)	12.8		48.2					39.4	2.2		28.2	0.4
Level of Service	B		D					D	A		C	A
Approach Delay (s)		42.2			0.0			26.1			22.5	
Approach LOS		D			A			C			C	

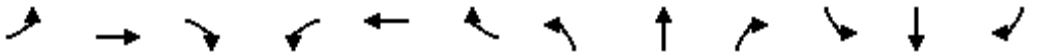
Intersection Summary			
HCM 2000 Control Delay	28.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	89.3	Sum of lost time (s)	11.5
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	938	49	60	729	66	4	26	35	79	181	95
Future Volume (vph)	205	938	49	60	729	66	4	26	35	79	181	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	3479		1752	3461		1752	1845	1568	1752	1845	1568
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1752	3479		1752	3461		1752	1845	1568	1752	1845	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	205	938	49	60	729	66	4	26	35	79	181	95
RTOR Reduction (vph)	0	6	0	0	10	0	0	0	29	0	0	75
Lane Group Flow (vph)	205	981	0	60	785	0	4	26	6	79	181	20
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)	9.5	24.5		2.2	17.2		0.5	9.6	9.6	2.7	11.8	11.8
Effective Green, g (s)	9.5	24.5		2.2	17.2		0.5	9.6	9.6	2.7	11.8	11.8
Actuated g/C Ratio	0.17	0.45		0.04	0.31		0.01	0.17	0.17	0.05	0.21	0.21
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	302	1549		70	1082		15	322	273	86	395	336
v/s Ratio Prot	c0.12	c0.28		0.03	0.23		0.00	0.01		c0.05	c0.10	
v/s Ratio Perm									0.00			0.01
v/c Ratio	0.68	0.63		0.86	0.73		0.27	0.08	0.02	0.92	0.46	0.06
Uniform Delay, d1	21.3	11.8		26.2	16.8		27.1	19.0	18.8	26.0	18.8	17.2
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.0	0.9		60.4	2.4		9.3	0.1	0.0	69.7	0.8	0.1
Delay (s)	27.3	12.6		86.7	19.2		36.4	19.1	18.8	95.7	19.7	17.3
Level of Service	C	B		F	B		D	B	B	F	B	B
Approach Delay (s)		15.2			24.0			20.0			35.9	
Approach LOS		B			C			C			D	

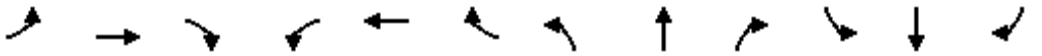
Intersection Summary			
HCM 2000 Control Delay	21.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	54.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



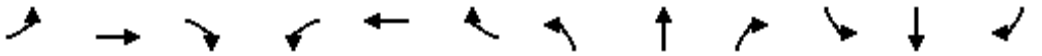
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	452	0	211	0	857	975	0	630	400
Future Volume (vph)	0	0	0	452	0	211	0	857	975	0	630	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.9			4.8	4.0		4.8	4.0
Lane Util. Factor				0.95	0.95			0.95	1.00		0.95	1.00
Frt				1.00	0.90			1.00	0.85		1.00	0.85
Flt Protected				0.95	0.98			1.00	1.00		1.00	1.00
Satd. Flow (prot)				1649	1537			3471	1553		3471	1553
Flt Permitted				0.95	0.98			1.00	1.00		1.00	1.00
Satd. Flow (perm)				1649	1537			3471	1553		3471	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	452	0	211	0	857	975	0	630	400
RTOR Reduction (vph)	0	0	0	0	44	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	344	275	0	0	857	975	0	630	400
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type				Prot	NA			NA	Free		NA	Free
Protected Phases				3	8			2			6	
Permitted Phases									Free			Free
Actuated Green, G (s)				11.2	11.2			14.5	34.5		14.5	34.5
Effective Green, g (s)				11.2	11.2			14.5	34.5		14.5	34.5
Actuated g/C Ratio				0.32	0.32			0.42	1.00		0.42	1.00
Clearance Time (s)				4.0	4.9			4.8			4.8	
Vehicle Extension (s)				3.0	1.0			1.0			1.0	
Lane Grp Cap (vph)				535	498			1458	1553		1458	1553
v/s Ratio Prot				0.21	0.18			0.25			0.18	
v/s Ratio Perm									c0.63			0.26
v/c Ratio				0.64	0.55			0.59	0.63		0.43	0.26
Uniform Delay, d1				9.9	9.6			7.7	0.0		7.1	0.0
Progression Factor				1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2				2.6	0.8			0.4	1.9		0.1	0.4
Delay (s)				12.6	10.3			8.1	1.9		7.2	0.4
Level of Service				B	B			A	A		A	A
Approach Delay (s)		0.0			11.5			4.8			4.5	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	34.5	Sum of lost time (s)	9.7
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



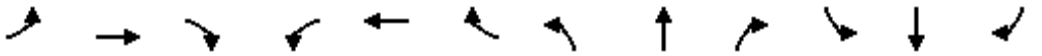
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	511	0	241	0	0	0	0	1321	1275	0	848	234
Future Volume (vph)	511	0	241	0	0	0	0	1321	1275	0	848	234
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.1	5.1					4.9	4.0		4.8	4.0
Lane Util. Factor	0.95	0.91	0.95					0.91	1.00		0.95	1.00
Frt	1.00	0.99	0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95	0.96	1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	1649	1569	1475					4988	1553		3471	1553
Flt Permitted	0.95	0.96	1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	1649	1569	1475					4988	1553		3471	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	511	0	241	0	0	0	0	1321	1275	0	848	234
RTOR Reduction (vph)	0	37	69	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	271	227	148	0	0	0	0	1321	1275	0	848	234
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA	Perm					NA	Free		NA	Free
Protected Phases	7	4						2			6	
Permitted Phases			4						Free			Free
Actuated Green, G (s)	10.0	10.0	8.9					16.1	35.0		16.2	35.0
Effective Green, g (s)	10.0	10.0	8.9					16.1	35.0		16.2	35.0
Actuated g/C Ratio	0.29	0.29	0.25					0.46	1.00		0.46	1.00
Clearance Time (s)	4.0	5.1	5.1					4.9			4.8	
Vehicle Extension (s)	3.0	1.0	1.0					1.0			1.0	
Lane Grp Cap (vph)	471	448	375					2294	1553		1606	1553
v/s Ratio Prot	0.16	0.14						0.26			0.24	
v/s Ratio Perm			0.10						c0.82			0.15
v/c Ratio	0.58	0.51	0.40					0.58	0.82		0.53	0.15
Uniform Delay, d1	10.7	10.4	10.8					6.9	0.0		6.7	0.0
Progression Factor	1.00	1.00	1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	1.7	0.3	0.3					0.2	5.0		0.1	0.2
Delay (s)	12.4	10.8	11.1					7.2	5.0		6.8	0.2
Level of Service	B	B	B					A	A		A	A
Approach Delay (s)		11.4			0.0			6.1			5.4	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	35.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	50.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



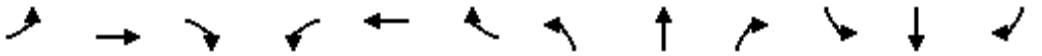
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1040	44	624	27	77	110	598	1430	17	146	362	586
Future Volume (vph)	1040	44	624	27	77	110	598	1430	17	146	362	586
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3	5.3		5.5	5.5	4.7	4.6		4.4	4.8	4.8
Lane Util. Factor	0.95	0.95	1.00		1.00	1.00	1.00	0.91		1.00	0.91	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.96	1.00		0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1649	1659	1553		1821	1568	1736	4979		1736	4988	1553
Flt Permitted	0.95	0.96	1.00		0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1649	1659	1553		1821	1568	1736	4979		1736	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1040	44	624	27	77	110	598	1430	17	146	362	586
RTOR Reduction (vph)	0	0	185	0	0	103	0	1	0	0	0	514
Lane Group Flow (vph)	541	543	439	0	104	7	598	1446	0	146	362	72
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	4%	4%	4%	4%	4%	4%
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4						2
Actuated Green, G (s)	44.5	44.5	44.5		8.5	8.5	46.7	47.3		13.7	13.8	13.8
Effective Green, g (s)	44.5	44.5	44.5		8.5	8.5	46.7	47.3		13.7	13.8	13.8
Actuated g/C Ratio	0.33	0.33	0.33		0.06	0.06	0.35	0.35		0.10	0.10	0.10
Clearance Time (s)	5.3	5.3	5.3		5.5	5.5	4.7	4.6		4.4	4.8	4.8
Vehicle Extension (s)	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lane Grp Cap (vph)	548	551	516		115	99	605	1760		177	514	160
v/s Ratio Prot	c0.33	0.33			c0.06		c0.34	c0.29		0.08	0.07	
v/s Ratio Perm			0.28			0.00						0.05
v/c Ratio	0.99	0.99	0.85		0.90	0.07	0.99	0.82		0.82	0.70	0.45
Uniform Delay, d1	44.4	44.3	41.6		62.2	58.9	43.3	39.4		58.9	58.0	56.4
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	34.7	34.2	12.3		53.9	0.1	33.2	3.1		24.7	3.6	0.7
Delay (s)	79.1	78.6	53.9		116.1	59.0	76.5	42.5		83.5	61.6	57.2
Level of Service	E	E	D		F	E	E	D		F	E	E
Approach Delay (s)		69.7			86.8			52.4			62.2	
Approach LOS		E			F			D			E	

Intersection Summary			
HCM 2000 Control Delay	61.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	133.8	Sum of lost time (s)	20.3
Intersection Capacity Utilization	89.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	561	0	242	0	1626	1720	0	743	512
Future Volume (vph)	0	0	0	561	0	242	0	1626	1720	0	743	512
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.8		6.8		4.6	4.0		4.6	4.0
Lane Util. Factor				0.97		1.00		0.91	1.00		0.95	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3400		1568		5036	1568		3505	1568
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3400		1568		5036	1568		3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	561	0	242	0	1626	1720	0	743	512
RTOR Reduction (vph)	0	0	0	0	0	33	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	561	0	209	0	1626	1720	0	743	512
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				Perm		Perm		NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases				8		8			Free			Free
Actuated Green, G (s)				8.5		8.5		15.1	35.0		15.1	35.0
Effective Green, g (s)				8.5		8.5		15.1	35.0		15.1	35.0
Actuated g/C Ratio				0.24		0.24		0.43	1.00		0.43	1.00
Clearance Time (s)				6.8		6.8		4.6			4.6	
Vehicle Extension (s)				1.0		1.0		1.0			1.0	
Lane Grp Cap (vph)				825		380		2172	1568		1512	1568
v/s Ratio Prot								0.32			0.21	
v/s Ratio Perm				0.17		0.13			c1.10			0.33
v/c Ratio				0.68		0.55		0.75	1.10		0.49	0.33
Uniform Delay, d1				12.0		11.6		8.4	17.5		7.2	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				1.8		0.9		1.3	54.1		0.1	0.6
Delay (s)				13.9		12.4		9.6	71.6		7.3	0.6
Level of Service				B		B		A	E		A	A
Approach Delay (s)		0.0			13.4			41.5			4.5	
Approach LOS		A			B			D			A	

Intersection Summary			
HCM 2000 Control Delay	28.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.63		
Actuated Cycle Length (s)	35.0	Sum of lost time (s)	11.4
Intersection Capacity Utilization	55.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

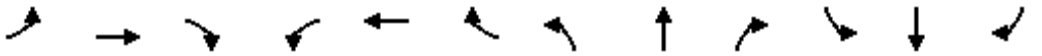


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	612	124	352	0	0	861	0	2598	8	0	1193	109
Future Volume (vph)	612	124	352	0	0	861	0	2598	8	0	1193	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0		4.0			4.0	4.0
Lane Util. Factor	0.91	0.86	0.91			0.88		0.86			0.95	1.00
Frt	1.00	0.97	0.85			0.85		1.00			1.00	0.85
Flt Protected	0.95	0.97	1.00			1.00		1.00			1.00	1.00
Satd. Flow (prot)	1595	2992	1427			2733		6343			3505	1568
Flt Permitted	0.95	0.97	1.00			1.00		1.00			1.00	1.00
Satd. Flow (perm)	1595	2992	1427			2733		6343			3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	612	124	352	0	0	861	0	2598	8	0	1193	109
RTOR Reduction (vph)	0	18	104	0	0	36	0	1	0	0	0	29
Lane Group Flow (vph)	306	521	139	0	0	825	0	2605	0	0	1193	80
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Turn Type	Split	NA	Perm			Prot		NA			NA	Perm
Protected Phases	4	4				1		2			6	
Permitted Phases			4									6
Actuated Green, G (s)	21.0	21.0	21.0			31.0		46.0			81.0	81.0
Effective Green, g (s)	21.0	21.0	21.0			31.0		46.0			81.0	81.0
Actuated g/C Ratio	0.19	0.19	0.19			0.28		0.42			0.74	0.74
Clearance Time (s)	4.0	4.0	4.0			4.0		4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	304	571	272			770		2652			2580	1154
v/s Ratio Prot	c0.19	0.17				c0.30		c0.41			0.34	
v/s Ratio Perm			0.10									0.05
v/c Ratio	1.01	0.95dl	0.51			1.07		0.98			0.46	0.07
Uniform Delay, d1	44.5	43.6	39.9			39.5		31.6			5.8	4.0
Progression Factor	1.00	1.00	1.00			1.00		1.00			1.00	1.00
Incremental Delay, d2	53.3	19.0	1.6			53.3		13.5			0.1	0.0
Delay (s)	97.8	62.6	41.5			92.8		45.1			5.9	4.1
Level of Service	F	E	D			F		D			A	A
Approach Delay (s)		67.8			92.8			45.1			5.8	
Approach LOS		E			F			D			A	

Intersection Summary			
HCM 2000 Control Delay	47.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.9%	ICU Level of Service	F
Analysis Period (min)	15		

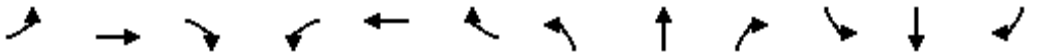
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



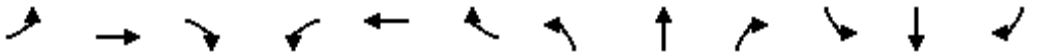
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	425	0	355	0	3085	515	0	1264	1121
Future Volume (vph)	0	0	0	425	0	355	0	3085	515	0	1264	1121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.5		3.5		4.8	4.0		5.1	4.0
Lane Util. Factor				0.97		0.88		0.91	1.00		0.91	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3303		2682		4988	1553		4988	1553
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3303		2682		4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	425	0	355	0	3085	515	0	1264	1121
RTOR Reduction (vph)	0	0	0	0	0	35	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	425	0	320	0	3085	515	0	1264	1121
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	4%	4%	4%	4%	4%	4%
Turn Type				Prot		Perm		NA	Free		NA	Free
Protected Phases				8				6			2	
Permitted Phases						8			Free			Free
Actuated Green, G (s)				8.2		8.2		35.3	51.8		35.0	51.8
Effective Green, g (s)				8.2		8.2		35.3	51.8		35.0	51.8
Actuated g/C Ratio				0.16		0.16		0.68	1.00		0.68	1.00
Clearance Time (s)				3.5		3.5		4.8			5.1	
Vehicle Extension (s)				1.0		1.0		1.0			1.0	
Lane Grp Cap (vph)				522		424		3399	1553		3370	1553
v/s Ratio Prot				0.13				c0.62			0.25	
v/s Ratio Perm						0.12			0.33			c0.72
v/c Ratio				0.81		0.75		0.91	0.33		0.38	0.72
Uniform Delay, d1				21.1		20.8		6.9	0.0		3.6	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				9.0		6.6		3.9	0.6		0.0	2.9
Delay (s)				30.0		27.5		10.8	0.6		3.7	2.9
Level of Service				C		C		B	A		A	A
Approach Delay (s)		0.0			28.9			9.3			3.3	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	51.8	Sum of lost time (s)	8.6
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



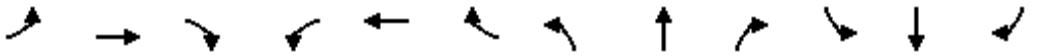
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1415	0	320	0	0	0	0	2184	363	0	1293	395
Future Volume (vph)	1415	0	320	0	0	0	0	2184	363	0	1293	395
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		3.5					4.8	4.0		5.1	4.0
Lane Util. Factor	0.94		0.88					0.86	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	4894		2733					6285	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	4894		2733					6285	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1415	0	320	0	0	0	0	2184	363	0	1293	395
RTOR Reduction (vph)	0	0	17	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	1415	0	303	0	0	0	0	2184	363	0	1293	395
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	4%	4%	4%	4%	4%	4%
Turn Type	Prot		Perm					NA	Free		NA	Free
Protected Phases	7				8			6			2	
Permitted Phases			4	8					Free			Free
Actuated Green, G (s)	23.1		23.6					24.6	56.5		24.3	56.5
Effective Green, g (s)	23.1		23.6					24.6	56.5		24.3	56.5
Actuated g/C Ratio	0.41		0.42					0.44	1.00		0.43	1.00
Clearance Time (s)	4.0		3.5					4.8			5.1	
Vehicle Extension (s)	3.0		1.0					1.0			1.0	
Lane Grp Cap (vph)	2000		1141					2736	1553		2145	1553
v/s Ratio Prot	c0.29							c0.35			0.26	
v/s Ratio Perm			0.11						0.23			0.25
v/c Ratio	0.71		0.27					0.80	0.23		0.60	0.25
Uniform Delay, d1	13.9		10.8					13.8	0.0		12.4	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	1.2		0.0					1.6	0.4		0.3	0.4
Delay (s)	15.1		10.8					15.4	0.4		12.7	0.4
Level of Service	B		B					B	A		B	A
Approach Delay (s)		14.3			0.0			13.2			9.8	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	56.5	Sum of lost time (s)	13.1
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



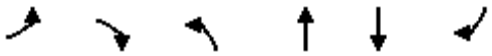
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	277	244	9	2	211	6	7	15	2	5	21	701
Future Volume (vph)	277	244	9	2	211	6	7	15	2	5	21	701
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.9	6.9	5.5	6.0			6.1			6.2	5.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00			0.99			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (prot)	1703	1792	1524	1719	1802			1798			1810	1553
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (perm)	1703	1792	1524	1719	1802			1798			1810	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	277	244	9	2	211	6	7	15	2	5	21	701
RTOR Reduction (vph)	0	0	4	0	2	0	0	2	0	0	0	311
Lane Group Flow (vph)	277	244	5	2	215	0	0	22	0	0	26	390
Heavy Vehicles (%)	6%	6%	6%	5%	5%	5%	3%	3%	3%	4%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	pm+ov
Protected Phases	1	6		5	2		8	8		4	4	1
Permitted Phases			6									4
Actuated Green, G (s)	17.7	30.8	30.8	0.4	14.4			0.9			1.6	19.3
Effective Green, g (s)	17.7	30.8	30.8	0.4	14.4			0.9			1.6	19.3
Actuated g/C Ratio	0.30	0.53	0.53	0.01	0.25			0.02			0.03	0.33
Clearance Time (s)	5.5	6.9	6.9	5.5	6.0			6.1			6.2	5.5
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0			1.0			1.0	1.0
Lane Grp Cap (vph)	516	945	803	11	444			27			49	513
v/s Ratio Prot	0.16	0.14		0.00	c0.12			c0.01			0.01	c0.23
v/s Ratio Perm			0.00									0.02
v/c Ratio	0.54	0.26	0.01	0.18	0.49			0.82			0.53	0.76
Uniform Delay, d1	16.9	7.6	6.5	28.8	18.8			28.7			28.0	17.5
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.5	0.1	0.0	2.9	0.3			92.1			5.4	5.7
Delay (s)	17.5	7.6	6.5	31.7	19.1			120.8			33.5	23.2
Level of Service	B	A	A	C	B			F			C	C
Approach Delay (s)		12.7			19.2			120.8			23.5	
Approach LOS		B			B			F			C	

Intersection Summary			
HCM 2000 Control Delay	20.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	58.4	Sum of lost time (s)	24.7
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



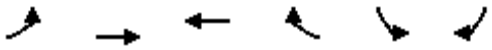
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	305	39	191	571	170	2118	0	0	1399	69
Future Volume (vph)	0	0	305	39	191	571	170	2118	0	0	1399	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.6		6.2	6.2	4.6	5.0			5.3	5.3
Lane Util. Factor			1.00		1.00	0.88	0.97	0.91			0.86	1.00
Frt			0.86		1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected			1.00		0.99	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)			1596		1777	2682	3303	4893			6166	1524
Flt Permitted			1.00		0.99	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)			1596		1777	2682	3303	4893			6166	1524
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	305	39	191	571	170	2118	0	0	1399	69
RTOR Reduction (vph)	0	0	252	0	0	85	0	0	0	0	0	44
Lane Group Flow (vph)	0	0	53	0	230	486	170	2118	0	0	1399	25
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type			Over	Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases			1	4	4		1	6			2	
Permitted Phases						4						2
Actuated Green, G (s)			11.4		13.7	13.7	11.4	40.2			23.9	23.9
Effective Green, g (s)			11.4		13.7	13.7	11.4	40.2			23.9	23.9
Actuated g/C Ratio			0.18		0.21	0.21	0.18	0.62			0.37	0.37
Clearance Time (s)			4.6		6.2	6.2	4.6	5.0			5.3	5.3
Vehicle Extension (s)			3.0		3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)			279		373	564	578	3021			2263	559
v/s Ratio Prot			0.03		0.13		0.05	c0.43			0.23	
v/s Ratio Perm						c0.18						0.02
v/c Ratio			0.19		0.62	0.86	0.29	0.70			0.62	0.05
Uniform Delay, d1			22.9		23.3	24.8	23.4	8.4			16.9	13.3
Progression Factor			1.00		1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2			0.3		3.0	12.8	0.3	0.8			0.5	0.0
Delay (s)			23.3		26.3	37.5	23.6	9.1			17.4	13.3
Level of Service			C		C	D	C	A			B	B
Approach Delay (s)		23.3			34.3			10.2			17.2	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	65.1	Sum of lost time (s)	16.1
Intersection Capacity Utilization	70.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



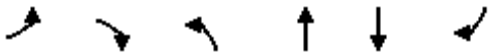
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1640	71	0	0	154	789
Future Volume (vph)	1640	71	0	0	154	789
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5			4.7	4.0
Lane Util. Factor	0.97	0.91			0.95	1.00
Frt	1.00	0.85			1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00
Satd. Flow (prot)	3310	1386			3406	1524
Flt Permitted	0.95	1.00			1.00	1.00
Satd. Flow (perm)	3310	1386			3406	1524
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1640	71	0	0	154	789
RTOR Reduction (vph)	0	17	0	0	0	0
Lane Group Flow (vph)	1647	47	0	0	154	789
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%
Turn Type	Prot	Perm			NA	Free
Protected Phases	4				2	
Permitted Phases		4				Free
Actuated Green, G (s)	42.1	42.1			7.4	57.7
Effective Green, g (s)	42.1	42.1			7.4	57.7
Actuated g/C Ratio	0.73	0.73			0.13	1.00
Clearance Time (s)	3.5	3.5			4.7	
Vehicle Extension (s)	1.5	1.5			1.0	
Lane Grp Cap (vph)	2415	1011			436	1524
v/s Ratio Prot	c0.50				0.05	
v/s Ratio Perm		0.03				c0.52
v/c Ratio	0.68	0.05			0.35	0.52
Uniform Delay, d1	4.2	2.2			23.0	0.0
Progression Factor	1.00	1.00			1.00	1.00
Incremental Delay, d2	0.6	0.0			0.2	1.3
Delay (s)	4.8	2.2			23.1	1.3
Level of Service	A	A			C	A
Approach Delay (s)	4.7			0.0	4.8	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	4.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	57.7	Sum of lost time (s)	8.2
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



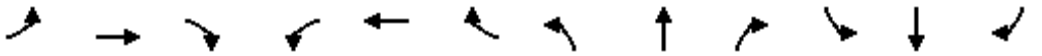
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	218	448	297	83	67	231
Future Volume (vph)	218	448	297	83	67	231
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1671	3343	3343	1495	1752	1568
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1671	3343	3343	1495	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	218	448	297	83	67	231
RTOR Reduction (vph)	0	0	0	62	0	183
Lane Group Flow (vph)	218	448	297	21	67	48
Heavy Vehicles (%)	8%	8%	8%	8%	3%	3%
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	7.5	20.7	9.2	9.2	7.5	7.5
Effective Green, g (s)	7.5	20.7	9.2	9.2	7.5	7.5
Actuated g/C Ratio	0.21	0.57	0.25	0.25	0.21	0.21
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	346	1911	849	379	362	324
v/s Ratio Prot	c0.13	0.13	c0.09		c0.04	
v/s Ratio Perm				0.01		0.03
v/c Ratio	0.63	0.23	0.35	0.06	0.19	0.15
Uniform Delay, d1	13.1	3.8	11.1	10.2	11.8	11.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.7	0.1	0.3	0.1	0.2	0.2
Delay (s)	16.8	3.9	11.3	10.3	12.1	11.9
Level of Service	B	A	B	B	B	B
Approach Delay (s)		8.1	11.1		12.0	
Approach LOS		A	B		B	

Intersection Summary			
HCM 2000 Control Delay	9.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	36.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	34.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	255	25	5	438	475	39
Future Volume (vph)	255	25	5	438	475	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3367	1553	1719	3438	3343	1495
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3367	1553	1719	3438	3343	1495
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	255	25	5	438	475	39
RTOR Reduction (vph)	0	19	0	0	0	30
Lane Group Flow (vph)	255	6	5	438	475	9
Heavy Vehicles (%)	4%	4%	5%	5%	8%	8%
Turn Type	Prot	Perm	Prot	NA	NA	Over
Protected Phases	4		5	2	6	4
Permitted Phases		4				
Actuated Green, G (s)	8.1	8.1	0.6	17.6	13.0	8.1
Effective Green, g (s)	8.1	8.1	0.6	17.6	13.0	8.1
Actuated g/C Ratio	0.24	0.24	0.02	0.52	0.39	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	809	373	30	1795	1289	359
v/s Ratio Prot	c0.08		0.00	c0.13	c0.14	0.01
v/s Ratio Perm		0.00				
v/c Ratio	0.32	0.02	0.17	0.24	0.37	0.03
Uniform Delay, d1	10.5	9.8	16.3	4.4	7.4	9.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.0	2.6	0.1	0.2	0.0
Delay (s)	10.7	9.8	18.9	4.5	7.6	9.8
Level of Service	B	A	B	A	A	A
Approach Delay (s)	10.7			4.6	7.8	
Approach LOS	B			A	A	

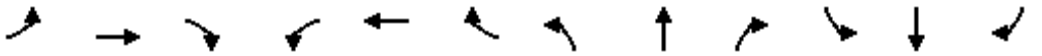
Intersection Summary			
HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	33.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	27.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	706	0	755	0	0	0	0	2665	619	0	1888	1108
Future Volume (vph)	706	0	755	0	0	0	0	2665	619	0	1888	1108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	4.0		4.0	4.0
Lane Util. Factor	0.97		0.88					0.86	1.00		0.86	0.86
Frt	1.00		0.85					1.00	0.85		0.97	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3400		2760					6346	1568		4626	1348
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3400		2760					6346	1568		4626	1348
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	706	0	755	0	0	0	0	2665	619	0	1888	1108
RTOR Reduction (vph)	0	0	12	0	0	0	0	0	0	0	55	0
Lane Group Flow (vph)	706	0	743	0	0	0	0	2665	619	0	2265	676
Turn Type	Prot		Perm					NA	Free		NA	Free
Protected Phases	4							2			6	
Permitted Phases			4						Free			Free
Actuated Green, G (s)	18.7		18.7					33.0	59.7		33.0	59.7
Effective Green, g (s)	18.7		18.7					33.0	59.7		33.0	59.7
Actuated g/C Ratio	0.31		0.31					0.55	1.00		0.55	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	1064		864					3507	1568		2557	1348
v/s Ratio Prot	0.21							0.42			c0.49	
v/s Ratio Perm			c0.27						0.39			0.50
v/c Ratio	0.66		0.86					0.76	0.39		0.89	0.50
Uniform Delay, d1	17.8		19.3					10.3	0.0		11.7	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	1.6		8.5					1.0	0.7		4.1	1.3
Delay (s)	19.3		27.8					11.3	0.7		15.8	1.3
Level of Service	B		C					B	A		B	A
Approach Delay (s)		23.7			0.0			9.3			12.5	
Approach LOS		C			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	59.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	342	0	1309	0	2454	921	0	2903	643
Future Volume (vph)	0	0	0	342	0	1309	0	2454	921	0	2903	643
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0		4.0		4.0	4.0		4.0	4.0
Lane Util. Factor				0.97		0.76		0.86	0.86		0.81	0.81
Frt				1.00		0.85		0.99	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3400		3575		4714	1348		5957	1270
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3400		3575		4714	1348		5957	1270
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	342	0	1309	0	2454	921	0	2903	643
RTOR Reduction (vph)	0	0	0	0	0	8	0	8	0	0	3	0
Lane Group Flow (vph)	0	0	0	342	0	1301	0	2612	755	0	2964	579
Turn Type				Prot		Perm		NA	Free		NA	Free
Protected Phases				8				2			6	
Permitted Phases						8			Free			Free
Actuated Green, G (s)				32.0		32.0		50.0	90.0		50.0	90.0
Effective Green, g (s)				32.0		32.0		50.0	90.0		50.0	90.0
Actuated g/C Ratio				0.36		0.36		0.56	1.00		0.56	1.00
Clearance Time (s)				4.0		4.0		4.0			4.0	
Vehicle Extension (s)				3.0		3.0		3.0			3.0	
Lane Grp Cap (vph)				1208		1271		2618	1348		3309	1270
v/s Ratio Prot				0.10				c0.55			0.50	
v/s Ratio Perm						c0.36			0.56			0.46
v/c Ratio				0.28		1.02		1.00	0.56		0.90	0.46
Uniform Delay, d1				20.8		29.0		19.9	0.0		17.7	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				0.1		31.5		16.9	1.7		3.6	1.2
Delay (s)				20.9		60.5		36.9	1.7		21.3	1.2
Level of Service				C		E		D	A		C	A
Approach Delay (s)		0.0			52.3			29.0			18.0	
Approach LOS		A			D			C			B	

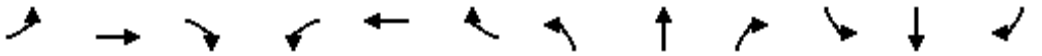
Intersection Summary			
HCM 2000 Control Delay	28.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	663	275	314	887	488	402
Future Volume (vph)	663	275	314	887	488	402
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3154	1411	1577	3154	3060	1411
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3154	1411	1577	3154	3060	1411
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	663	275	314	887	488	402
RTOR Reduction (vph)	0	195	0	0	0	301
Lane Group Flow (vph)	663	80	314	887	488	101
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	15.9	15.9	14.3	34.2	14.1	14.1
Effective Green, g (s)	15.9	15.9	14.3	34.2	14.1	14.1
Actuated g/C Ratio	0.28	0.28	0.25	0.61	0.25	0.25
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	890	398	400	1915	766	353
v/s Ratio Prot	c0.21		c0.20	0.28	c0.16	
v/s Ratio Perm		0.06				0.07
v/c Ratio	0.74	0.20	0.79	0.46	0.64	0.29
Uniform Delay, d1	18.4	15.4	19.6	6.0	18.8	17.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.4	0.2	9.7	0.2	1.7	0.4
Delay (s)	21.8	15.6	29.3	6.2	20.6	17.5
Level of Service	C	B	C	A	C	B
Approach Delay (s)	20.0			12.3	19.2	
Approach LOS	B			B	B	

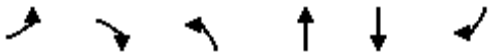
Intersection Summary			
HCM 2000 Control Delay	16.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	56.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	309	226	1	0	443	26	0	0	0	23	0	247
Future Volume (vph)	309	226	1	0	443	26	0	0	0	23	0	247
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0					4.0	4.0	4.0
Lane Util. Factor	1.00	0.95			0.95					0.95	0.95	1.00
Frt	1.00	1.00			0.99					1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00					0.95	0.95	1.00
Satd. Flow (prot)	1736	3469			3442					1665	1665	1568
Flt Permitted	0.95	1.00			1.00					0.95	0.95	1.00
Satd. Flow (perm)	1736	3469			3442					1665	1665	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	309	226	1	0	443	26	0	0	0	23	0	247
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	0	0	0	209
Lane Group Flow (vph)	309	227	0	0	464	0	0	0	0	11	12	38
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA					Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases												6
Actuated Green, G (s)	14.5	30.1			11.6					6.9	6.9	6.9
Effective Green, g (s)	14.5	30.1			11.6					6.9	6.9	6.9
Actuated g/C Ratio	0.32	0.67			0.26					0.15	0.15	0.15
Clearance Time (s)	4.0	4.0			4.0					4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0					3.0	3.0	3.0
Lane Grp Cap (vph)	559	2320			887					255	255	240
v/s Ratio Prot	c0.18	0.07			c0.13					0.01	0.01	
v/s Ratio Perm												c0.02
v/c Ratio	0.55	0.10			0.52					0.04	0.05	0.16
Uniform Delay, d1	12.6	2.6			14.3					16.2	16.2	16.5
Progression Factor	1.00	1.00			1.00					1.00	1.00	1.00
Incremental Delay, d2	1.2	0.0			0.6					0.1	0.1	0.3
Delay (s)	13.8	2.7			14.9					16.3	16.3	16.8
Level of Service	B	A			B					B	B	B
Approach Delay (s)		9.1			14.9			0.0			16.8	
Approach LOS		A			B			A			B	

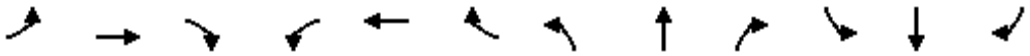
Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	43.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	109	47	22	493	962	336
Future Volume (vph)	109	47	22	493	962	336
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frt	0.96		1.00	1.00	0.97	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1710		1752	1845	1780	
Flt Permitted	0.97		0.95	1.00	1.00	
Satd. Flow (perm)	1710		1752	1845	1780	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	109	47	22	493	962	336
RTOR Reduction (vph)	15	0	0	0	9	0
Lane Group Flow (vph)	141	0	22	493	1289	0
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	13.2		1.6	89.8	84.2	
Effective Green, g (s)	13.2		1.6	89.8	84.2	
Actuated g/C Ratio	0.12		0.01	0.81	0.76	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	203		25	1492	1350	
v/s Ratio Prot	c0.08		c0.01	0.27	c0.72	
v/s Ratio Perm						
v/c Ratio	0.69		0.88	0.33	0.95	
Uniform Delay, d1	47.0		54.6	2.8	11.7	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	9.9		127.2	0.1	14.9	
Delay (s)	56.8		181.8	2.9	26.6	
Level of Service	E		F	A	C	
Approach Delay (s)	56.8			10.5	26.6	
Approach LOS	E			B	C	

Intersection Summary			
HCM 2000 Control Delay	24.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	111.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.7%	ICU Level of Service	E
Analysis Period (min)	15		

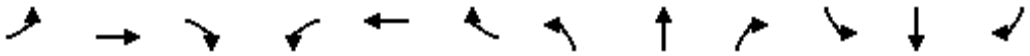
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	4	32	121	22	46	46	865	32	85	1069	115
Future Volume (vph)	58	4	32	121	22	46	46	865	32	85	1069	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1845	1568	1752	1845	1568	1752	3486		1752	3454	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1752	1845	1568	1752	1845	1568	1752	3486		1752	3454	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	58	4	32	121	22	46	46	865	32	85	1069	115
RTOR Reduction (vph)	0	0	31	0	0	40	0	3	0	0	11	0
Lane Group Flow (vph)	58	4	1	121	22	6	46	894	0	85	1173	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	2.2	2.2	2.2	7.0	7.0	7.0	1.7	23.4		2.8	24.5	
Effective Green, g (s)	2.2	2.2	2.2	7.0	7.0	7.0	1.7	23.4		2.8	24.5	
Actuated g/C Ratio	0.04	0.04	0.04	0.14	0.14	0.14	0.03	0.46		0.05	0.48	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	78	67	238	251	213	57	1587		95	1646	
v/s Ratio Prot	0.03	0.00		c0.07	c0.01		0.03	0.26		c0.05	c0.34	
v/s Ratio Perm			0.00			0.00						
v/c Ratio	0.78	0.05	0.02	0.51	0.09	0.03	0.81	0.56		0.89	0.71	
Uniform Delay, d1	24.4	23.6	23.6	20.6	19.4	19.3	24.7	10.3		24.2	10.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	40.6	0.3	0.1	1.7	0.2	0.1	55.0	0.5		59.1	1.5	
Delay (s)	64.9	23.9	23.7	22.3	19.6	19.3	79.7	10.7		83.2	12.1	
Level of Service	E	C	C	C	B	B	E	B		F	B	
Approach Delay (s)		49.1			21.3			14.1			16.9	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	51.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	4	67	0	5	67	28	819	0	44	962	51
Future Volume (vph)	77	4	67	0	5	67	28	819	0	44	962	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00	1.00		1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1845	1568		1845	1568	1752	3505		1752	3478	
Flt Permitted	0.95	1.00	1.00		1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1752	1845	1568		1845	1568	1752	3505		1752	3478	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	77	4	67	0	5	67	28	819	0	44	962	51
RTOR Reduction (vph)	0	0	52	0	0	63	0	0	0	0	5	0
Lane Group Flow (vph)	77	4	15	0	5	4	28	819	0	44	1008	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	3.3	10.4	10.4		3.1	3.1	0.5	23.6		1.3	24.4	
Effective Green, g (s)	3.3	10.4	10.4		3.1	3.1	0.5	23.6		1.3	24.4	
Actuated g/C Ratio	0.07	0.22	0.22		0.07	0.07	0.01	0.50		0.03	0.52	
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	122	405	344		120	102	18	1748		48	1794	
v/s Ratio Prot	c0.04	0.00			0.00		0.02	0.23		c0.03	c0.29	
v/s Ratio Perm			c0.01			0.00						
v/c Ratio	0.63	0.01	0.04		0.04	0.04	1.56	0.47		0.92	0.56	
Uniform Delay, d1	21.4	14.4	14.5		20.7	20.7	23.4	7.7		22.9	7.8	
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	10.2	0.0	0.1		0.1	0.2	417.6	0.2		97.8	0.4	
Delay (s)	31.6	14.4	14.6		20.9	20.9	441.0	7.9		120.8	8.2	
Level of Service	C	B	B		C	C	F	A		F	A	
Approach Delay (s)		23.4			20.9			22.3			12.9	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	17.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	47.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		

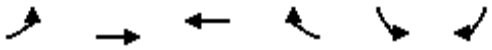
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	543	81	103	659	34	50
Future Volume (vph)	543	81	103	659	34	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3437		1752	3505	1752	1568
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3437		1752	3505	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	543	81	103	659	34	50
RTOR Reduction (vph)	18	0	0	0	0	45
Lane Group Flow (vph)	606	0	103	659	34	5
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases						2
Actuated Green, G (s)	18.6		3.1	25.7	3.6	3.6
Effective Green, g (s)	18.6		3.1	25.7	3.6	3.6
Actuated g/C Ratio	0.50		0.08	0.69	0.10	0.10
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1713		145	2414	169	151
v/s Ratio Prot	c0.18		c0.06	0.19	c0.02	
v/s Ratio Perm						0.00
v/c Ratio	0.35		0.71	0.27	0.20	0.03
Uniform Delay, d1	5.7		16.7	2.2	15.5	15.3
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1		15.1	0.1	0.6	0.1
Delay (s)	5.8		31.8	2.3	16.1	15.4
Level of Service	A		C	A	B	B
Approach Delay (s)	5.8			6.3	15.7	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	37.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	141	391	515	212	361	241
Future Volume (vph)	141	391	515	212	361	241
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1752	1845	3505	1568	1752	1568
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1752	1845	3505	1568	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	141	391	515	212	361	241
RTOR Reduction (vph)	0	0	0	150	0	165
Lane Group Flow (vph)	141	391	515	62	361	76
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	4.4	20.7	12.3	12.3	13.1	13.1
Effective Green, g (s)	4.4	20.7	12.3	12.3	13.1	13.1
Actuated g/C Ratio	0.11	0.50	0.29	0.29	0.31	0.31
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	184	913	1031	461	549	491
v/s Ratio Prot	c0.08	c0.21	0.15		c0.21	
v/s Ratio Perm				0.04		0.05
v/c Ratio	0.77	0.43	0.50	0.14	0.66	0.15
Uniform Delay, d1	18.2	6.8	12.2	10.8	12.4	10.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	17.2	0.3	0.4	0.1	2.8	0.1
Delay (s)	35.4	7.1	12.6	11.0	15.3	10.5
Level of Service	D	A	B	B	B	B
Approach Delay (s)		14.6	12.1		13.4	
Approach LOS		B	B		B	

Intersection Summary			
HCM 2000 Control Delay	13.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	41.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2077	79	50	2210	30	24
Future Volume (vph)	2077	79	50	2210	30	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3486		1752	3505	1752	1568
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3486		1752	3505	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2077	79	50	2210	30	24
RTOR Reduction (vph)	2	0	0	0	0	22
Lane Group Flow (vph)	2154	0	50	2210	30	2
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases						2
Actuated Green, G (s)	69.6		5.2	78.8	7.9	7.9
Effective Green, g (s)	69.6		5.2	78.8	7.9	7.9
Actuated g/C Ratio	0.73		0.05	0.83	0.08	0.08
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2562		96	2916	146	130
v/s Ratio Prot	c0.62		0.03	c0.63	c0.02	
v/s Ratio Perm						0.00
v/c Ratio	0.84		0.52	0.76	0.21	0.02
Uniform Delay, d1	8.7		43.5	3.6	40.5	39.8
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	2.7		5.0	1.2	0.7	0.0
Delay (s)	11.4		48.6	4.8	41.2	39.9
Level of Service	B		D	A	D	D
Approach Delay (s)	11.4			5.7	40.6	
Approach LOS	B			A	D	

Intersection Summary			
HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	94.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		

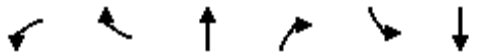
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	63	52	1238	27	162	1073
Future Volume (vph)	63	52	1238	27	162	1073
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.95		0.97	0.95
Frt	1.00	0.85	1.00		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	1568	3494		3400	3505
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	1568	3494		3400	3505
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	63	52	1238	27	162	1073
RTOR Reduction (vph)	0	46	2	0	0	0
Lane Group Flow (vph)	63	6	1263	0	162	1073
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Actuated Green, G (s)	6.3	6.3	32.6		4.1	40.7
Effective Green, g (s)	6.3	6.3	32.6		4.1	40.7
Actuated g/C Ratio	0.11	0.11	0.59		0.07	0.74
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	200	179	2070		253	2593
v/s Ratio Prot	c0.04		c0.36		c0.05	0.31
v/s Ratio Perm		0.00				
v/c Ratio	0.32	0.03	0.61		0.64	0.41
Uniform Delay, d1	22.4	21.6	7.1		24.7	2.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.9	0.1	0.5		5.4	0.5
Delay (s)	23.3	21.7	7.7		30.2	3.2
Level of Service	C	C	A		C	A
Approach Delay (s)	22.6		7.7			6.7
Approach LOS	C		A			A

Intersection Summary			
HCM 2000 Control Delay	7.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	48	0	1561	44	0	2145
Future Volume (vph)	48	0	1561	44	0	2145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.91			0.95
Frt	1.00		1.00			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	1752		5015			3505
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	1752		5015			3505
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	48	0	1561	44	0	2145
RTOR Reduction (vph)	0	0	1	0	0	0
Lane Group Flow (vph)	48	0	1604	0	0	2145
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Actuated Green, G (s)	4.6		64.0			64.0
Effective Green, g (s)	4.6		64.0			64.0
Actuated g/C Ratio	0.06		0.84			0.84
Clearance Time (s)	4.0		4.0			4.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	105		4190			2928
v/s Ratio Prot	c0.03		0.32			c0.61
v/s Ratio Perm						
v/c Ratio	0.46		0.38			0.73
Uniform Delay, d1	34.8		1.5			2.7
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	3.1		0.1			1.0
Delay (s)	37.9		1.6			3.6
Level of Service	D		A			A
Approach Delay (s)	37.9		1.6			3.6
Approach LOS	D		A			A

Intersection Summary			
HCM 2000 Control Delay	3.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	76.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		

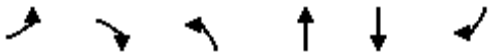
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	304	797	617	169	425	1874
Future Volume (vph)	304	797	617	169	425	1874
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.91		1.00	0.91
Frt	1.00	0.85	0.97		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	1568	4874		1752	5036
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	1568	4874		1752	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	304	797	617	169	425	1874
RTOR Reduction (vph)	0	470	99	0	0	0
Lane Group Flow (vph)	304	327	687	0	425	1874
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		3				
Actuated Green, G (s)	13.0	13.0	9.7		13.6	27.3
Effective Green, g (s)	13.0	13.0	9.7		13.6	27.3
Actuated g/C Ratio	0.27	0.27	0.20		0.28	0.57
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	471	422	978		493	2846
v/s Ratio Prot	0.17		0.14		c0.24	c0.37
v/s Ratio Perm		c0.21				
v/c Ratio	0.65	0.78	0.70		0.86	0.66
Uniform Delay, d1	15.6	16.3	18.0		16.5	7.3
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	3.0	8.6	2.3		14.4	0.6
Delay (s)	18.6	24.9	20.3		30.8	7.8
Level of Service	B	C	C		C	A
Approach Delay (s)	23.2		20.3			12.1
Approach LOS	C		C			B

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	48.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.7%	ICU Level of Service	C
Analysis Period (min)	15		

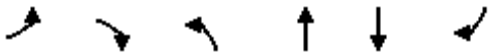
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	118	80	82	486	1767	162
Future Volume (vph)	118	80	82	486	1767	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1568	1752	5036	4972	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1752	1568	1752	5036	4972	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	118	80	82	486	1767	162
RTOR Reduction (vph)	0	69	0	0	14	0
Lane Group Flow (vph)	118	11	82	486	1915	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	7.2	7.2	3.7	37.5	29.8	
Effective Green, g (s)	7.2	7.2	3.7	37.5	29.8	
Actuated g/C Ratio	0.14	0.14	0.07	0.71	0.57	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	239	214	123	3583	2811	
v/s Ratio Prot	c0.07		c0.05	0.10	c0.39	
v/s Ratio Perm		0.01				
v/c Ratio	0.49	0.05	0.67	0.14	0.68	
Uniform Delay, d1	21.1	19.8	23.9	2.4	8.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.6	0.1	12.8	0.0	0.7	
Delay (s)	22.7	19.9	36.7	2.4	8.8	
Level of Service	C	B	D	A	A	
Approach Delay (s)	21.5			7.4	8.8	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	9.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	52.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		

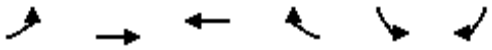
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	296	302	158	482	640	158
Future Volume (vph)	296	302	158	482	640	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1568	1752	3505	3401	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1752	1568	1752	3505	3401	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	296	302	158	482	640	158
RTOR Reduction (vph)	0	218	0	0	43	0
Lane Group Flow (vph)	296	84	158	482	755	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	12.2	12.2	5.1	23.9	14.8	
Effective Green, g (s)	12.2	12.2	5.1	23.9	14.8	
Actuated g/C Ratio	0.28	0.28	0.12	0.54	0.34	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	484	433	202	1899	1141	
v/s Ratio Prot	c0.17		c0.09	0.14	c0.22	
v/s Ratio Perm		0.05				
v/c Ratio	0.61	0.19	0.78	0.25	0.66	
Uniform Delay, d1	13.9	12.2	19.0	5.4	12.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.3	0.2	17.7	0.1	1.5	
Delay (s)	16.2	12.4	36.6	5.4	14.0	
Level of Service	B	B	D	A	B	
Approach Delay (s)	14.3			13.1	14.0	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	44.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		

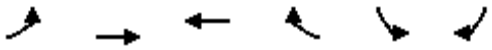
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	329	489	18	75	231
Future Volume (vph)	0	329	489	18	75	231
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85	1.00	0.85
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1845	1845	1568	1752	1568
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1845	1845	1568	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	329	489	18	75	231
RTOR Reduction (vph)	0	0	0	9	0	178
Lane Group Flow (vph)	0	329	489	9	75	53
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)		14.8	14.8	14.8	6.8	6.8
Effective Green, g (s)		14.8	14.8	14.8	6.8	6.8
Actuated g/C Ratio		0.50	0.50	0.50	0.23	0.23
Clearance Time (s)		4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		922	922	784	402	360
v/s Ratio Prot		0.18	c0.27		c0.04	
v/s Ratio Perm				0.01		0.03
v/c Ratio		0.36	0.53	0.01	0.19	0.15
Uniform Delay, d1		4.5	5.0	3.7	9.2	9.1
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.2	0.6	0.0	0.2	0.2
Delay (s)		4.7	5.6	3.7	9.4	9.3
Level of Service		A	A	A	A	A
Approach Delay (s)		4.7	5.6		9.3	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	6.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	29.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

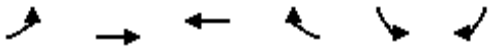
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	505	1585	1152	52	88	745
Future Volume (vph)	505	1585	1152	52	88	745
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	0.95	0.91		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3400	3505	5003		1752	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3400	3505	5003		1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	505	1585	1152	52	88	745
RTOR Reduction (vph)	0	0	8	0	0	269
Lane Group Flow (vph)	505	1585	1196	0	88	476
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	9.0	28.9	15.9		17.4	17.4
Effective Green, g (s)	9.0	28.9	15.9		17.4	17.4
Actuated g/C Ratio	0.17	0.53	0.29		0.32	0.32
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	563	1865	1464		561	502
v/s Ratio Prot	0.15	c0.45	0.24		0.05	
v/s Ratio Perm						c0.30
v/c Ratio	0.90	0.85	0.82		0.16	0.95
Uniform Delay, d1	22.2	10.8	17.8		13.2	18.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	16.8	3.8	3.6		0.1	27.3
Delay (s)	39.0	14.7	21.5		13.3	45.3
Level of Service	D	B	C		B	D
Approach Delay (s)		20.6	21.5		41.9	
Approach LOS		C	C		D	

Intersection Summary			
HCM 2000 Control Delay	25.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	54.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.2%	ICU Level of Service	D
Analysis Period (min)	15		

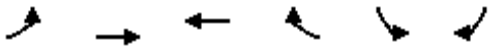
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	153	1380	757	51	51	175
Future Volume (vph)	153	1380	757	51	51	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3400	3505	3505	1568	3400	1568
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3400	3505	3505	1568	3400	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	153	1380	757	51	51	175
RTOR Reduction (vph)	0	0	0	27	0	151
Lane Group Flow (vph)	153	1380	757	24	51	24
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	3.1	24.6	17.5	17.5	5.3	5.3
Effective Green, g (s)	3.1	24.6	17.5	17.5	5.3	5.3
Actuated g/C Ratio	0.08	0.65	0.46	0.46	0.14	0.14
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	278	2275	1618	724	475	219
v/s Ratio Prot	0.05	c0.39	0.22		0.02	
v/s Ratio Perm				0.02		c0.02
v/c Ratio	0.55	0.61	0.47	0.03	0.11	0.11
Uniform Delay, d1	16.7	3.8	7.0	5.6	14.2	14.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.4	0.5	0.2	0.0	0.1	0.2
Delay (s)	19.1	4.3	7.2	5.6	14.3	14.5
Level of Service	B	A	A	A	B	B
Approach Delay (s)		5.8	7.1		14.4	
Approach LOS		A	A		B	

Intersection Summary			
HCM 2000 Control Delay	7.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	37.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	197	1195	699	17	8	123
Future Volume (vph)	197	1195	699	17	8	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3492		1752	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3492		1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	197	1195	699	17	8	123
RTOR Reduction (vph)	0	0	3	0	0	111
Lane Group Flow (vph)	197	1195	713	0	8	12
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	6.2	26.5	16.3		3.8	3.8
Effective Green, g (s)	6.2	26.5	16.3		3.8	3.8
Actuated g/C Ratio	0.16	0.69	0.43		0.10	0.10
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	283	2425	1486		173	155
v/s Ratio Prot	c0.11	c0.34	0.20		0.00	
v/s Ratio Perm						c0.01
v/c Ratio	0.70	0.49	0.48		0.05	0.08
Uniform Delay, d1	15.2	2.8	7.9		15.6	15.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	7.3	0.2	0.2		0.1	0.2
Delay (s)	22.4	2.9	8.2		15.7	15.9
Level of Service	C	A	A		B	B
Approach Delay (s)		5.7	8.2		15.9	
Approach LOS		A	A		B	

Intersection Summary			
HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	38.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	44.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	705	181	338	580	171	270
Future Volume (vph)	705	181	338	580	171	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3505	1568	3400	3505	3400	1568
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3505	1568	3400	3505	3400	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	705	181	338	580	171	270
RTOR Reduction (vph)	0	117	0	0	0	183
Lane Group Flow (vph)	705	64	338	580	171	87
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	12.6	12.6	3.1	19.7	8.0	8.0
Effective Green, g (s)	12.6	12.6	3.1	19.7	8.0	8.0
Actuated g/C Ratio	0.35	0.35	0.09	0.55	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1237	553	295	1934	761	351
v/s Ratio Prot	c0.20		c0.10	0.17	0.05	
v/s Ratio Perm		0.04				c0.06
v/c Ratio	0.57	0.12	1.15	0.30	0.22	0.25
Uniform Delay, d1	9.4	7.8	16.3	4.3	11.3	11.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.1	97.8	0.1	0.2	0.4
Delay (s)	10.0	7.9	114.1	4.4	11.5	11.7
Level of Service	A	A	F	A	B	B
Approach Delay (s)	9.5			44.8	11.6	
Approach LOS	A			D	B	

Intersection Summary			
HCM 2000 Control Delay	24.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	35.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	44.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	975	0	79	918	0	163
Future Volume (vph)	975	0	79	918	0	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0		4.0
Lane Util. Factor	0.95		1.00	0.95		1.00
Frt	1.00		1.00	1.00		0.85
Flt Protected	1.00		0.95	1.00		1.00
Satd. Flow (prot)	3505		1752	3505		1568
Flt Permitted	1.00		0.95	1.00		1.00
Satd. Flow (perm)	3505		1752	3505		1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	975	0	79	918	0	163
RTOR Reduction (vph)	0	0	0	0	0	144
Lane Group Flow (vph)	975	0	79	918	0	19
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases						2
Actuated Green, G (s)	20.7		2.2	26.9		4.5
Effective Green, g (s)	20.7		2.2	26.9		4.5
Actuated g/C Ratio	0.53		0.06	0.68		0.11
Clearance Time (s)	4.0		4.0	4.0		4.0
Vehicle Extension (s)	3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	1841		97	2393		179
v/s Ratio Prot	c0.28		c0.05	0.26		
v/s Ratio Perm						c0.01
v/c Ratio	0.53		0.81	0.38		0.10
Uniform Delay, d1	6.1		18.4	2.7		15.6
Progression Factor	1.00		1.00	1.00		1.00
Incremental Delay, d2	0.3		38.7	0.1		0.3
Delay (s)	6.4		57.1	2.8		15.9
Level of Service	A		E	A		B
Approach Delay (s)	6.4			7.1	15.9	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	39.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	0	494	476	228	596	0	1765	703	0	2192	360
Future Volume (veh/h)	179	0	494	476	228	596	0	1765	703	0	2192	360
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1827	1827	1827	0	1827	1827	0	1827	1827
Adj Flow Rate, veh/h	179	0	494	381	299	638	0	1765	0	0	2192	360
Adj No. of Lanes	0	1	2	2	1	3	0	3	1	0	4	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	0	4	4	0	4	4
Cap, veh/h	376	0	590	752	395	1007	0	1945	605	0	2450	605
Arrive On Green	0.21	0.00	0.21	0.22	0.22	0.22	0.00	0.39	0.00	0.00	0.39	0.39
Sat Flow, veh/h	1757	0	2760	3480	1827	4659	0	5152	1553	0	6540	1553
Grp Volume(v), veh/h	179	0	494	381	299	638	0	1765	0	0	2192	360
Grp Sat Flow(s),veh/h/ln	1757	0	1380	1740	1827	1553	0	1663	1553	0	1571	1553
Q Serve(g_s), s	5.9	0.0	11.4	6.4	10.2	8.3	0.0	22.3	0.0	0.0	21.8	12.3
Cycle Q Clear(g_c), s	5.9	0.0	11.4	6.4	10.2	8.3	0.0	22.3	0.0	0.0	21.8	12.3
Prop In Lane	1.00		1.00	1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	376	0	590	752	395	1007	0	1945	605	0	2450	605
V/C Ratio(X)	0.48	0.00	0.84	0.51	0.76	0.63	0.00	0.91	0.00	0.00	0.89	0.59
Avail Cap(c_a), veh/h	422	0	663	835	439	1119	0	1946	606	0	2452	606
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	22.9	0.0	25.1	23.0	24.5	23.7	0.0	19.2	0.0	0.0	19.0	16.1
Incr Delay (d2), s/veh	0.9	0.0	8.5	0.5	6.7	1.0	0.0	6.7	0.0	0.0	4.7	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	5.0	3.1	5.9	3.6	0.0	11.3	0.0	0.0	10.1	5.5
LnGrp Delay(d),s/veh	23.9	0.0	33.5	23.5	31.2	24.7	0.0	25.9	0.0	0.0	23.8	17.7
LnGrp LOS	C		C	C	C	C		C			C	B
Approach Vol, veh/h		673			1318			1765			2552	
Approach Delay, s/veh		31.0			25.8			25.9			22.9	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		30.0		18.2		30.0		18.4
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		26.0		16.0		26.0		16.0
Max Q Clear Time (g_c+I1), s		24.3		13.4		23.8		12.2
Green Ext Time (p_c), s		1.7		0.8		2.2		2.2

Intersection Summary	
HCM 2010 Ctrl Delay	25.2
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	27	163	17	40	16	136	839	6	17	1419	389
Future Volume (veh/h)	154	27	163	17	40	16	136	839	6	17	1419	389
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1827	1900	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	173	0	163	17	40	16	136	839	6	17	1419	389
Adj No. of Lanes	2	0	1	0	1	0	2	3	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	4	4	4	4	4	4
Cap, veh/h	500	0	223	22	52	21	207	1242	9	549	1726	772
Arrive On Green	0.14	0.00	0.14	0.05	0.05	0.05	0.06	0.24	0.24	0.32	0.50	0.50
Sat Flow, veh/h	3514	0	1568	405	953	381	3375	5109	37	1740	3471	1553
Grp Volume(v), veh/h	173	0	163	73	0	0	136	546	299	17	1419	389
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1739	0	0	1688	1663	1820	1740	1736	1553
Q Serve(g_s), s	2.9	0.0	6.5	2.7	0.0	0.0	2.6	9.7	9.7	0.4	22.7	11.0
Cycle Q Clear(g_c), s	2.9	0.0	6.5	2.7	0.0	0.0	2.6	9.7	9.7	0.4	22.7	11.0
Prop In Lane	1.00		1.00	0.23		0.22	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	500	0	223	95	0	0	207	808	443	549	1726	772
V/C Ratio(X)	0.35	0.00	0.73	0.77	0.00	0.00	0.66	0.68	0.68	0.03	0.82	0.50
Avail Cap(c_a), veh/h	860	0	384	426	0	0	207	1933	1058	549	2018	903
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	0.0	26.8	30.5	0.0	0.0	30.0	22.4	22.4	15.5	14.0	11.0
Incr Delay (d2), s/veh	0.4	0.0	4.6	12.4	0.0	0.0	7.4	1.0	1.8	0.0	2.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	3.1	1.6	0.0	0.0	1.4	4.6	5.1	0.2	11.2	4.8
LnGrp Delay(d),s/veh	25.7	0.0	31.4	42.9	0.0	0.0	37.5	23.4	24.2	15.5	16.5	11.5
LnGrp LOS	C		C	D			D	C	C	B	B	B
Approach Vol, veh/h		336			73			981			1825	
Approach Delay, s/veh		28.5			42.9			25.6			15.4	
Approach LOS		C			D			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	24.6	19.9		13.3	8.0	36.5		7.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	38.0		16.0	4.0	38.0		16.0
Max Q Clear Time (g_c+I1), s	2.4	11.7		8.5	4.6	24.7		4.7
Green Ext Time (p_c), s	1.3	4.2		0.8	0.0	7.8		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	20.5
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	149	636	124	158	855	204	132	616	15	225	1165	231
Future Volume (veh/h)	149	636	124	158	855	204	132	616	15	225	1165	231
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	149	636	124	158	855	204	132	616	15	225	1165	231
Adj No. of Lanes	1	2	0	1	2	1	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	180	755	147	193	931	416	173	1159	28	314	1307	585
Arrive On Green	0.10	0.26	0.26	0.11	0.27	0.27	0.05	0.33	0.33	0.09	0.38	0.38
Sat Flow, veh/h	1757	2927	570	1757	3505	1568	3375	3463	84	3375	3471	1553
Grp Volume(v), veh/h	149	380	380	158	855	204	132	309	322	225	1165	231
Grp Sat Flow(s),veh/h/ln	1757	1752	1744	1757	1752	1568	1688	1736	1812	1688	1736	1553
Q Serve(g_s), s	6.5	16.1	16.2	6.9	18.5	8.6	3.0	11.3	11.3	5.1	24.6	8.5
Cycle Q Clear(g_c), s	6.5	16.1	16.2	6.9	18.5	8.6	3.0	11.3	11.3	5.1	24.6	8.5
Prop In Lane	1.00		0.33	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	180	452	450	193	931	416	173	581	606	314	1307	585
V/C Ratio(X)	0.83	0.84	0.84	0.82	0.92	0.49	0.77	0.53	0.53	0.72	0.89	0.39
Avail Cap(c_a), veh/h	180	452	450	202	941	421	173	581	606	431	1375	615
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.5	27.5	27.5	34.1	27.9	24.3	36.7	21.1	21.1	34.5	22.9	17.9
Incr Delay (d2), s/veh	26.6	13.4	13.7	21.8	13.6	0.9	18.3	0.9	0.9	3.5	7.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	9.4	9.4	4.5	10.7	3.8	1.9	5.5	5.8	2.5	13.0	3.7
LnGrp Delay(d),s/veh	61.0	40.9	41.2	55.8	41.5	25.2	55.0	22.0	22.0	38.0	30.3	18.3
LnGrp LOS	E	D	D	E	D	C	D	C	C	D	C	B
Approach Vol, veh/h		909			1217			763			1621	
Approach Delay, s/veh		44.4			40.7			27.7			29.7	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.3	30.2	12.6	24.2	8.0	33.5	12.0	24.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	25.0	9.0	20.0	4.0	31.0	8.0	21.0
Max Q Clear Time (g_c+I1), s	7.1	13.3	8.9	18.2	5.0	26.6	8.5	20.5
Green Ext Time (p_c), s	0.3	7.5	0.0	1.4	0.0	2.8	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	35.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	1629	67	160	1087	105	88	802	185	27	236	2
Future Volume (veh/h)	23	1629	67	160	1087	105	88	802	185	27	236	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1900	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	23	1629	67	160	1087	105	88	802	185	27	236	2
Adj No. of Lanes	1	1	2	1	2	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	28	1108	1657	103	2078	201	108	683	305	34	543	5
Arrive On Green	0.02	0.62	0.62	0.06	0.66	0.66	0.06	0.19	0.19	0.02	0.15	0.15
Sat Flow, veh/h	1707	1792	2682	1707	3139	303	1757	3505	1568	1757	3562	30
Grp Volume(v), veh/h	23	1629	67	160	589	603	88	802	185	27	116	122
Grp Sat Flow(s),veh/h/ln	1707	1792	1341	1707	1703	1739	1757	1752	1568	1757	1752	1839
Q Serve(g_s), s	2.0	92.0	1.5	9.0	26.6	26.7	7.4	29.0	16.0	2.3	8.9	9.0
Cycle Q Clear(g_c), s	2.0	92.0	1.5	9.0	26.6	26.7	7.4	29.0	16.0	2.3	8.9	9.0
Prop In Lane	1.00		1.00	1.00		0.17	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	28	1108	1657	103	1127	1151	108	683	305	34	267	281
V/C Ratio(X)	0.82	1.47	0.04	1.55	0.52	0.52	0.81	1.17	0.61	0.80	0.43	0.43
Avail Cap(c_a), veh/h	69	1108	1657	103	1127	1151	142	683	305	47	267	281
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.0	28.4	11.1	69.9	13.0	13.0	69.0	59.9	54.7	72.7	57.3	57.3
Incr Delay (d2), s/veh	41.0	216.8	0.0	289.7	0.4	0.4	23.1	93.5	3.4	45.3	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	111.9	0.5	12.5	12.6	12.9	4.3	22.8	7.2	1.5	4.4	4.7
LnGrp Delay(d),s/veh	114.0	245.2	11.2	359.6	13.5	13.5	92.1	153.5	58.1	118.0	58.4	58.3
LnGrp LOS	F	F	B	F	B	B	F	F	E	F	E	E
Approach Vol, veh/h		1719			1352			1075			265	
Approach Delay, s/veh		234.3			54.4			132.0			64.4	
Approach LOS		F			D			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.9	33.0	13.0	96.0	13.2	26.7	6.5	102.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	29.0	9.0	92.0	12.0	21.0	6.0	95.0
Max Q Clear Time (g_c+I1), s	4.3	31.0	11.0	94.0	9.4	11.0	4.0	28.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	4.2	0.0	50.2

Intersection Summary	
HCM 2010 Ctrl Delay	144.0
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	640	276	253	807	41	115	554	231	16	512	163
Future Volume (veh/h)	34	640	276	253	807	41	115	554	231	16	512	163
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	34	640	276	253	807	41	115	554	231	16	512	163
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	51	845	378	302	1303	66	146	1050	470	27	813	364
Arrive On Green	0.03	0.24	0.24	0.17	0.38	0.38	0.08	0.30	0.30	0.02	0.23	0.23
Sat Flow, veh/h	1757	3505	1568	1757	3394	172	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	34	640	276	253	417	431	115	554	231	16	512	163
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1814	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	1.1	10.0	9.5	8.2	11.3	11.3	3.8	7.7	7.1	0.5	7.7	5.2
Cycle Q Clear(g_c), s	1.1	10.0	9.5	8.2	11.3	11.3	3.8	7.7	7.1	0.5	7.7	5.2
Prop In Lane	1.00		1.00	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	51	845	378	302	673	697	146	1050	470	27	813	364
V/C Ratio(X)	0.67	0.76	0.73	0.84	0.62	0.62	0.79	0.53	0.49	0.58	0.63	0.45
Avail Cap(c_a), veh/h	149	952	426	328	673	697	149	1071	479	119	1012	453
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.3	20.7	20.6	23.6	14.7	14.7	26.5	17.2	16.9	28.8	20.3	19.4
Incr Delay (d2), s/veh	14.0	3.1	5.5	16.1	1.7	1.7	23.4	0.5	0.8	18.0	0.8	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	5.2	4.7	5.3	5.8	6.0	2.8	3.8	3.1	0.4	3.8	2.4
LnGrp Delay(d),s/veh	42.4	23.9	26.1	39.7	16.4	16.3	49.9	17.6	17.7	46.8	21.2	20.2
LnGrp LOS	D	C	C	D	B	B	D	B	B	D	C	C
Approach Vol, veh/h		950			1101			900			691	
Approach Delay, s/veh		25.2			21.7			21.8			21.5	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.9	21.6	14.1	18.2	8.9	17.7	5.7	26.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	18.0	11.0	16.0	5.0	17.0	5.0	22.0
Max Q Clear Time (g_c+I1), s	2.5	9.7	10.2	12.0	5.8	9.7	3.1	13.3
Green Ext Time (p_c), s	0.0	4.3	0.1	2.2	0.0	3.9	0.0	5.2

Intersection Summary	
HCM 2010 Ctrl Delay	22.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	222	465	63	178	510	45	119	240	99	74	793	219
Future Volume (veh/h)	222	465	63	178	510	45	119	240	99	74	793	219
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	222	465	63	178	510	45	119	240	99	74	793	219
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	254	839	375	222	776	347	127	1025	458	93	957	428
Arrive On Green	0.14	0.24	0.24	0.13	0.22	0.22	0.07	0.29	0.29	0.05	0.27	0.27
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	222	465	63	178	510	45	119	240	99	74	793	219
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1568	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	6.9	6.4	1.8	5.5	7.3	1.3	3.7	2.9	2.6	2.3	11.8	6.5
Cycle Q Clear(g_c), s	6.9	6.4	1.8	5.5	7.3	1.3	3.7	2.9	2.6	2.3	11.8	6.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	254	839	375	222	776	347	127	1025	458	93	957	428
V/C Ratio(X)	0.87	0.55	0.17	0.80	0.66	0.13	0.94	0.23	0.22	0.80	0.83	0.51
Avail Cap(c_a), veh/h	254	1012	453	254	1012	453	127	1025	458	127	1012	453
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.2	18.5	16.7	23.5	19.6	17.3	25.6	14.9	14.8	25.9	18.9	17.0
Incr Delay (d2), s/veh	27.0	0.6	0.2	14.9	1.0	0.2	60.9	0.1	0.2	21.4	5.6	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	3.2	0.8	3.5	3.6	0.6	3.9	1.4	1.2	1.7	6.4	2.9
LnGrp Delay(d),s/veh	50.2	19.0	16.9	38.4	20.6	17.4	86.5	15.0	15.0	47.3	24.5	18.0
LnGrp LOS	D	B	B	D	C	B	F	B	B	D	C	B
Approach Vol, veh/h		750			733			458			1086	
Approach Delay, s/veh		28.1			24.7			33.6			24.8	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.9	20.2	11.0	17.3	8.0	19.1	12.0	16.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	8.0	16.0	4.0	16.0	8.0	16.0
Max Q Clear Time (g_c+I1), s	4.3	4.9	7.5	8.4	5.7	13.8	8.9	9.3
Green Ext Time (p_c), s	0.0	4.9	0.0	3.2	0.0	1.3	0.0	2.9

Intersection Summary	
HCM 2010 Ctrl Delay	26.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	344	422	137	251	455	589	132	2350	233	340	2324	402
Future Volume (veh/h)	344	422	137	251	455	589	132	2350	233	340	2324	402
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	344	422	137	251	455	589	132	2350	233	340	2324	402
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	283	892	399	276	885	537	150	2191	682	303	2416	752
Arrive On Green	0.08	0.25	0.25	0.08	0.25	0.25	0.04	0.44	0.44	0.09	0.48	0.48
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	344	422	137	251	455	589	132	2350	233	340	2324	402
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	12.5	15.4	10.7	11.0	16.8	38.0	5.9	66.1	14.9	13.5	67.7	27.1
Cycle Q Clear(g_c), s	12.5	15.4	10.7	11.0	16.8	38.0	5.9	66.1	14.9	13.5	67.7	27.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	283	892	399	276	885	537	150	2191	682	303	2416	752
V/C Ratio(X)	1.22	0.47	0.34	0.91	0.51	1.10	0.88	1.07	0.34	1.12	0.96	0.53
Avail Cap(c_a), veh/h	283	892	399	276	885	537	150	2191	682	303	2416	752
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.0	47.5	45.8	68.6	48.3	49.5	71.5	42.2	27.8	68.5	37.5	27.0
Incr Delay (d2), s/veh	124.7	0.1	0.2	30.8	0.2	68.3	39.2	42.2	0.1	89.0	10.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.8	7.5	4.7	6.4	8.2	32.4	3.5	38.8	6.4	10.0	33.4	11.7
LnGrp Delay(d),s/veh	193.7	47.7	46.0	99.4	48.5	117.8	110.7	84.4	28.0	157.5	48.2	27.4
LnGrp LOS	F	D	D	F	D	F	F	F	C	F	D	C
Approach Vol, veh/h		903			1295			2715			3066	
Approach Delay, s/veh		103.1			89.9			80.8			57.6	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.2	77.7	18.0	42.6	19.0	70.9	17.7	42.9
Change Period (Y+Rc), s	5.5	4.8	5.5	* 4.6	5.5	* 4.8	5.5	4.6
Max Green Setting (Gmax), s	6.7	72.7	12.5	* 38	13.5	* 66	12.2	38.0
Max Q Clear Time (g_c+I1), s	7.9	69.7	14.5	40.0	15.5	68.1	13.0	17.4
Green Ext Time (p_c), s	0.0	2.7	0.0	0.0	0.0	0.0	0.0	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	75.9
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	0	1	69	0	26	0	2526	59	113	2593	4
Future Volume (veh/h)	1	0	1	69	0	26	0	2526	59	113	2593	4
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	1	0	1	69	0	26	0	2526	59	113	2593	4
Adj No. of Lanes	0	1	0	1	0	2	1	3	1	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	1	0	1	100	0	178	2	2890	900	142	3749	6
Arrive On Green	0.00	0.00	0.00	0.06	0.00	0.06	0.00	0.58	0.58	0.08	0.73	0.73
Sat Flow, veh/h	828	0	828	1757	0	3136	1740	4988	1553	1740	5143	8
Grp Volume(v), veh/h	2	0	0	69	0	26	0	2526	59	113	1676	921
Grp Sat Flow(s),veh/h/ln	1657	0	0	1757	0	1568	1740	1663	1553	1740	1663	1826
Q Serve(g_s), s	0.1	0.0	0.0	2.9	0.0	0.6	0.0	32.5	1.2	4.8	20.7	20.7
Cycle Q Clear(g_c), s	0.1	0.0	0.0	2.9	0.0	0.6	0.0	32.5	1.2	4.8	20.7	20.7
Prop In Lane	0.50		0.50	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	3	0	0	100	0	178	2	2890	900	142	2424	1331
V/C Ratio(X)	0.74	0.00	0.00	0.69	0.00	0.15	0.00	0.87	0.07	0.79	0.69	0.69
Avail Cap(c_a), veh/h	66	0	0	280	0	500	69	3129	974	160	2424	1331
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.5	0.0	0.0	34.8	0.0	33.8	0.0	13.5	6.9	33.9	5.6	5.6
Incr Delay (d2), s/veh	86.8	0.0	0.0	3.2	0.0	0.1	0.0	3.6	0.1	18.7	1.3	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	1.5	0.0	0.3	0.0	15.7	0.5	3.0	9.8	11.1
LnGrp Delay(d),s/veh	124.3	0.0	0.0	38.0	0.0	33.9	0.0	17.1	7.0	52.6	6.9	8.0
LnGrp LOS	F			D		C		B	A	D	A	A
Approach Vol, veh/h		2			95			2585			2710	
Approach Delay, s/veh		124.3			36.9			16.9			9.2	
Approach LOS		F			D			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	59.8		5.6	11.3	48.6		9.8
Change Period (Y+Rc), s	* 4.6	5.0		5.5	* 5.1	* 5		5.5
Max Green Setting (Gmax), s	* 3	51.4		3.0	* 6.9	* 47		12.0
Max Q Clear Time (g_c+I1), s	0.0	22.7		2.1	6.8	34.5		4.9
Green Ext Time (p_c), s	0.0	28.6		0.0	0.0	9.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.4
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	333	23	115	149	648	9	1900	129	789	1879	23
Future Volume (veh/h)	74	333	23	115	149	648	9	1900	129	789	1879	23
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1845	1845	1845	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	74	333	23	115	149	648	9	1900	129	789	1879	23
Adj No. of Lanes	2	2	1	2	2	1	2	3	0	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	92	705	316	143	764	342	21	1838	124	753	3057	37
Arrive On Green	0.03	0.20	0.20	0.04	0.22	0.22	0.01	0.39	0.39	0.22	0.60	0.60
Sat Flow, veh/h	3375	3471	1553	3408	3505	1568	3375	4772	323	3375	5079	62
Grp Volume(v), veh/h	74	333	23	115	149	648	9	1322	707	789	1230	672
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1704	1752	1568	1688	1663	1770	1688	1663	1816
Q Serve(g_s), s	3.3	12.7	1.8	5.0	5.2	32.7	0.4	57.8	57.8	33.5	35.1	35.1
Cycle Q Clear(g_c), s	3.3	12.7	1.8	5.0	5.2	32.7	0.4	57.8	57.8	33.5	35.1	35.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		0.03
Lane Grp Cap(c), veh/h	92	705	316	143	764	342	21	1280	682	753	2002	1093
V/C Ratio(X)	0.80	0.47	0.07	0.80	0.20	1.90	0.43	1.03	1.04	1.05	0.61	0.61
Avail Cap(c_a), veh/h	92	708	317	143	764	342	67	1280	682	753	2002	1093
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.6	52.7	48.4	71.3	48.0	58.7	74.3	46.2	46.2	58.3	18.9	18.9
Incr Delay (d2), s/veh	36.0	0.2	0.0	25.6	0.0	414.5	5.0	33.9	44.5	45.9	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	6.1	0.8	2.9	2.5	53.5	0.2	32.5	36.6	20.4	16.2	17.8
LnGrp Delay(d),s/veh	108.6	52.9	48.4	96.9	48.0	473.2	79.3	80.0	90.7	104.2	19.3	19.6
LnGrp LOS	F	D	D	F	D	F	E	F	F	F	B	B
Approach Vol, veh/h		430			912			2038			2691	
Approach Delay, s/veh		62.2			356.3			83.7			44.3	
Approach LOS		E			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	95.7	9.6	38.4	39.0	63.1	11.8	36.2
Change Period (Y+Rc), s	5.5	5.3	5.5	* 5.7	5.5	* 5.3	5.5	* 5.7
Max Green Setting (Gmax), s	3.0	88.2	4.1	* 33	33.5	* 58	6.3	* 31
Max Q Clear Time (g_c+I1), s	2.4	37.1	5.3	34.7	35.5	59.8	7.0	14.7
Green Ext Time (p_c), s	0.0	8.4	0.0	0.0	0.0	0.0	0.0	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	105.7
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	13	34	1987	23	79	1936
Future Volume (veh/h)	13	34	1987	23	79	1936
Number	3	18	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1827	1900	1827	1827
Adj Flow Rate, veh/h	13	34	1987	23	79	1936
Adj No. of Lanes	1	1	3	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	4	4	4	4
Cap, veh/h	54	48	2735	32	97	2470
Arrive On Green	0.03	0.03	0.54	0.54	0.06	0.71
Sat Flow, veh/h	1757	1568	5247	59	1740	3563
Grp Volume(v), veh/h	13	34	1299	711	79	1936
Grp Sat Flow(s),veh/h/ln	1757	1568	1663	1817	1740	1736
Q Serve(g_s), s	0.3	0.9	11.8	11.8	1.8	14.5
Cycle Q Clear(g_c), s	0.3	0.9	11.8	11.8	1.8	14.5
Prop In Lane	1.00	1.00		0.03	1.00	
Lane Grp Cap(c), veh/h	54	48	1789	977	97	2470
V/C Ratio(X)	0.24	0.71	0.73	0.73	0.82	0.78
Avail Cap(c_a), veh/h	136	122	2490	1361	305	3617
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.9	19.2	7.0	7.0	18.6	3.8
Incr Delay (d2), s/veh	0.9	7.0	0.3	0.6	6.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.5	5.3	5.9	1.0	6.6
LnGrp Delay(d),s/veh	19.8	26.2	7.3	7.6	24.8	4.1
LnGrp LOS	B	C	A	A	C	A
Approach Vol, veh/h	47		2010			2015
Approach Delay, s/veh	24.4		7.4			4.9
Approach LOS	C		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		33.2			6.9	26.3		6.7
Change Period (Y+Rc), s		4.8			* 4.7	4.8		5.5
Max Green Setting (Gmax), s		41.6			* 7	29.9		3.1
Max Q Clear Time (g_c+I1), s		16.5			3.8	13.8		2.9
Green Ext Time (p_c), s		9.0			0.0	7.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	6.4
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	369	444	99	57	692	152	35	747	54	227	626	199
Future Volume (veh/h)	369	444	99	57	692	152	35	747	54	227	626	199
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1827	1828	1900	1845	1827	1827
Adj Flow Rate, veh/h	369	444	99	57	692	152	35	747	54	227	626	199
Adj No. of Lanes	1	1	1	1	2	0	1	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	3	4	4
Cap, veh/h	375	758	644	73	675	148	44	792	57	238	1239	554
Arrive On Green	0.21	0.41	0.41	0.04	0.24	0.24	0.03	0.24	0.24	0.14	0.36	0.36
Sat Flow, veh/h	1757	1845	1568	1757	2859	628	1740	3285	237	1757	3471	1553
Grp Volume(v), veh/h	369	444	99	57	424	420	35	395	406	227	626	199
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1752	1734	1740	1737	1786	1757	1736	1553
Q Serve(g_s), s	25.1	22.5	4.8	3.9	28.4	28.4	2.4	26.9	26.9	15.4	17.0	11.4
Cycle Q Clear(g_c), s	25.1	22.5	4.8	3.9	28.4	28.4	2.4	26.9	26.9	15.4	17.0	11.4
Prop In Lane	1.00		1.00	1.00		0.36	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	375	758	644	73	414	409	44	419	430	238	1239	554
V/C Ratio(X)	0.98	0.59	0.15	0.78	1.02	1.03	0.80	0.94	0.94	0.95	0.51	0.36
Avail Cap(c_a), veh/h	375	758	644	139	414	409	97	424	437	238	1239	554
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.1	27.5	22.3	57.1	45.9	45.9	58.3	44.8	44.8	51.6	30.3	28.5
Incr Delay (d2), s/veh	41.7	0.8	0.0	6.6	50.7	51.3	11.4	29.1	28.7	45.0	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.5	11.6	2.1	2.0	19.5	19.4	1.3	16.2	16.6	10.5	8.2	4.9
LnGrp Delay(d),s/veh	88.8	28.3	22.3	63.7	96.7	97.2	69.7	73.9	73.5	96.6	30.5	28.7
LnGrp LOS	F	C	C	E	F	F	E	E	E	F	C	C
Approach Vol, veh/h		912			901			836			1052	
Approach Delay, s/veh		52.1			94.8			73.6			44.4	
Approach LOS		D			F			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	47.7	31.2	33.7	21.6	33.8	10.2	54.7
Change Period (Y+Rc), s	* 4.6	4.8	5.5	* 5.3	* 5.3	4.8	* 5.2	* 5.3
Max Green Setting (Gmax), s	* 6.7	39.7	25.7	* 28	* 16	29.4	* 9.5	* 44
Max Q Clear Time (g_c+I1), s	4.4	19.0	27.1	30.4	17.4	28.9	5.9	24.5
Green Ext Time (p_c), s	0.0	1.8	0.0	0.0	0.0	0.1	0.0	1.4

Intersection Summary	
HCM 2010 Ctrl Delay	65.2
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	454	134	376	604	52	44	513	212	180	589	20
Future Volume (veh/h)	136	454	134	376	604	52	44	513	212	180	589	20
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1845	1845	1845	1827	1827	1845	1845	1827	1827
Adj Flow Rate, veh/h	136	454	134	376	604	52	44	513	212	180	589	20
Adj No. of Lanes	0	1	1	1	1	1	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	3	3	4	4
Cap, veh/h	115	383	428	424	445	378	38	462	396	125	559	475
Arrive On Green	0.27	0.27	0.27	0.24	0.24	0.24	0.02	0.25	0.25	0.07	0.31	0.31
Sat Flow, veh/h	420	1403	1568	1757	1845	1568	1740	1827	1568	1757	1827	1553
Grp Volume(v), veh/h	590	0	134	376	604	52	44	513	212	180	589	20
Grp Sat Flow(s),veh/h/ln	1824	0	1568	1757	1845	1568	1740	1827	1568	1757	1827	1553
Q Serve(g_s), s	40.9	0.0	10.2	31.0	36.2	3.9	3.3	37.9	17.5	10.7	45.9	1.4
Cycle Q Clear(g_c), s	40.9	0.0	10.2	31.0	36.2	3.9	3.3	37.9	17.5	10.7	45.9	1.4
Prop In Lane	0.23		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	497	0	428	424	445	378	38	462	396	125	559	475
V/C Ratio(X)	1.19	0.00	0.31	0.89	1.36	0.14	1.15	1.11	0.54	1.44	1.05	0.04
Avail Cap(c_a), veh/h	497	0	428	424	445	378	38	462	396	125	559	475
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.6	0.0	43.4	54.9	56.9	44.6	73.3	56.0	48.4	69.7	52.1	36.6
Incr Delay (d2), s/veh	102.8	0.0	0.2	19.7	174.7	0.2	193.2	75.8	0.8	235.7	52.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	34.8	0.0	4.5	17.4	40.0	1.7	3.6	28.8	7.7	13.4	31.4	0.6
LnGrp Delay(d),s/veh	157.3	0.0	43.5	74.6	231.6	44.8	270.7	131.9	49.2	305.4	105.0	36.6
LnGrp LOS	F		D	E	F	D	F	F	D	F	F	D
Approach Vol, veh/h		724			1032			769			789	
Approach Delay, s/veh		136.2			165.0			117.0			149.0	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	51.0		43.0	16.0	43.0		48.0
Change Period (Y+Rc), s	* 4.7	5.1		6.8	* 5.3	5.1		7.1
Max Green Setting (Gmax), s	* 3.3	45.9		36.2	* 11	37.9		40.9
Max Q Clear Time (g_c+I1), s	5.3	47.9		38.2	12.7	39.9		42.9
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		143.8
HCM 2010 LOS		F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	284	370	267	238	786	9	73	479	46	19	803	275
Future Volume (veh/h)	284	370	267	238	786	9	73	479	46	19	803	275
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1827	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	284	370	267	238	786	9	73	479	46	19	803	275
Adj No. of Lanes	1	2	0	1	2	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	292	474	337	273	806	361	93	1134	109	22	813	278
Arrive On Green	0.17	0.24	0.24	0.16	0.23	0.23	0.05	0.35	0.35	0.01	0.32	0.32
Sat Flow, veh/h	1740	1939	1380	1740	3471	1553	1740	3202	306	1740	2540	869
Grp Volume(v), veh/h	284	331	306	238	786	9	73	259	266	19	549	529
Grp Sat Flow(s),veh/h/ln	1740	1736	1583	1740	1736	1553	1740	1736	1773	1740	1736	1674
Q Serve(g_s), s	14.6	16.0	16.3	12.0	20.2	0.4	3.7	10.2	10.3	1.0	28.3	28.3
Cycle Q Clear(g_c), s	14.6	16.0	16.3	12.0	20.2	0.4	3.7	10.2	10.3	1.0	28.3	28.3
Prop In Lane	1.00		0.87	1.00		1.00	1.00		0.17	1.00		0.52
Lane Grp Cap(c), veh/h	292	424	387	273	806	361	93	615	628	22	555	535
V/C Ratio(X)	0.97	0.78	0.79	0.87	0.98	0.02	0.79	0.42	0.42	0.87	0.99	0.99
Avail Cap(c_a), veh/h	292	424	387	309	806	361	95	615	628	68	555	535
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.3	31.7	31.9	37.1	34.3	26.7	42.1	22.1	22.1	44.4	30.4	30.4
Incr Delay (d2), s/veh	44.9	13.2	15.2	19.5	26.2	0.1	31.0	2.1	2.1	28.8	35.3	36.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.7	9.2	8.8	7.2	12.7	0.2	2.6	5.3	5.4	0.6	19.0	18.5
LnGrp Delay(d),s/veh	82.2	45.0	47.1	56.5	60.5	26.8	73.1	24.2	24.2	73.2	65.7	66.7
LnGrp LOS	F	D	D	E	E	C	E	C	C	E	E	E
Approach Vol, veh/h		921			1033			598			1097	
Approach Delay, s/veh		57.2			59.3			30.2			66.3	
Approach LOS		E			E			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	34.0	20.2	26.1	6.6	37.1	19.1	27.2
Change Period (Y+Rc), s	* 4.9	* 5.2	* 5.1	* 5.2	5.5	* 5.2	5.0	* 5.2
Max Green Setting (Gmax), s	* 4.9	* 29	* 15	* 21	3.5	* 30	16.0	* 20
Max Q Clear Time (g_c+I1), s	5.7	30.3	16.6	22.2	3.0	12.3	14.0	18.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	15.9	0.1	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	56.1
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	280	653	175	306	13	283	492	59	46	1137	108
Future Volume (veh/h)	74	280	653	175	306	13	283	492	59	46	1137	108
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	74	280	653	175	306	13	283	492	59	46	1137	108
Adj No. of Lanes	2	2	1	2	2	1	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	120	1115	499	198	1196	535	302	1274	152	80	1187	531
Arrive On Green	0.04	0.32	0.32	0.06	0.34	0.34	0.09	0.41	0.41	0.02	0.34	0.34
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	3123	373	3375	3471	1553
Grp Volume(v), veh/h	74	280	653	175	306	13	283	273	278	46	1137	108
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1736	1761	1688	1736	1553
Q Serve(g_s), s	2.5	6.8	36.6	5.9	7.3	0.6	9.6	12.7	12.8	1.6	36.9	5.7
Cycle Q Clear(g_c), s	2.5	6.8	36.6	5.9	7.3	0.6	9.6	12.7	12.8	1.6	36.9	5.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	120	1115	499	198	1196	535	302	708	718	80	1187	531
V/C Ratio(X)	0.62	0.25	1.31	0.88	0.26	0.02	0.94	0.39	0.39	0.57	0.96	0.20
Avail Cap(c_a), veh/h	175	1115	499	198	1196	535	302	708	718	126	1195	534
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.7	29.1	39.2	53.8	27.4	25.2	52.1	23.9	24.0	55.6	37.0	26.8
Incr Delay (d2), s/veh	1.9	0.5	153.1	32.8	0.4	0.1	34.9	1.1	1.1	2.4	17.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	3.4	37.1	3.7	3.6	0.3	5.9	6.3	6.4	0.7	20.6	2.5
LnGrp Delay(d),s/veh	56.6	29.6	192.3	86.5	27.7	25.2	87.0	25.0	25.1	58.0	54.4	27.4
LnGrp LOS	E	C	F	F	C	C	F	C	C	E	D	C
Approach Vol, veh/h		1007			494			834			1291	
Approach Delay, s/veh		137.1			48.5			46.1			52.3	
Approach LOS		F			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.8	44.9	9.6	44.8	8.2	52.4	12.2	42.2
Change Period (Y+Rc), s	5.5	* 5.5	5.5	5.6	5.5	* 5.5	5.5	* 5.6
Max Green Setting (Gmax), s	10.3	* 40	5.9	37.2	4.3	* 46	6.7	* 37
Max Q Clear Time (g_c+I1), s	11.6	38.9	4.5	9.3	3.6	14.8	7.9	38.6
Green Ext Time (p_c), s	0.0	0.5	0.0	18.8	0.0	24.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	73.9
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	2021	245	95	2036	5	96	30	44	4	32	23
Future Volume (veh/h)	14	2021	245	95	2036	5	96	30	44	4	32	23
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	14	2021	245	95	2036	5	96	30	44	4	32	23
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	21	2096	249	113	2571	6	112	77	114	7	48	35
Arrive On Green	0.01	0.68	0.68	0.07	0.74	0.74	0.06	0.11	0.11	0.00	0.05	0.05
Sat Flow, veh/h	1707	3067	364	1707	3485	9	1757	677	993	1757	999	718
Grp Volume(v), veh/h	14	1104	1162	95	994	1047	96	0	74	4	0	55
Grp Sat Flow(s),veh/h/ln	1707	1703	1728	1707	1703	1791	1757	0	1669	1757	0	1718
Q Serve(g_s), s	1.1	79.0	88.0	7.4	49.8	49.9	7.3	0.0	5.6	0.3	0.0	4.3
Cycle Q Clear(g_c), s	1.1	79.0	88.0	7.4	49.8	49.9	7.3	0.0	5.6	0.3	0.0	4.3
Prop In Lane	1.00		0.21	1.00		0.00	1.00		0.59	1.00		0.42
Lane Grp Cap(c), veh/h	21	1164	1181	113	1256	1321	112	0	191	7	0	83
V/C Ratio(X)	0.68	0.95	0.98	0.84	0.79	0.79	0.86	0.00	0.39	0.55	0.00	0.66
Avail Cap(c_a), veh/h	50	1177	1195	113	1256	1321	112	0	316	52	0	267
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	66.6	19.3	20.7	62.5	11.2	11.2	62.8	0.0	55.5	67.3	0.0	63.3
Incr Delay (d2), s/veh	23.2	15.7	22.2	38.5	3.9	3.7	44.3	0.0	1.2	37.8	0.0	7.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	41.9	48.6	4.7	24.3	25.8	4.9	0.0	2.6	0.2	0.0	2.2
LnGrp Delay(d),s/veh	89.8	35.0	42.9	101.0	15.0	14.9	107.1	0.0	56.7	105.0	0.0	71.2
LnGrp LOS	F	C	D	F	B	B	F		E	F		E
Approach Vol, veh/h		2280			2136			170			59	
Approach Delay, s/veh		39.3			18.8			85.2			73.5	
Approach LOS		D			B			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.5	98.9	13.0	11.0	5.1	106.3	4.1	19.9
Change Period (Y+Rc), s	3.5	6.4	4.4	* 4.4	3.5	6.4	3.5	4.4
Max Green Setting (Gmax), s	9.0	93.6	8.6	* 21	4.0	98.6	4.0	25.6
Max Q Clear Time (g_c+I1), s	9.4	90.0	9.3	6.3	3.1	51.9	2.3	7.6
Green Ext Time (p_c), s	0.0	2.5	0.0	0.3	0.0	46.4	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	32.0
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	652	11	136	645	72	59	35	91	64	29	13
Future Volume (veh/h)	13	652	11	136	645	72	59	35	91	64	29	13
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	13	652	11	136	645	72	59	35	91	64	29	13
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	18	1141	19	172	1308	146	70	217	185	77	224	190
Arrive On Green	0.01	0.32	0.32	0.10	0.41	0.41	0.04	0.12	0.12	0.04	0.12	0.12
Sat Flow, veh/h	1757	3527	59	1757	3180	355	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	13	324	339	136	355	362	59	35	91	64	29	13
Grp Sat Flow(s),veh/h/ln	1757	1752	1834	1757	1752	1782	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	0.3	5.9	5.9	2.9	5.7	5.8	1.3	0.7	2.1	1.4	0.5	0.3
Cycle Q Clear(g_c), s	0.3	5.9	5.9	2.9	5.7	5.8	1.3	0.7	2.1	1.4	0.5	0.3
Prop In Lane	1.00		0.03	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	18	567	594	172	721	733	70	217	185	77	224	190
V/C Ratio(X)	0.73	0.57	0.57	0.79	0.49	0.49	0.84	0.16	0.49	0.83	0.13	0.07
Avail Cap(c_a), veh/h	137	822	861	229	914	929	137	866	736	137	866	736
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.9	10.8	10.8	16.9	8.3	8.3	18.3	15.2	15.8	18.2	15.0	14.9
Incr Delay (d2), s/veh	43.8	0.9	0.9	12.7	0.5	0.5	22.4	0.3	2.0	20.1	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.9	3.1	2.0	2.9	2.9	1.0	0.4	1.0	1.1	0.3	0.1
LnGrp Delay(d),s/veh	62.7	11.7	11.6	29.6	8.9	8.9	40.7	15.6	17.9	38.3	15.3	15.1
LnGrp LOS	E	B	B	C	A	A	D	B	B	D	B	B
Approach Vol, veh/h		676			853			185			106	
Approach Delay, s/veh		12.6			12.2			24.7			29.2	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.7	8.5	7.8	16.4	5.5	8.7	4.4	19.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	18.0	5.0	18.0	3.0	18.0	3.0	20.0
Max Q Clear Time (g_c+I1), s	3.4	4.1	4.9	7.9	3.3	2.5	2.3	7.8
Green Ext Time (p_c), s	0.0	0.4	0.0	4.5	0.0	0.5	0.0	5.0

Intersection Summary	
HCM 2010 Ctrl Delay	14.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	775	58	222	942	82	10	38	33	19	193	53
Future Volume (veh/h)	16	775	58	222	942	82	10	38	33	19	193	53
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	16	775	58	222	942	82	10	38	33	19	193	53
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	21	1162	87	199	1478	129	14	291	247	25	302	257
Arrive On Green	0.01	0.35	0.35	0.11	0.45	0.45	0.01	0.16	0.16	0.01	0.16	0.16
Sat Flow, veh/h	1757	3306	247	1757	3263	284	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	16	411	422	222	506	518	10	38	33	19	193	53
Grp Sat Flow(s),veh/h/ln	1757	1752	1801	1757	1752	1795	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	0.4	8.7	8.7	5.0	9.8	9.8	0.3	0.8	0.8	0.5	4.3	1.3
Cycle Q Clear(g_c), s	0.4	8.7	8.7	5.0	9.8	9.8	0.3	0.8	0.8	0.5	4.3	1.3
Prop In Lane	1.00		0.14	1.00		0.16	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	21	616	633	199	794	813	14	291	247	25	302	257
V/C Ratio(X)	0.75	0.67	0.67	1.11	0.64	0.64	0.73	0.13	0.13	0.77	0.64	0.21
Avail Cap(c_a), veh/h	120	716	736	199	796	815	120	754	641	120	754	641
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.7	12.1	12.1	19.5	9.3	9.3	21.8	16.0	16.0	21.6	17.2	15.9
Incr Delay (d2), s/veh	40.7	1.9	1.9	97.5	1.7	1.7	52.4	0.2	0.2	37.7	2.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	4.5	4.7	7.8	5.0	5.1	0.3	0.4	0.4	0.5	2.4	0.6
LnGrp Delay(d),s/veh	62.3	14.0	14.0	117.0	11.0	10.9	74.2	16.2	16.2	59.3	19.4	16.3
LnGrp LOS	E	B	B	F	B	B	E	B	B	E	B	B
Approach Vol, veh/h		849			1246			81			265	
Approach Delay, s/veh		14.9			29.8			23.3			21.7	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.6	10.9	9.0	19.5	4.3	11.2	4.5	24.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	18.0	5.0	18.0	3.0	18.0	3.0	20.0
Max Q Clear Time (g_c+I1), s	2.5	2.8	7.0	10.7	2.3	6.3	2.4	11.8
Green Ext Time (p_c), s	0.0	1.0	0.0	4.7	0.0	0.9	0.0	5.2

Intersection Summary	
HCM 2010 Ctrl Delay	23.5
HCM 2010 LOS	C

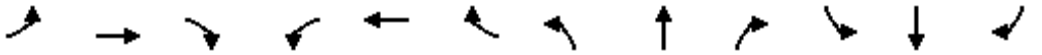
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	734	161	172	716	392	131	367	124	308	454	15
Future Volume (veh/h)	28	734	161	172	716	392	131	367	124	308	454	15
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	28	734	161	172	716	392	131	367	124	308	454	15
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	34	808	177	179	795	435	160	409	348	338	596	506
Arrive On Green	0.02	0.28	0.28	0.10	0.36	0.36	0.09	0.22	0.22	0.19	0.32	0.32
Sat Flow, veh/h	1757	2859	627	1757	2189	1197	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	28	450	445	172	573	535	131	367	124	308	454	15
Grp Sat Flow(s),veh/h/ln	1757	1752	1734	1757	1752	1634	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	1.6	24.3	24.3	9.5	30.3	30.4	7.2	18.9	6.5	16.8	21.7	0.6
Cycle Q Clear(g_c), s	1.6	24.3	24.3	9.5	30.3	30.4	7.2	18.9	6.5	16.8	21.7	0.6
Prop In Lane	1.00		0.36	1.00		0.73	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	34	495	490	179	637	593	160	409	348	338	596	506
V/C Ratio(X)	0.82	0.91	0.91	0.96	0.90	0.90	0.82	0.90	0.36	0.91	0.76	0.03
Avail Cap(c_a), veh/h	57	540	535	179	655	610	210	584	496	346	729	619
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.9	33.9	33.9	43.8	29.5	29.5	43.7	37.0	32.2	38.7	29.8	22.7
Incr Delay (d2), s/veh	16.4	17.5	17.7	54.8	14.7	15.9	13.3	9.9	0.2	26.4	2.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	14.2	14.0	7.4	17.2	16.3	4.1	10.8	2.9	10.6	11.4	0.3
LnGrp Delay(d),s/veh	64.2	51.4	51.6	98.5	44.2	45.4	57.0	47.0	32.4	65.1	32.7	22.7
LnGrp LOS	E	D	D	F	D	D	E	D	C	E	C	C
Approach Vol, veh/h		923			1280			622			777	
Approach Delay, s/veh		51.9			52.0			46.2			45.3	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.1	40.4	14.4	36.0	15.0	32.5	24.3	26.1
Change Period (Y+Rc), s	* 5.2	4.8	5.5	* 4.4	5.0	* 4.8	5.5	* 4.4
Max Green Setting (Gmax), s	* 3.2	36.6	11.7	* 39	10.0	* 30	19.3	* 31
Max Q Clear Time (g_c+I1), s	3.6	32.4	9.2	23.7	11.5	26.3	18.8	20.9
Green Ext Time (p_c), s	0.0	1.5	0.0	0.9	0.0	1.4	0.0	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	49.5
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	151	1830	92	280	1756	1	244	1058	191	2	1094	208
Future Volume (veh/h)	151	1830	92	280	1756	1	244	1058	191	2	1094	208
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1792	1845	1845	1792	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	151	1830	92	280	1756	1	244	1058	191	2	1094	208
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	6	3	3	6	3	3	3	3	3	3	3
Cap, veh/h	189	1740	557	265	1849	592	227	1357	607	6	1129	505
Arrive On Green	0.06	0.36	0.36	0.08	0.38	0.38	0.07	0.39	0.39	0.00	0.32	0.32
Sat Flow, veh/h	3408	4893	1568	3408	4893	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	151	1830	92	280	1756	1	244	1058	191	2	1094	208
Grp Sat Flow(s),veh/h/ln	1704	1631	1568	1704	1631	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	3.9	32.0	3.6	7.0	31.3	0.0	6.0	23.8	7.6	0.1	27.7	9.3
Cycle Q Clear(g_c), s	3.9	32.0	3.6	7.0	31.3	0.0	6.0	23.8	7.6	0.1	27.7	9.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	189	1740	557	265	1849	592	227	1357	607	6	1129	505
V/C Ratio(X)	0.80	1.05	0.17	1.06	0.95	0.00	1.07	0.78	0.31	0.36	0.97	0.41
Avail Cap(c_a), veh/h	189	1740	557	265	1849	592	227	1357	607	151	1129	505
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.0	29.0	19.9	41.5	27.2	17.4	42.0	24.2	19.2	44.9	30.1	23.8
Incr Delay (d2), s/veh	20.8	36.7	0.1	70.9	11.3	0.0	80.7	3.0	0.3	35.3	19.6	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	20.2	1.6	5.9	15.9	0.0	5.4	12.0	3.3	0.1	16.4	4.1
LnGrp Delay(d),s/veh	62.8	65.7	20.0	112.4	38.5	17.4	122.7	27.2	19.5	80.2	49.7	24.4
LnGrp LOS	E	F	B	F	D	B	F	C	B	F	D	C
Approach Vol, veh/h		2073			2037			1493			1304	
Approach Delay, s/veh		63.4			48.6			41.8			45.7	
Approach LOS		E			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.1	38.9	11.0	36.0	10.0	33.0	9.0	38.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	31.0	7.0	32.0	6.0	29.0	5.0	34.0
Max Q Clear Time (g_c+I1), s	2.1	25.8	9.0	34.0	8.0	29.7	5.9	33.3
Green Ext Time (p_c), s	0.0	4.4	0.0	0.0	0.0	0.0	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	51.0
HCM 2010 LOS	D



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	610	35	73	695	748	708
Future Volume (veh/h)	610	35	73	695	748	708
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	610	35	73	695	748	708
Adj No. of Lanes	2	1	2	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	859	395	134	2019	1580	707
Arrive On Green	0.25	0.25	0.04	0.58	0.45	0.45
Sat Flow, veh/h	3408	1568	3408	3597	3597	1568
Grp Volume(v), veh/h	610	35	73	695	748	708
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1752	1752	1568
Q Serve(g_s), s	7.6	0.8	1.0	4.9	6.9	21.0
Cycle Q Clear(g_c), s	7.6	0.8	1.0	4.9	6.9	21.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	859	395	134	2019	1580	707
V/C Ratio(X)	0.71	0.09	0.54	0.34	0.47	1.00
Avail Cap(c_a), veh/h	1317	606	293	2182	1580	707
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.9	13.3	22.0	5.2	8.9	12.8
Incr Delay (d2), s/veh	1.1	0.1	3.4	0.1	0.2	34.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.8	0.5	2.3	3.4	15.6
LnGrp Delay(d),s/veh	17.0	13.4	25.4	5.3	9.1	47.0
LnGrp LOS	B	B	C	A	A	F
Approach Vol, veh/h	645			768	1456	
Approach Delay, s/veh	16.8			7.2	27.5	
Approach LOS	B			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		30.8		15.7	5.8	25.0		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		29.0		18.0	4.0	21.0		
Max Q Clear Time (g_c+I1), s		6.9		9.6	3.0	23.0		
Green Ext Time (p_c), s		11.8		2.2	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	19.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	515	296	0	0	484	129	6	0	1	197	0	748
Future Volume (veh/h)	515	296	0	0	484	129	6	0	1	197	0	748
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1845	1845	1845	1900	1845	1900	1900	1845	1900
Adj Flow Rate, veh/h	515	296	0	0	484	129	6	0	1	197	0	748
Adj No. of Lanes	0	1	0	1	1	1	0	1	0	0	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	376	216	0	361	379	322	8	0	1	111	0	421
Arrive On Green	0.33	0.33	0.00	0.00	0.21	0.21	0.01	0.00	0.01	0.33	0.00	0.33
Sat Flow, veh/h	1135	653	0	1757	1845	1568	1480	0	247	334	0	1270
Grp Volume(v), veh/h	811	0	0	0	484	129	7	0	0	945	0	0
Grp Sat Flow(s),veh/h/ln	1788	0	0	1757	1845	1568	1727	0	0	1604	0	0
Q Serve(g_s), s	42.0	0.0	0.0	0.0	26.0	9.0	0.5	0.0	0.0	42.0	0.0	0.0
Cycle Q Clear(g_c), s	42.0	0.0	0.0	0.0	26.0	9.0	0.5	0.0	0.0	42.0	0.0	0.0
Prop In Lane	0.64		0.00	1.00		1.00	0.86		0.14	0.21		0.79
Lane Grp Cap(c), veh/h	593	0	0	361	379	322	9	0	0	532	0	0
V/C Ratio(X)	1.37	0.00	0.00	0.00	1.28	0.40	0.78	0.00	0.00	1.78	0.00	0.00
Avail Cap(c_a), veh/h	593	0	0	361	379	322	55	0	0	532	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	42.3	0.0	0.0	0.0	50.3	43.6	62.9	0.0	0.0	42.3	0.0	0.0
Incr Delay (d2), s/veh	176.2	0.0	0.0	0.0	144.1	0.8	84.5	0.0	0.0	357.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	49.6	0.0	0.0	0.0	28.3	4.0	0.5	0.0	0.0	71.2	0.0	0.0
LnGrp Delay(d),s/veh	218.5	0.0	0.0	0.0	194.5	44.4	147.4	0.0	0.0	399.4	0.0	0.0
LnGrp LOS	F				F	D	F			F		
Approach Vol, veh/h		811			613			7			945	
Approach Delay, s/veh		218.5			162.9			147.4			399.4	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		4.7		46.0		46.0		30.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		4.0		42.0		42.0		26.0
Max Q Clear Time (g_c+I1), s		2.5		44.0		44.0		28.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	275.9
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	31	17	128	44	479	48	2159	37	419	2225	59
Future Volume (veh/h)	73	31	17	128	44	479	48	2159	37	419	2225	59
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	73	31	17	128	44	479	48	2159	37	419	2225	59
Adj No. of Lanes	1	1	0	2	1	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	83	53	29	712	385	327	61	2232	695	432	2715	72
Arrive On Green	0.05	0.05	0.05	0.21	0.21	0.21	0.04	0.45	0.45	0.13	0.54	0.54
Sat Flow, veh/h	1757	1121	615	3408	1845	1568	1740	4988	1553	3375	4996	132
Grp Volume(v), veh/h	73	0	48	128	44	479	48	2159	37	419	1479	805
Grp Sat Flow(s),veh/h/ln	1757	0	1736	1704	1845	1568	1740	1663	1553	1688	1663	1804
Q Serve(g_s), s	5.3	0.0	3.5	4.0	2.5	26.9	3.5	54.3	1.7	15.9	47.1	47.5
Cycle Q Clear(g_c), s	5.3	0.0	3.5	4.0	2.5	26.9	3.5	54.3	1.7	15.9	47.1	47.5
Prop In Lane	1.00		0.35	1.00		1.00	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	83	0	82	712	385	327	61	2232	695	432	1807	980
V/C Ratio(X)	0.88	0.00	0.58	0.18	0.11	1.46	0.78	0.97	0.05	0.97	0.82	0.82
Avail Cap(c_a), veh/h	83	0	82	712	385	327	88	2276	709	432	1807	980
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.0	0.0	60.1	41.9	41.3	51.0	61.7	34.7	20.2	55.9	24.2	24.3
Incr Delay (d2), s/veh	58.4	0.0	7.0	0.0	0.0	224.6	15.3	12.0	0.0	35.1	2.9	5.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	1.8	1.9	1.3	32.1	2.0	27.3	0.8	9.5	22.3	24.9
LnGrp Delay(d),s/veh	119.4	0.0	67.1	42.0	41.4	275.6	77.0	46.6	20.2	91.0	27.1	29.6
LnGrp LOS	F		E	D	D	F	E	D	C	F	C	C
Approach Vol, veh/h		121			651			2244			2703	
Approach Delay, s/veh		98.7			213.8			46.9			37.7	
Approach LOS		F			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.6	75.2		11.6	22.0	62.9		32.4
Change Period (Y+Rc), s	* 5.1	* 5.2		5.5	5.5	* 5.2		5.5
Max Green Setting (Gmax), s	* 6.5	* 69		6.1	16.5	* 59		26.9
Max Q Clear Time (g_c+I1), s	5.5	49.5		7.3	17.9	56.3		28.9
Green Ext Time (p_c), s	0.0	10.1		0.0	0.0	1.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	62.7
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	1075	457	395	987	603	500	1023	148	728	1370	169
Future Volume (veh/h)	179	1075	457	395	987	603	500	1023	148	728	1370	169
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	179	1075	457	395	987	603	500	1023	148	728	1370	169
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	223	964	431	352	1097	491	438	1226	382	768	1192	533
Arrive On Green	0.07	0.27	0.27	0.10	0.31	0.31	0.13	0.25	0.25	0.23	0.34	0.34
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1553	3375	3471	1553
Grp Volume(v), veh/h	179	1075	457	395	987	603	500	1023	148	728	1370	169
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1553	1688	1736	1553
Q Serve(g_s), s	7.8	41.3	41.3	15.5	40.5	47.0	19.5	29.2	11.9	31.9	51.6	12.0
Cycle Q Clear(g_c), s	7.8	41.3	41.3	15.5	40.5	47.0	19.5	29.2	11.9	31.9	51.6	12.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	223	964	431	352	1097	491	438	1226	382	768	1192	533
V/C Ratio(X)	0.80	1.12	1.06	1.12	0.90	1.23	1.14	0.83	0.39	0.95	1.15	0.32
Avail Cap(c_a), veh/h	247	964	431	352	1097	491	438	1226	382	793	1192	533
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.3	54.5	54.4	67.3	49.4	51.6	65.3	53.7	47.2	57.1	49.3	36.3
Incr Delay (d2), s/veh	14.1	66.1	60.1	85.6	9.9	120.0	87.5	4.8	0.2	19.7	77.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	28.8	25.0	11.5	21.1	36.7	14.4	14.0	5.1	17.0	37.4	5.2
LnGrp Delay(d),s/veh	83.4	120.6	114.6	152.9	59.2	171.6	152.9	58.6	47.5	76.8	126.4	36.4
LnGrp LOS	F	F	F	F	E	F	F	E	D	E	F	D
Approach Vol, veh/h		1711			1985			1671			2267	
Approach Delay, s/veh		115.1			112.0			85.8			103.8	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	57.2	15.3	52.7	39.7	42.5	21.0	47.0
Change Period (Y+Rc), s	5.5	* 5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	19.5	* 52	10.9	* 46	35.3	* 36	15.5	* 41
Max Q Clear Time (g_c+I1), s	21.5	53.6	9.8	49.0	33.9	31.2	17.5	43.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.3	2.3	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	104.5
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	276	1576	354	240	1322	594	493	694	78	596	1666	161
Future Volume (veh/h)	276	1576	354	240	1322	594	493	694	78	596	1666	161
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1845	1845	1792	1792	1845	1845	1845	1827	1845	1827
Adj Flow Rate, veh/h	276	1576	354	240	1322	594	493	694	78	596	1666	0
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	3	3	6	6	3	3	3	4	3	4
Cap, veh/h	302	1496	479	243	1417	441	486	1372	427	653	1613	497
Arrive On Green	0.09	0.31	0.31	0.07	0.29	0.29	0.14	0.27	0.27	0.19	0.32	0.00
Sat Flow, veh/h	3312	4893	1568	3408	4893	1524	3408	5036	1568	3375	5036	1553
Grp Volume(v), veh/h	276	1576	354	240	1322	594	493	694	78	596	1666	0
Grp Sat Flow(s),veh/h/ln	1656	1631	1568	1704	1631	1524	1704	1679	1568	1688	1679	1553
Q Serve(g_s), s	10.8	39.9	26.4	9.2	34.3	37.8	18.6	15.2	5.0	22.6	41.8	0.0
Cycle Q Clear(g_c), s	10.8	39.9	26.4	9.2	34.3	37.8	18.6	15.2	5.0	22.6	41.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	302	1496	479	243	1417	441	486	1372	427	653	1613	497
V/C Ratio(X)	0.91	1.05	0.74	0.99	0.93	1.35	1.01	0.51	0.18	0.91	1.03	0.00
Avail Cap(c_a), veh/h	302	1496	479	243	1417	441	486	1372	427	828	1613	497
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	58.8	45.3	40.6	60.5	45.1	46.4	56.0	40.1	36.3	51.5	44.4	0.0
Incr Delay (d2), s/veh	30.0	38.7	5.3	54.3	11.2	170.2	44.6	0.3	0.2	10.9	31.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	23.2	12.2	6.1	16.9	36.8	11.7	7.1	2.2	11.5	23.9	0.0
LnGrp Delay(d),s/veh	88.8	84.0	45.9	114.8	56.4	216.6	100.6	40.4	36.5	62.5	75.7	0.0
LnGrp LOS	F	F	D	F	E	F	F	D	D	E	F	
Approach Vol, veh/h		2206			2156			1265			2262	
Approach Delay, s/veh		78.5			107.0			63.6			72.2	
Approach LOS		E			F			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.0	46.9	16.2	43.4	30.2	40.7	14.1	45.5
Change Period (Y+Rc), s	* 5.4	5.1	* 4.3	5.6	5.0	5.1	* 4.8	* 5.6
Max Green Setting (Gmax), s	* 19	41.8	* 12	37.3	32.0	28.8	* 9.3	* 40
Max Q Clear Time (g_c+I1), s	20.6	43.8	12.8	39.8	24.6	17.2	11.2	41.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.7	5.7	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	82.1
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	535	43	190	493	63	73	612	311	91	1725	40
Future Volume (veh/h)	34	535	43	190	493	63	73	612	311	91	1725	40
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	34	535	43	190	493	63	73	612	311	91	1725	40
Adj No. of Lanes	2	1	0	2	2	1	1	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	60	492	40	195	1163	520	78	1058	538	134	1629	729
Arrive On Green	0.02	0.29	0.29	0.06	0.33	0.33	0.04	0.47	0.47	0.04	0.46	0.46
Sat Flow, veh/h	3408	1685	135	3408	3505	1568	1757	2251	1144	3408	3505	1568
Grp Volume(v), veh/h	34	0	578	190	493	63	73	476	447	91	1725	40
Grp Sat Flow(s),veh/h/ln	1704	0	1821	1704	1752	1568	1757	1752	1643	1704	1752	1568
Q Serve(g_s), s	1.5	0.0	43.8	8.3	16.4	4.2	6.2	29.7	29.7	4.0	69.7	2.1
Cycle Q Clear(g_c), s	1.5	0.0	43.8	8.3	16.4	4.2	6.2	29.7	29.7	4.0	69.7	2.1
Prop In Lane	1.00		0.07	1.00		1.00	1.00		0.70	1.00		1.00
Lane Grp Cap(c), veh/h	60	0	532	195	1163	520	78	824	772	134	1629	729
V/C Ratio(X)	0.57	0.00	1.09	0.97	0.42	0.12	0.93	0.58	0.58	0.68	1.06	0.05
Avail Cap(c_a), veh/h	95	0	532	195	1163	520	78	824	772	191	1629	729
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.1	0.0	53.1	70.6	39.0	34.9	71.4	28.9	28.9	71.1	40.2	22.1
Incr Delay (d2), s/veh	8.1	0.0	64.8	56.2	0.2	0.1	78.1	1.0	1.1	6.0	39.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	31.6	5.5	8.0	1.8	4.7	14.5	13.6	2.0	42.7	0.9
LnGrp Delay(d),s/veh	81.2	0.0	117.9	126.8	39.2	35.0	149.5	29.9	30.0	77.1	80.0	22.1
LnGrp LOS	F		F	F	D	D	F	C	C	E	F	C
Approach Vol, veh/h		612			746			996			1856	
Approach Delay, s/veh		115.9			61.2			38.7			78.6	
Approach LOS		F			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.2	74.7	14.1	49.0	11.4	75.5	8.1	55.0
Change Period (Y+Rc), s	5.5	5.0	5.5	* 5.2	5.5	5.0	5.5	* 5.2
Max Green Setting (Gmax), s	6.7	69.7	8.6	* 44	8.4	68.0	4.2	* 48
Max Q Clear Time (g_c+I1), s	8.2	71.7	10.3	45.8	6.0	31.7	3.5	18.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	9.7	0.0	6.0

Intersection Summary	
HCM 2010 Ctrl Delay	71.5
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	253	14	355	459	31	4	670	130	13	1752	188
Future Volume (veh/h)	220	253	14	355	459	31	4	670	130	13	1752	188
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1828	1900	1845	1796	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	220	253	14	355	459	31	4	670	130	13	1752	188
Adj No. of Lanes	2	1	0	2	1	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	4	4	3	6	6	3	3	3	3	3	3
Cap, veh/h	238	363	20	397	429	29	5	1524	295	15	1683	177
Arrive On Green	0.07	0.21	0.21	0.12	0.26	0.26	0.00	0.52	0.52	0.01	0.53	0.53
Sat Flow, veh/h	3408	1716	95	3408	1663	112	1757	2929	568	1757	3200	337
Grp Volume(v), veh/h	220	0	267	355	0	490	4	401	399	13	945	995
Grp Sat Flow(s),veh/h/ln	1704	0	1811	1704	0	1776	1757	1752	1744	1757	1752	1785
Q Serve(g_s), s	9.5	0.0	20.1	15.1	0.0	38.0	0.3	20.9	21.0	1.1	77.5	77.5
Cycle Q Clear(g_c), s	9.5	0.0	20.1	15.1	0.0	38.0	0.3	20.9	21.0	1.1	77.5	77.5
Prop In Lane	1.00		0.05	1.00		0.06	1.00		0.33	1.00		0.19
Lane Grp Cap(c), veh/h	238	0	383	397	0	458	5	912	908	15	922	939
V/C Ratio(X)	0.92	0.00	0.70	0.89	0.00	1.07	0.74	0.44	0.44	0.85	1.03	1.06
Avail Cap(c_a), veh/h	238	0	383	398	0	458	37	912	908	66	922	939
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.1	0.0	53.7	64.2	0.0	54.7	73.4	22.0	22.0	72.9	34.9	34.9
Incr Delay (d2), s/veh	38.1	0.0	4.6	21.9	0.0	62.0	107.1	0.3	0.3	71.8	36.3	46.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.0	10.6	8.4	0.0	26.5	0.3	10.2	10.2	0.8	46.7	50.2
LnGrp Delay(d),s/veh	106.2	0.0	58.4	86.2	0.0	116.7	180.5	22.3	22.3	144.7	71.3	81.4
LnGrp LOS	F		E	F		F	F	C	C	F	F	F
Approach Vol, veh/h		487			845			804			1953	
Approach Delay, s/veh		80.0			103.9			23.1			76.9	
Approach LOS		E			F			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	81.8	15.8	43.0	6.0	82.6	22.7	36.1
Change Period (Y+Rc), s	5.5	* 5.1	5.5	* 5	5.5	* 5.1	5.5	* 5
Max Green Setting (Gmax), s	5.5	* 75	10.3	* 38	3.1	* 78	17.2	* 31
Max Q Clear Time (g_c+I1), s	3.1	23.0	11.5	40.0	2.3	79.5	17.1	22.1
Green Ext Time (p_c), s	0.0	28.0	0.0	0.0	0.0	0.0	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	72.3
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

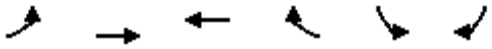
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	172	121	63	216	56	41	611	35	108	1562	314
Future Volume (veh/h)	117	172	121	63	216	56	41	611	35	108	1562	314
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1827	1844	1900	1845	1845	1900
Adj Flow Rate, veh/h	117	172	121	63	216	56	41	611	35	108	1562	314
Adj No. of Lanes	2	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	3	3	3	3	3
Cap, veh/h	168	189	133	80	259	67	52	1762	101	132	1657	324
Arrive On Green	0.05	0.19	0.19	0.05	0.18	0.18	0.03	0.52	0.52	0.08	0.57	0.57
Sat Flow, veh/h	3408	1009	710	1757	1414	366	1740	3368	193	1757	2925	571
Grp Volume(v), veh/h	117	0	293	63	0	272	41	317	329	108	918	958
Grp Sat Flow(s),veh/h/ln	1704	0	1719	1757	0	1780	1740	1752	1810	1757	1752	1744
Q Serve(g_s), s	4.2	0.0	20.8	4.4	0.0	18.4	2.9	13.2	13.2	7.6	59.4	65.9
Cycle Q Clear(g_c), s	4.2	0.0	20.8	4.4	0.0	18.4	2.9	13.2	13.2	7.6	59.4	65.9
Prop In Lane	1.00		0.41	1.00		0.21	1.00		0.11	1.00		0.33
Lane Grp Cap(c), veh/h	168	0	321	80	0	327	52	916	946	132	993	988
V/C Ratio(X)	0.70	0.00	0.91	0.78	0.00	0.83	0.79	0.35	0.35	0.82	0.92	0.97
Avail Cap(c_a), veh/h	194	0	430	86	0	435	63	916	946	227	1010	1005
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.4	0.0	49.7	58.9	0.0	49.1	60.1	17.3	17.3	56.8	24.6	26.0
Incr Delay (d2), s/veh	8.8	0.0	16.8	31.4	0.0	7.7	34.2	0.2	0.2	4.6	13.5	21.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	11.4	2.9	0.0	9.8	1.9	6.4	6.6	3.8	32.3	37.2
LnGrp Delay(d),s/veh	67.1	0.0	66.5	90.3	0.0	56.8	94.3	17.6	17.6	61.5	38.1	47.2
LnGrp LOS	E		E	F		E	F	B	B	E	D	D
Approach Vol, veh/h		410			335			687			1984	
Approach Delay, s/veh		66.7			63.1			22.1			43.8	
Approach LOS		E			E			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	70.3	11.6	28.3	9.0	75.8	11.2	28.7
Change Period (Y+Rc), s	* 5.1	5.1	5.5	* 5.4	* 5.3	5.1	5.5	* 5.4
Max Green Setting (Gmax), s	* 16	60.5	7.1	* 31	* 4.5	71.9	6.1	* 31
Max Q Clear Time (g_c+I1), s	9.6	15.2	6.2	20.4	4.9	67.9	6.4	22.8
Green Ext Time (p_c), s	0.0	23.1	0.0	0.5	0.0	2.7	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	44.1
HCM 2010 LOS	D

Notes

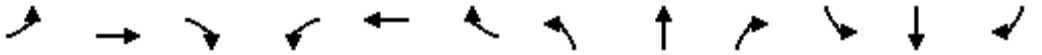
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	141	1703	1282	717	773	322
Future Volume (veh/h)	141	1703	1282	717	773	322
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	141	1703	1282	717	773	322
Adj No. of Lanes	2	3	3	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	234	2722	1980	616	1030	474
Arrive On Green	0.07	0.54	0.39	0.39	0.30	0.30
Sat Flow, veh/h	3408	5202	5202	1568	3408	1568
Grp Volume(v), veh/h	141	1703	1282	717	773	322
Grp Sat Flow(s),veh/h/ln	1704	1679	1679	1568	1704	1568
Q Serve(g_s), s	2.0	11.9	10.5	20.0	10.4	9.2
Cycle Q Clear(g_c), s	2.0	11.9	10.5	20.0	10.4	9.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	234	2722	1980	616	1030	474
V/C Ratio(X)	0.60	0.63	0.65	1.16	0.75	0.68
Avail Cap(c_a), veh/h	268	2772	1980	616	1273	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.0	8.1	12.6	15.4	16.0	15.6
Incr Delay (d2), s/veh	2.9	0.4	0.7	90.3	2.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	5.5	5.0	29.3	5.1	8.0
LnGrp Delay(d),s/veh	26.0	8.6	13.3	105.8	18.0	17.9
LnGrp LOS	C	A	B	F	B	B
Approach Vol, veh/h		1844	1999		1095	
Approach Delay, s/veh		9.9	46.5		18.0	
Approach LOS		A	D		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				31.5		19.4	7.5	24.0
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				28.0		19.0	4.0	20.0
Max Q Clear Time (g_c+I1), s				13.9		12.4	4.0	22.0
Green Ext Time (p_c), s				12.8		3.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	26.5
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	1167	153	766	844	374	107	347	597	363	626	39
Future Volume (veh/h)	126	1167	153	766	844	374	107	347	597	363	626	39
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1792	1845	1845	1792	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	126	1167	153	766	844	374	107	347	597	363	626	39
Adj No. of Lanes	1	2	1	1	2	1	1	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	6	3	3	6	3	3	3	3	3	3	3
Cap, veh/h	149	876	403	422	1405	647	129	195	336	204	1075	481
Arrive On Green	0.08	0.26	0.26	0.24	0.41	0.41	0.07	0.32	0.32	0.06	0.31	0.31
Sat Flow, veh/h	1757	3406	1568	1757	3406	1568	1757	610	1049	3408	3505	1568
Grp Volume(v), veh/h	126	1167	153	766	844	374	107	0	944	363	626	39
Grp Sat Flow(s),veh/h/ln	1757	1703	1568	1757	1703	1568	1757	0	1659	1704	1752	1568
Q Serve(g_s), s	10.6	38.6	12.0	36.0	29.0	27.6	9.0	0.0	48.0	9.0	22.6	2.7
Cycle Q Clear(g_c), s	10.6	38.6	12.0	36.0	29.0	27.6	9.0	0.0	48.0	9.0	22.6	2.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.63	1.00		1.00
Lane Grp Cap(c), veh/h	149	876	403	422	1405	647	129	0	531	204	1075	481
V/C Ratio(X)	0.84	1.33	0.38	1.82	0.60	0.58	0.83	0.00	1.78	1.78	0.58	0.08
Avail Cap(c_a), veh/h	223	876	403	422	1405	647	176	0	531	204	1075	481
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.7	55.7	45.8	57.0	34.4	34.0	68.6	0.0	51.0	70.5	43.9	37.0
Incr Delay (d2), s/veh	16.9	157.1	0.8	376.8	0.9	1.6	20.9	0.0	357.5	367.9	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	37.3	5.3	61.6	13.8	12.2	5.1	0.0	74.7	14.7	11.1	1.2
LnGrp Delay(d),s/veh	84.6	212.8	46.7	433.8	35.3	35.6	89.5	0.0	408.5	438.4	44.7	37.0
LnGrp LOS	F	F	D	F	D	D	F		F	F	D	D
Approach Vol, veh/h		1446			1984			1051			1028	
Approach Delay, s/veh		184.0			189.2			376.1			183.4	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	40.0	45.0	15.0	50.0	16.7	68.3	13.0	52.0
Change Period (Y+Rc), s	4.0	6.4	4.0	4.0	4.0	6.4	4.0	4.0
Max Green Setting (Gmax), s	36.0	38.6	15.0	42.0	19.0	55.6	9.0	48.0
Max Q Clear Time (g_c+I1), s	38.0	40.6	11.0	24.6	12.6	31.0	11.0	50.0
Green Ext Time (p_c), s	0.0	0.0	0.1	8.8	0.2	19.6	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	222.4
HCM 2010 LOS	F

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	702	37	27	345	804	536
Future Volume (veh/h)	702	37	27	345	804	536
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	702	37	27	345	804	536
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	714	637	32	929	812	690
Arrive On Green	0.41	0.41	0.02	0.50	0.44	0.44
Sat Flow, veh/h	1757	1568	1757	1845	1845	1568
Grp Volume(v), veh/h	702	37	27	345	804	536
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1845	1845	1568
Q Serve(g_s), s	35.0	1.3	1.4	10.1	38.3	25.8
Cycle Q Clear(g_c), s	35.0	1.3	1.4	10.1	38.3	25.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	714	637	32	929	812	690
V/C Ratio(X)	0.98	0.06	0.84	0.37	0.99	0.78
Avail Cap(c_a), veh/h	714	637	59	957	812	690
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.0	16.0	43.4	13.4	24.6	21.1
Incr Delay (d2), s/veh	29.5	0.0	39.7	0.2	29.1	5.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.8	1.5	1.0	5.1	26.0	12.1
LnGrp Delay(d),s/veh	55.6	16.0	83.1	13.7	53.8	26.7
LnGrp LOS	E	B	F	B	D	C
Approach Vol, veh/h	739			372	1340	
Approach Delay, s/veh	53.6			18.7	42.9	
Approach LOS	D			B	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		48.6		40.0	5.6	43.0		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		46.0		36.0	3.0	39.0		
Max Q Clear Time (g_c+I1), s		12.1		37.0	3.4	40.3		
Green Ext Time (p_c), s		9.9		0.0	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	42.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	196	109	159	257	12	53	273	65	1	757	30
Future Volume (veh/h)	10	196	109	159	257	12	53	273	65	1	757	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1759	1759	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	10	196	109	159	257	12	53	273	65	1	757	30
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	8	8	8	3	3	3	3	3	3
Cap, veh/h	80	203	113	198	431	20	94	663	158	82	799	32
Arrive On Green	0.05	0.19	0.19	0.12	0.26	0.26	0.05	0.46	0.46	0.05	0.45	0.45
Sat Flow, veh/h	1707	1084	603	1675	1668	78	1757	1441	343	1757	1762	70
Grp Volume(v), veh/h	10	0	305	159	0	269	53	0	338	1	0	787
Grp Sat Flow(s),veh/h/ln	1707	0	1686	1675	0	1746	1757	0	1784	1757	0	1832
Q Serve(g_s), s	0.5	0.0	15.3	7.9	0.0	11.5	2.5	0.0	10.8	0.0	0.0	35.1
Cycle Q Clear(g_c), s	0.5	0.0	15.3	7.9	0.0	11.5	2.5	0.0	10.8	0.0	0.0	35.1
Prop In Lane	1.00		0.36	1.00		0.04	1.00		0.19	1.00		0.04
Lane Grp Cap(c), veh/h	80	0	316	198	0	452	94	0	821	82	0	831
V/C Ratio(X)	0.13	0.00	0.97	0.80	0.00	0.60	0.56	0.00	0.41	0.01	0.00	0.95
Avail Cap(c_a), veh/h	280	0	316	275	0	452	288	0	836	288	0	858
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.0	0.0	34.4	36.7	0.0	27.7	39.4	0.0	15.3	38.8	0.0	22.4
Incr Delay (d2), s/veh	0.7	0.0	41.3	11.2	0.0	2.1	5.1	0.0	0.3	0.1	0.0	18.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	10.7	4.3	0.0	5.8	1.4	0.0	5.3	0.0	0.0	22.1
LnGrp Delay(d),s/veh	39.7	0.0	75.7	47.9	0.0	29.9	44.6	0.0	15.7	38.9	0.0	41.2
LnGrp LOS	D		E	D		C	D		B	D		D
Approach Vol, veh/h		315			428			391			788	
Approach Delay, s/veh		74.6			36.6			19.6			41.2	
Approach LOS		E			D			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	43.3	14.1	20.0	8.6	42.7	8.0	26.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	14.0	40.0	14.0	16.0	14.0	40.0	14.0	16.0
Max Q Clear Time (g_c+I1), s	2.0	12.8	9.9	17.3	4.5	37.1	2.5	13.5
Green Ext Time (p_c), s	0.0	6.2	0.2	0.0	0.1	1.6	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	41.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	421	148	31	118	140	668	56	1525	85	266	1053	227
Future Volume (veh/h)	421	148	31	118	140	668	56	1525	85	266	1053	227
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	421	148	31	118	140	668	56	1525	85	266	1053	227
Adj No. of Lanes	2	3	0	2	1	2	2	3	0	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	469	1274	254	180	398	972	97	1618	90	321	1999	622
Arrive On Green	0.14	0.30	0.30	0.05	0.22	0.22	0.03	0.33	0.33	0.09	0.40	0.40
Sat Flow, veh/h	3408	4215	839	3514	1845	3136	3408	4882	272	3408	5036	1568
Grp Volume(v), veh/h	421	116	63	118	140	668	56	1049	561	266	1053	227
Grp Sat Flow(s),veh/h/ln	1704	1679	1697	1757	1845	1568	1704	1679	1797	1704	1679	1568
Q Serve(g_s), s	12.3	2.5	2.7	3.3	6.5	18.9	1.6	30.7	30.7	7.7	16.1	10.3
Cycle Q Clear(g_c), s	12.3	2.5	2.7	3.3	6.5	18.9	1.6	30.7	30.7	7.7	16.1	10.3
Prop In Lane	1.00		0.49	1.00		1.00	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	469	1015	513	180	398	972	97	1113	595	321	1999	622
V/C Ratio(X)	0.90	0.11	0.12	0.66	0.35	0.69	0.57	0.94	0.94	0.83	0.53	0.36
Avail Cap(c_a), veh/h	469	1181	597	285	548	1227	176	1158	619	321	1999	622
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.8	25.4	25.5	47.0	33.6	30.5	48.4	32.8	32.8	44.9	23.2	21.5
Incr Delay (d2), s/veh	19.1	0.0	0.0	1.5	0.2	0.7	2.0	14.2	22.2	15.5	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	1.2	1.3	1.7	3.3	8.2	0.8	16.3	18.8	4.3	7.4	4.5
LnGrp Delay(d),s/veh	62.0	25.5	25.5	48.5	33.8	31.2	50.4	47.0	55.0	60.5	23.3	21.6
LnGrp LOS	E	C	C	D	C	C	D	D	D	E	C	C
Approach Vol, veh/h		600			926			1666			1546	
Approach Delay, s/veh		51.1			33.8			49.8			29.5	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	45.7	19.4	27.5	15.0	39.0	10.7	36.2
Change Period (Y+Rc), s	5.5	5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	5.2	38.8	13.9	* 30	9.5	* 35	8.2	* 36
Max Q Clear Time (g_c+I1), s	3.6	18.1	14.3	20.9	9.7	32.7	5.3	4.7
Green Ext Time (p_c), s	0.0	4.7	0.0	0.9	0.0	0.8	0.0	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	40.2
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	311	103	44	69	49	159	17	1053	31	71	1056	51
Future Volume (veh/h)	311	103	44	69	49	159	17	1053	31	71	1056	51
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	229	218	44	59	63	159	17	1053	31	71	1056	51
Adj No. of Lanes	1	1	0	1	1	1	1	3	0	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	320	271	55	235	247	210	22	1340	39	128	1593	77
Arrive On Green	0.18	0.18	0.18	0.13	0.13	0.13	0.01	0.27	0.27	0.07	0.32	0.32
Sat Flow, veh/h	1757	1491	301	1757	1845	1568	1757	5028	148	1757	4923	238
Grp Volume(v), veh/h	229	0	262	59	63	159	17	703	381	71	720	387
Grp Sat Flow(s),veh/h/ln	1757	0	1792	1757	1845	1568	1757	1679	1819	1757	1679	1803
Q Serve(g_s), s	7.3	0.0	8.3	1.8	1.8	5.8	0.6	11.5	11.5	2.3	10.9	10.9
Cycle Q Clear(g_c), s	7.3	0.0	8.3	1.8	1.8	5.8	0.6	11.5	11.5	2.3	10.9	10.9
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.08	1.00		0.13
Lane Grp Cap(c), veh/h	320	0	326	235	247	210	22	895	485	128	1087	583
V/C Ratio(X)	0.72	0.00	0.80	0.25	0.26	0.76	0.78	0.79	0.79	0.55	0.66	0.66
Avail Cap(c_a), veh/h	832	0	848	802	842	716	89	1147	621	131	1215	652
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.8	0.0	23.2	23.0	23.0	24.7	29.1	20.1	20.1	26.5	17.2	17.2
Incr Delay (d2), s/veh	1.1	0.0	1.8	0.2	0.2	2.1	19.9	2.1	3.8	2.7	0.8	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.0	4.2	0.9	0.9	2.6	0.4	5.5	6.2	1.2	5.1	5.6
LnGrp Delay(d),s/veh	23.9	0.0	25.0	23.2	23.2	26.8	49.0	22.2	23.9	29.2	18.0	18.7
LnGrp LOS	C		C	C	C	C	D	C	C	C	B	B
Approach Vol, veh/h		491			281			1101			1178	
Approach Delay, s/veh		24.5			25.2			23.2			18.9	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.5	23.9		13.4	8.9	20.6		16.3
Change Period (Y+Rc), s	* 4.8	4.8		5.5	* 4.6	4.8		5.5
Max Green Setting (Gmax), s	* 3	21.4		27.0	* 4.4	20.2		28.0
Max Q Clear Time (g_c+I1), s	2.6	12.9		7.8	4.3	13.5		10.3
Green Ext Time (p_c), s	0.0	2.5		0.2	0.0	2.3		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	21.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	389	280	180	530	148	278	673	65	172	828	150
Future Volume (veh/h)	170	389	280	180	530	148	278	673	65	172	828	150
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	170	389	280	180	530	148	278	673	65	172	828	150
Adj No. of Lanes	2	3	0	2	3	1	2	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	165	767	358	187	1183	368	357	1403	437	263	1078	194
Arrive On Green	0.05	0.23	0.23	0.05	0.23	0.23	0.10	0.28	0.28	0.08	0.25	0.25
Sat Flow, veh/h	3408	3357	1568	3408	5036	1568	3408	5036	1568	3408	4293	773
Grp Volume(v), veh/h	170	389	280	180	530	148	278	673	65	172	646	332
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1679	1568	1704	1679	1708
Q Serve(g_s), s	3.0	6.3	10.4	3.3	5.6	4.9	4.9	6.9	1.9	3.0	11.1	11.2
Cycle Q Clear(g_c), s	3.0	6.3	10.4	3.3	5.6	4.9	4.9	6.9	1.9	3.0	11.1	11.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.45
Lane Grp Cap(c), veh/h	165	767	358	187	1183	368	357	1403	437	263	843	429
V/C Ratio(X)	1.03	0.51	0.78	0.96	0.45	0.40	0.78	0.48	0.15	0.65	0.77	0.77
Avail Cap(c_a), veh/h	165	1547	723	187	2353	733	357	2475	771	280	1574	801
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.5	20.9	22.5	29.3	20.3	20.1	27.1	18.6	16.8	27.8	21.6	21.6
Incr Delay (d2), s/veh	78.7	0.2	1.4	54.9	0.1	0.3	9.6	0.1	0.1	3.7	0.6	1.1
Initial Q Delay(d3),s/veh	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	2.9	4.7	2.9	2.6	2.1	2.8	3.2	0.8	1.6	5.2	5.4
LnGrp Delay(d),s/veh	108.5	21.1	23.9	84.2	20.4	20.3	36.7	18.7	16.9	31.5	22.1	22.7
LnGrp LOS	F	C	C	F	C	C	D	B	B	C	C	C
Approach Vol, veh/h		839			858			1016			1150	
Approach Delay, s/veh		39.7			33.8			23.5			23.7	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	21.2	8.5	20.4	10.3	22.9	8.9	20.0
Change Period (Y+Rc), s	5.5	* 5.6	5.5	5.8	5.5	* 5.6	5.5	5.8
Max Green Setting (Gmax), s	6.5	* 29	3.0	29.0	5.1	* 31	3.4	28.6
Max Q Clear Time (g_c+I1), s	6.9	13.2	5.0	7.6	5.0	8.9	5.3	12.4
Green Ext Time (p_c), s	0.0	2.4	0.0	1.8	0.0	2.4	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	29.4
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

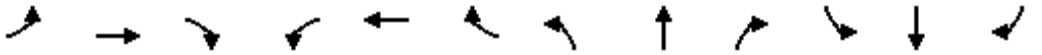
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	164	58	129	176	100	43	638	102	178	760	188
Future Volume (veh/h)	23	164	58	129	176	100	43	638	102	178	760	188
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	23	164	58	129	176	100	43	638	102	178	760	188
Adj No. of Lanes	1	2	0	1	1	1	1	1	0	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	27	252	86	163	313	266	53	687	110	263	903	768
Arrive On Green	0.02	0.10	0.10	0.09	0.17	0.17	0.03	0.44	0.44	0.08	0.49	0.49
Sat Flow, veh/h	1757	2566	876	1757	1845	1568	1757	1553	248	3408	1845	1568
Grp Volume(v), veh/h	23	110	112	129	176	100	43	0	740	178	760	188
Grp Sat Flow(s),veh/h/ln	1757	1752	1690	1757	1845	1568	1757	0	1801	1704	1845	1568
Q Serve(g_s), s	0.9	4.3	4.5	5.1	6.2	4.0	1.7	0.0	27.6	3.6	25.4	4.9
Cycle Q Clear(g_c), s	0.9	4.3	4.5	5.1	6.2	4.0	1.7	0.0	27.6	3.6	25.4	4.9
Prop In Lane	1.00		0.52	1.00		1.00	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	27	172	166	163	313	266	53	0	797	263	903	768
V/C Ratio(X)	0.85	0.64	0.67	0.79	0.56	0.38	0.82	0.00	0.93	0.68	0.84	0.24
Avail Cap(c_a), veh/h	143	826	796	222	944	803	91	0	1145	336	1251	1063
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.9	30.9	31.0	31.6	27.1	26.2	34.3	0.0	18.8	31.9	15.8	10.5
Incr Delay (d2), s/veh	22.6	1.5	1.8	8.8	0.6	0.3	10.7	0.0	8.2	1.9	2.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.2	2.2	2.9	3.2	1.7	1.0	0.0	15.4	1.8	13.6	2.1
LnGrp Delay(d),s/veh	57.5	32.3	32.7	40.4	27.7	26.5	45.0	0.0	26.9	33.9	18.6	10.6
LnGrp LOS	E	C	C	D	C	C	D		C	C	B	B
Approach Vol, veh/h		245			405			783			1126	
Approach Delay, s/veh		34.9			31.5			27.9			19.7	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.6	17.0	7.6	39.9	11.7	11.9	11.0	36.6
Change Period (Y+Rc), s	5.5	* 4.9	5.5	* 5.1	* 5.1	* 4.9	5.5	* 5.1
Max Green Setting (Gmax), s	5.8	* 36	3.7	* 48	* 9	* 34	7.0	* 45
Max Q Clear Time (g_c+I1), s	2.9	8.2	3.7	27.4	7.1	6.5	5.6	29.6
Green Ext Time (p_c), s	0.0	0.4	0.0	1.8	0.0	0.4	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	25.5
HCM 2010 LOS	C

Notes

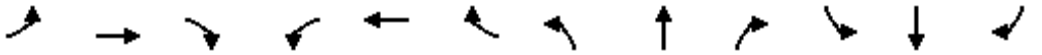
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	408	606	123	219	575	66	74	162	83	57	230	348
Future Volume (veh/h)	408	606	123	219	575	66	74	162	83	57	230	348
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	408	606	123	219	575	66	74	162	83	57	230	348
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	501	1030	461	335	860	385	169	952	426	145	928	415
Arrive On Green	0.15	0.29	0.29	0.10	0.25	0.25	0.05	0.27	0.27	0.04	0.26	0.26
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	408	606	123	219	575	66	74	162	83	57	230	348
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	6.3	8.0	3.3	3.4	8.1	1.8	1.1	1.9	2.2	0.9	2.8	11.4
Cycle Q Clear(g_c), s	6.3	8.0	3.3	3.4	8.1	1.8	1.1	1.9	2.2	0.9	2.8	11.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	501	1030	461	335	860	385	169	952	426	145	928	415
V/C Ratio(X)	0.82	0.59	0.27	0.65	0.67	0.17	0.44	0.17	0.19	0.39	0.25	0.84
Avail Cap(c_a), veh/h	501	1030	461	501	1030	461	250	1030	461	250	1030	461
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.5	16.4	14.7	23.7	18.6	16.2	25.2	15.1	15.3	25.4	15.8	18.9
Incr Delay (d2), s/veh	10.0	0.9	0.3	2.2	1.3	0.2	1.8	0.1	0.2	1.7	0.1	11.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	4.0	1.5	1.7	4.1	0.8	0.6	0.9	1.0	0.5	1.4	6.3
LnGrp Delay(d),s/veh	32.6	17.3	15.0	25.8	19.9	16.4	26.9	15.2	15.5	27.1	15.9	30.9
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	C
Approach Vol, veh/h		1137			860			319			635	
Approach Delay, s/veh		22.5			21.1			18.0			25.1	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	18.8	9.4	20.0	6.7	18.4	12.0	17.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	8.0	16.0	4.0	16.0	8.0	16.0
Max Q Clear Time (g_c+I1), s	2.9	4.2	5.4	10.0	3.1	13.4	8.3	10.1
Green Ext Time (p_c), s	0.0	2.8	0.2	3.3	0.0	1.0	0.0	3.3

Intersection Summary	
HCM 2010 Ctrl Delay	22.2
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	977	86	42	561	63	33	172	18	87	370	148
Future Volume (veh/h)	154	977	86	42	561	63	33	172	18	87	370	148
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	154	977	86	42	561	63	33	172	18	87	370	148
Adj No. of Lanes	2	2	0	1	2	1	1	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	252	1207	106	62	1161	520	51	424	361	188	472	401
Arrive On Green	0.07	0.37	0.37	0.04	0.33	0.33	0.03	0.23	0.23	0.06	0.26	0.26
Sat Flow, veh/h	3408	3260	287	1757	3505	1568	1757	1845	1568	3408	1845	1568
Grp Volume(v), veh/h	154	525	538	42	561	63	33	172	18	87	370	148
Grp Sat Flow(s),veh/h/ln	1704	1752	1794	1757	1752	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	2.3	13.9	13.9	1.2	6.6	1.4	1.0	4.1	0.5	1.3	9.7	4.0
Cycle Q Clear(g_c), s	2.3	13.9	13.9	1.2	6.6	1.4	1.0	4.1	0.5	1.3	9.7	4.0
Prop In Lane	1.00		0.16	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	252	649	664	62	1161	520	51	424	361	188	472	401
V/C Ratio(X)	0.61	0.81	0.81	0.68	0.48	0.12	0.64	0.41	0.05	0.46	0.78	0.37
Avail Cap(c_a), veh/h	330	678	694	136	1288	576	136	571	485	264	571	485
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.2	14.6	14.6	24.7	13.8	12.0	24.8	16.9	15.5	23.7	17.9	15.8
Incr Delay (d2), s/veh	2.4	7.0	6.9	12.5	0.3	0.1	12.7	0.6	0.1	1.8	5.8	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	8.0	8.1	0.8	3.2	0.6	0.6	2.1	0.2	0.7	5.6	1.8
LnGrp Delay(d),s/veh	25.6	21.7	21.5	37.1	14.1	12.1	37.5	17.5	15.6	25.4	23.7	16.4
LnGrp LOS	C	C	C	D	B	B	D	B	B	C	C	B
Approach Vol, veh/h		1217			666			223			605	
Approach Delay, s/veh		22.1			15.3			20.3			22.2	
Approach LOS		C			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.9	15.9	5.8	23.1	5.5	17.2	7.8	21.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	4.0	20.0	4.0	16.0	5.0	19.0
Max Q Clear Time (g_c+I1), s	3.3	6.1	3.2	15.9	3.0	11.7	4.3	8.6
Green Ext Time (p_c), s	0.0	2.8	0.0	3.2	0.0	1.6	0.0	7.2

Intersection Summary	
HCM 2010 Ctrl Delay	20.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	325	573	92	212	207	365	83	1858	339	294	1134	183
Future Volume (veh/h)	325	573	92	212	207	365	83	1858	339	294	1134	183
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	325	573	92	212	207	365	83	1858	339	294	1134	183
Adj No. of Lanes	2	2	1	2	1	2	2	4	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	322	908	406	288	455	1070	137	1993	493	319	1851	576
Arrive On Green	0.09	0.26	0.26	0.08	0.25	0.25	0.04	0.32	0.32	0.09	0.37	0.37
Sat Flow, veh/h	3408	3505	1568	3514	1845	3136	3375	6285	1553	3375	4988	1553
Grp Volume(v), veh/h	325	573	92	212	207	365	83	1858	339	294	1134	183
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1757	1845	1568	1688	1571	1553	1688	1663	1553
Q Serve(g_s), s	8.5	13.0	4.2	5.3	8.6	7.8	2.2	25.8	17.1	7.8	16.6	7.5
Cycle Q Clear(g_c), s	8.5	13.0	4.2	5.3	8.6	7.8	2.2	25.8	17.1	7.8	16.6	7.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	322	908	406	288	455	1070	137	1993	493	319	1851	576
V/C Ratio(X)	1.01	0.63	0.23	0.74	0.45	0.34	0.61	0.93	0.69	0.92	0.61	0.32
Avail Cap(c_a), veh/h	322	1143	511	442	657	1413	165	2014	498	319	1851	576
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	29.5	26.2	40.3	28.7	22.1	42.4	29.7	26.8	40.4	23.0	20.1
Incr Delay (d2), s/veh	52.2	1.1	0.4	1.4	2.0	0.5	1.7	8.3	3.3	30.3	1.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	6.4	1.9	2.6	4.6	3.4	1.0	12.3	7.7	4.9	7.8	3.4
LnGrp Delay(d),s/veh	92.9	30.6	26.6	41.7	30.7	22.6	44.1	38.1	30.1	70.7	24.2	21.2
LnGrp LOS	F	C	C	D	C	C	D	D	C	E	C	C
Approach Vol, veh/h		990			784			2280			1611	
Approach Delay, s/veh		50.7			29.9			37.1			32.4	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	38.8	14.0	28.0	14.0	33.9	12.9	29.1
Change Period (Y+Rc), s	5.5	* 5.4	5.5	5.8	5.5	* 5.4	5.5	* 5.8
Max Green Setting (Gmax), s	4.4	* 33	8.5	32.0	8.5	* 29	11.3	* 29
Max Q Clear Time (g_c+I1), s	4.2	18.6	10.5	10.6	9.8	27.8	7.3	15.0
Green Ext Time (p_c), s	0.0	12.4	0.0	10.7	0.0	0.7	0.1	8.3

Intersection Summary	
HCM 2010 Ctrl Delay	37.1
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	371	498	244	152	321	233	193	1147	75	199	1366	162
Future Volume (veh/h)	371	498	244	152	321	233	193	1147	75	199	1366	162
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1827	1827	1827	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	371	498	244	152	321	233	193	1147	75	199	1366	162
Adj No. of Lanes	2	2	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	4	4	4	4	4	4
Cap, veh/h	389	1081	484	218	1292	402	221	1592	496	225	1598	497
Arrive On Green	0.11	0.31	0.31	0.06	0.26	0.26	0.07	0.32	0.32	0.07	0.32	0.32
Sat Flow, veh/h	3408	3505	1568	3375	4988	1553	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	371	498	244	152	321	233	193	1147	75	199	1366	162
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1688	1663	1553	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	10.2	10.8	12.1	4.2	4.8	12.4	5.4	19.2	3.3	5.5	24.3	7.5
Cycle Q Clear(g_c), s	10.2	10.8	12.1	4.2	4.8	12.4	5.4	19.2	3.3	5.5	24.3	7.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	389	1081	484	218	1292	402	221	1592	496	225	1598	497
V/C Ratio(X)	0.95	0.46	0.50	0.70	0.25	0.58	0.87	0.72	0.15	0.89	0.86	0.33
Avail Cap(c_a), veh/h	389	1174	525	318	1582	492	221	1608	501	225	1603	499
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.7	26.4	26.8	43.3	27.8	30.6	43.8	28.5	23.0	43.8	30.1	24.4
Incr Delay (d2), s/veh	33.4	0.6	1.7	1.5	0.3	4.5	28.5	1.9	0.3	30.6	5.1	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	5.4	5.4	2.0	2.2	5.8	3.4	9.1	1.4	3.5	11.9	3.3
LnGrp Delay(d),s/veh	75.1	27.0	28.4	44.8	28.1	35.0	72.3	30.4	23.3	74.4	35.2	25.2
LnGrp LOS	E	C	C	D	C	D	E	C	C	E	D	C
Approach Vol, veh/h		1113			706			1415			1727	
Approach Delay, s/veh		43.3			34.0			35.8			38.8	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.7	36.1	16.3	30.5	11.8	36.0	11.6	35.2
Change Period (Y+Rc), s	5.5	* 5.8	5.5	* 6	5.5	* 5.8	5.5	6.0
Max Green Setting (Gmax), s	6.2	* 30	10.8	* 30	6.3	* 31	8.9	31.7
Max Q Clear Time (g_c+I1), s	7.4	26.3	12.2	14.4	7.5	21.2	6.2	14.1
Green Ext Time (p_c), s	0.0	4.1	0.0	10.1	0.0	8.9	0.1	11.1

Intersection Summary	
HCM 2010 Ctrl Delay	38.3
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	178	15	446	13	24	66	296	1214	11	20	1563	81
Future Volume (veh/h)	178	15	446	13	24	66	296	1214	11	20	1563	81
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	178	15	446	13	24	66	296	1214	11	20	1563	81
Adj No. of Lanes	2	1	2	1	1	0	2	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	259	352	526	17	54	149	382	2416	22	24	1867	581
Arrive On Green	0.08	0.19	0.19	0.01	0.12	0.12	0.11	0.47	0.47	0.01	0.37	0.37
Sat Flow, veh/h	3408	1845	2760	1757	436	1198	3375	5098	46	1740	4988	1553
Grp Volume(v), veh/h	178	15	446	13	0	90	296	792	433	20	1563	81
Grp Sat Flow(s),veh/h/ln	1704	1845	1380	1757	0	1633	1688	1663	1819	1740	1663	1553
Q Serve(g_s), s	3.8	0.5	11.5	0.5	0.0	3.8	6.3	12.2	12.2	0.8	21.1	2.5
Cycle Q Clear(g_c), s	3.8	0.5	11.5	0.5	0.0	3.8	6.3	12.2	12.2	0.8	21.1	2.5
Prop In Lane	1.00		1.00	1.00		0.73	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	259	352	526	17	0	203	382	1576	862	24	1867	581
V/C Ratio(X)	0.69	0.04	0.85	0.78	0.00	0.44	0.77	0.50	0.50	0.84	0.84	0.14
Avail Cap(c_a), veh/h	290	908	1358	81	0	751	452	1892	1035	132	2508	781
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.3	24.4	28.9	36.6	0.0	30.0	31.9	13.4	13.4	36.4	21.1	15.3
Incr Delay (d2), s/veh	4.2	0.0	1.5	24.3	0.0	0.6	5.6	0.1	0.2	24.0	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.3	4.5	0.4	0.0	1.7	3.2	5.5	6.1	0.6	9.8	1.1
LnGrp Delay(d),s/veh	37.6	24.4	30.4	60.9	0.0	30.6	37.5	13.5	13.6	60.4	22.6	15.3
LnGrp LOS	D	C	C	E		C	D	B	B	E	C	B
Approach Vol, veh/h		639			103			1521			1664	
Approach Delay, s/veh		32.2			34.4			18.2			22.7	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.9	33.7	11.1	15.3	6.5	41.1	6.2	20.2
Change Period (Y+Rc), s	5.5	6.0	5.5	* 6.1	5.5	* 6	5.5	* 6.1
Max Green Setting (Gmax), s	9.9	37.2	6.3	* 34	5.6	* 42	3.4	* 36
Max Q Clear Time (g_c+I1), s	8.3	23.1	5.8	5.8	2.8	14.2	2.5	13.5
Green Ext Time (p_c), s	0.1	4.6	0.0	0.6	0.0	5.2	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	22.8
HCM 2010 LOS	C

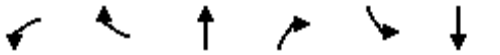
Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	160	172	83	55	104	104	931	135	379	1635	168
Future Volume (veh/h)	104	160	172	83	55	104	104	931	135	379	1635	168
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1759	1759	1759	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	104	160	172	83	55	104	104	931	135	379	1635	168
Adj No. of Lanes	2	2	0	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	8	8	8	4	4	4	4	4	4
Cap, veh/h	177	256	229	142	460	206	176	1513	471	483	1966	612
Arrive On Green	0.05	0.15	0.15	0.04	0.14	0.14	0.05	0.30	0.30	0.14	0.39	0.39
Sat Flow, veh/h	3408	1752	1568	3250	3343	1495	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	104	160	172	83	55	104	104	931	135	379	1635	168
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1625	1671	1495	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	1.8	5.2	6.4	1.5	0.9	3.9	1.8	9.7	4.0	6.6	17.9	4.4
Cycle Q Clear(g_c), s	1.8	5.2	6.4	1.5	0.9	3.9	1.8	9.7	4.0	6.6	17.9	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	177	256	229	142	460	206	176	1513	471	483	1966	612
V/C Ratio(X)	0.59	0.63	0.75	0.58	0.12	0.50	0.59	0.62	0.29	0.78	0.83	0.27
Avail Cap(c_a), veh/h	197	652	584	161	1216	544	195	1856	578	558	2393	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.0	24.3	24.8	28.4	22.8	24.2	28.0	18.0	16.1	25.0	16.5	12.4
Incr Delay (d2), s/veh	1.9	0.9	1.9	1.9	0.0	0.7	2.0	0.2	0.1	5.3	1.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.6	2.8	0.7	0.4	1.6	0.9	4.4	1.7	3.4	8.5	1.9
LnGrp Delay(d),s/veh	29.9	25.2	26.6	30.2	22.9	24.9	30.0	18.2	16.2	30.3	18.3	12.5
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		436			242			1170			2182	
Approach Delay, s/veh		26.9			26.3			19.0			20.0	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	29.3	8.6	13.8	14.2	23.8	8.1	14.3
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	3.5	29.0	3.5	22.0	10.0	22.5	3.0	22.5
Max Q Clear Time (g_c+I1), s	3.8	19.9	3.8	5.9	8.6	11.7	3.5	8.4
Green Ext Time (p_c), s	0.0	4.0	0.0	0.5	0.1	4.3	0.0	0.5

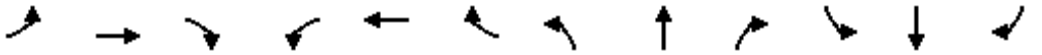
Intersection Summary	
HCM 2010 Ctrl Delay	20.8
HCM 2010 LOS	C



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	92	98	910	214	173	1674
Future Volume (veh/h)	92	98	910	214	173	1674
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1827	1827	1827	1827
Adj Flow Rate, veh/h	92	98	910	214	173	1674
Adj No. of Lanes	2	1	3	1	2	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	4	4	4	4
Cap, veh/h	338	155	1738	541	308	2077
Arrive On Green	0.10	0.10	0.35	0.35	0.09	0.60
Sat Flow, veh/h	3408	1568	5152	1553	3375	3563
Grp Volume(v), veh/h	92	98	910	214	173	1674
Grp Sat Flow(s),veh/h/ln	1704	1568	1663	1553	1688	1736
Q Serve(g_s), s	0.9	2.1	5.0	3.6	1.7	13.0
Cycle Q Clear(g_c), s	0.9	2.1	5.0	3.6	1.7	13.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	338	155	1738	541	308	2077
V/C Ratio(X)	0.27	0.63	0.52	0.40	0.56	0.81
Avail Cap(c_a), veh/h	442	203	3666	1141	1849	5003
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.5	15.0	9.0	8.5	15.1	5.4
Incr Delay (d2), s/veh	0.2	1.6	0.1	0.2	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.8	2.3	1.6	0.8	6.1
LnGrp Delay(d),s/veh	14.6	16.6	9.1	8.7	15.7	5.7
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	190		1124			1847
Approach Delay, s/veh	15.6		9.0			6.6
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		25.8		8.9	8.7	17.1		
Change Period (Y+Rc), s		5.0		5.5	5.5	5.0		
Max Green Setting (Gmax), s		50.0		4.5	19.0	25.5		
Max Q Clear Time (g_c+I1), s		15.0		4.1	3.7	7.0		
Green Ext Time (p_c), s		5.4		0.0	0.2	5.0		

Intersection Summary	
HCM 2010 Ctrl Delay	8.0
HCM 2010 LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	542	20	182	9	16	51	109	498	42	84	952	621
Future Volume (veh/h)	542	20	182	9	16	51	109	498	42	84	952	621
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845	1845	1827	1827	1827	1834	1900
Adj Flow Rate, veh/h	542	20	182	9	16	51	109	498	42	84	952	621
Adj No. of Lanes	2	2	1	0	1	1	1	2	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	4	4	4	4	4
Cap, veh/h	604	621	278	31	55	74	136	1847	826	138	1027	643
Arrive On Green	0.18	0.18	0.18	0.05	0.05	0.05	0.08	0.53	0.53	0.04	0.50	0.50
Sat Flow, veh/h	3408	3505	1568	652	1160	1568	1757	3471	1553	3375	2059	1289
Grp Volume(v), veh/h	542	20	182	25	0	51	109	498	42	84	799	774
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1812	0	1568	1757	1736	1553	1688	1742	1606
Q Serve(g_s), s	14.8	0.5	10.3	1.3	0.0	3.1	5.8	7.5	1.2	2.3	40.5	44.4
Cycle Q Clear(g_c), s	14.8	0.5	10.3	1.3	0.0	3.1	5.8	7.5	1.2	2.3	40.5	44.4
Prop In Lane	1.00		1.00	0.36		1.00	1.00		1.00	1.00		0.80
Lane Grp Cap(c), veh/h	604	621	278	86	0	74	136	1847	826	138	869	801
V/C Ratio(X)	0.90	0.03	0.65	0.29	0.00	0.69	0.80	0.27	0.05	0.61	0.92	0.97
Avail Cap(c_a), veh/h	607	625	279	342	0	296	144	1847	826	237	880	812
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.4	32.5	36.5	43.9	0.0	44.8	43.3	12.2	10.7	45.0	22.1	23.1
Incr Delay (d2), s/veh	16.0	0.0	5.4	1.9	0.0	10.8	25.8	0.1	0.0	4.2	14.5	23.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	0.2	4.9	0.7	0.0	1.6	3.8	3.6	0.5	1.2	22.8	24.7
LnGrp Delay(d),s/veh	54.4	32.5	41.9	45.8	0.0	55.6	69.0	12.3	10.8	49.2	36.6	46.3
LnGrp LOS	D	C	D	D		E	E	B	B	D	D	D
Approach Vol, veh/h		744			76			649			1657	
Approach Delay, s/veh		50.8			52.3			21.7			41.8	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	52.6		9.9	8.8	55.8		20.9
Change Period (Y+Rc), s	* 4.6	5.0		* 5.4	* 4.9	5.0		4.0
Max Green Setting (Gmax), s	* 7.8	48.2		* 18	* 6.7	49.0		17.0
Max Q Clear Time (g_c+I1), s	7.8	46.4		5.1	4.3	9.5		16.8
Green Ext Time (p_c), s	0.0	1.2		0.1	0.1	16.7		0.1

Intersection Summary		
HCM 2010 Ctrl Delay		40.0
HCM 2010 LOS		D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	217	747	88	46	404	119	41	323	61	134	795	209
Future Volume (veh/h)	217	747	88	46	404	119	41	323	61	134	795	209
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1792	1845	1845	1900	1827	1845	1845
Adj Flow Rate, veh/h	217	747	88	46	404	119	41	323	61	134	795	209
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	6	3	3	3	4	3	3
Cap, veh/h	241	724	616	52	526	573	39	511	97	158	752	854
Arrive On Green	0.14	0.39	0.39	0.03	0.28	0.28	0.02	0.34	0.34	0.09	0.41	0.41
Sat Flow, veh/h	1757	1845	1568	1757	1845	1524	1757	1509	285	1740	1845	1568
Grp Volume(v), veh/h	217	747	88	46	404	119	41	0	384	134	795	209
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1524	1757	0	1794	1740	1845	1568
Q Serve(g_s), s	16.4	53.0	4.9	3.5	27.1	7.1	3.0	0.0	24.3	10.2	55.0	9.5
Cycle Q Clear(g_c), s	16.4	53.0	4.9	3.5	27.1	7.1	3.0	0.0	24.3	10.2	55.0	9.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	241	724	616	52	526	573	39	0	608	158	752	854
V/C Ratio(X)	0.90	1.03	0.14	0.88	0.77	0.21	1.05	0.00	0.63	0.85	1.06	0.24
Avail Cap(c_a), veh/h	260	724	616	52	526	573	39	0	608	232	752	854
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.3	41.0	26.4	65.3	44.2	28.5	66.0	0.0	37.6	60.4	40.0	16.1
Incr Delay (d2), s/veh	29.8	41.8	0.1	83.0	6.8	0.2	159.3	0.0	2.1	11.9	49.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	35.4	2.1	2.9	14.8	3.0	3.2	0.0	12.4	5.4	38.2	4.1
LnGrp Delay(d),s/veh	87.1	82.8	26.5	148.3	51.0	28.7	226.6	0.0	39.7	72.4	89.2	16.3
LnGrp LOS	F	F	C	F	D	C	F		D	E	F	B
Approach Vol, veh/h		1052			569			425			1138	
Approach Delay, s/veh		79.0			54.2			57.7			73.8	
Approach LOS		E			D			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	59.0	7.0	61.0	22.5	44.5	16.3	51.7
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	4.0	53.0	3.0	55.0	20.0	37.0	18.0	40.0
Max Q Clear Time (g_c+I1), s	5.5	55.0	5.0	57.0	18.4	29.1	12.2	26.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	4.0	0.1	5.8

Intersection Summary	
HCM 2010 Ctrl Delay	69.9
HCM 2010 LOS	E

Notes

User approved changes to right turn type.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	139	16	14	278	730	204
Future Volume (veh/h)	139	16	14	278	730	204
Number	7	14	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1900	1827	1827	1827	1900
Adj Flow Rate, veh/h	139	16	14	278	730	204
Adj No. of Lanes	0	0	1	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	4	4	4	4
Cap, veh/h	173	20	18	1252	775	217
Arrive On Green	0.12	0.12	0.01	0.69	0.56	0.56
Sat Flow, veh/h	1448	167	1740	1827	1375	384
Grp Volume(v), veh/h	156	0	14	278	0	934
Grp Sat Flow(s),veh/h/ln	1625	0	1740	1827	0	1759
Q Serve(g_s), s	4.6	0.0	0.4	2.8	0.0	24.5
Cycle Q Clear(g_c), s	4.6	0.0	0.4	2.8	0.0	24.5
Prop In Lane	0.89	0.10	1.00			0.22
Lane Grp Cap(c), veh/h	194	0	18	1252	0	992
V/C Ratio(X)	0.80	0.00	0.76	0.22	0.00	0.94
Avail Cap(c_a), veh/h	262	0	214	2124	0	1620
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.3	0.0	24.5	2.9	0.0	10.1
Incr Delay (d2), s/veh	12.2	0.0	20.6	0.0	0.0	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	0.3	1.4	0.0	13.2
LnGrp Delay(d),s/veh	33.4	0.0	45.1	2.9	0.0	15.5
LnGrp LOS	C		D	A		B
Approach Vol, veh/h	156			292	934	
Approach Delay, s/veh	33.4			5.0	15.5	
Approach LOS	C			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	6.0	33.7		9.9		39.7		
Change Period (Y+Rc), s	5.5	* 5.7		4.0		* 5.7		
Max Green Setting (Gmax), s	6.1	* 46		8.0		* 58		
Max Q Clear Time (g_c+I1), s	2.4	26.5		6.6		4.8		
Green Ext Time (p_c), s	0.0	1.5		0.1		1.5		

Intersection Summary	
HCM 2010 Ctrl Delay	15.3
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	759	708	1	2	269	458	16	205	7	54	3	189
Future Volume (veh/h)	759	708	1	2	269	458	16	205	7	54	3	189
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1792	1792	1900	1792	1792	1792
Adj Flow Rate, veh/h	759	708	1	2	269	458	16	205	7	36	49	189
Adj No. of Lanes	2	2	0	1	1	1	1	1	0	1	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	6	6	6	6	6	6
Cap, veh/h	823	1966	3	3	560	476	236	238	8	143	150	255
Arrive On Green	0.24	0.55	0.55	0.00	0.30	0.30	0.14	0.14	0.14	0.08	0.08	0.08
Sat Flow, veh/h	3408	3591	5	1757	1845	1568	1707	1723	59	1707	1792	3047
Grp Volume(v), veh/h	759	345	364	2	269	458	16	0	212	36	49	189
Grp Sat Flow(s),veh/h/ln	1704	1752	1844	1757	1845	1568	1707	0	1782	1707	1792	1524
Q Serve(g_s), s	20.9	10.7	10.7	0.1	11.4	27.6	0.8	0.0	11.2	1.9	2.5	5.8
Cycle Q Clear(g_c), s	20.9	10.7	10.7	0.1	11.4	27.6	0.8	0.0	11.2	1.9	2.5	5.8
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	823	960	1010	3	560	476	236	0	246	143	150	255
V/C Ratio(X)	0.92	0.36	0.36	0.70	0.48	0.96	0.07	0.00	0.86	0.25	0.33	0.74
Avail Cap(c_a), veh/h	868	960	1010	55	560	476	373	0	389	426	447	760
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	12.3	12.3	48.0	27.3	33.0	36.0	0.0	40.5	41.2	41.5	43.0
Incr Delay (d2), s/veh	14.2	0.1	0.1	75.8	0.2	31.4	0.0	0.0	6.6	0.3	0.5	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.4	5.2	5.5	0.1	5.9	16.1	0.4	0.0	5.9	0.9	1.2	2.5
LnGrp Delay(d),s/veh	49.8	12.3	12.3	123.8	27.5	64.4	36.1	0.0	47.1	41.6	42.0	44.6
LnGrp LOS	D	B	B	F	C	E	D		D	D	D	D
Approach Vol, veh/h		1468			729			228			274	
Approach Delay, s/veh		31.7			51.0			46.4			43.7	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	28.7	35.1		13.6	5.3	58.6		18.8
Change Period (Y+Rc), s	5.5	* 5.9		5.5	* 5.1	* 5.9		5.5
Max Green Setting (Gmax), s	24.5	* 29		24.0	* 3	* 50		21.0
Max Q Clear Time (g_c+I1), s	22.9	29.6		7.8	2.1	12.7		13.2
Green Ext Time (p_c), s	0.3	0.0		0.2	0.0	1.3		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	39.4
HCM 2010 LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	153	194	14	318	377	121
Future Volume (veh/h)	153	194	14	318	377	121
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1792	1792	1810	1810
Adj Flow Rate, veh/h	153	194	14	318	377	121
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	8	8	6	6	5	5
Cap, veh/h	328	292	25	876	572	487
Arrive On Green	0.20	0.20	0.01	0.49	0.32	0.32
Sat Flow, veh/h	1675	1495	1707	1792	1810	1538
Grp Volume(v), veh/h	153	194	14	318	377	121
Grp Sat Flow(s),veh/h/ln	1675	1495	1707	1792	1810	1538
Q Serve(g_s), s	2.8	4.2	0.3	3.8	6.3	2.0
Cycle Q Clear(g_c), s	2.8	4.2	0.3	3.8	6.3	2.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	328	292	25	876	572	487
V/C Ratio(X)	0.47	0.66	0.56	0.36	0.66	0.25
Avail Cap(c_a), veh/h	721	644	196	1492	1013	861
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.4	13.0	17.1	5.5	10.3	8.8
Incr Delay (d2), s/veh	1.0	2.6	18.5	0.3	1.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	3.6	0.3	1.9	3.2	0.9
LnGrp Delay(d),s/veh	13.4	15.5	35.6	5.8	11.6	9.1
LnGrp LOS	B	B	D	A	B	A
Approach Vol, veh/h	347			332	498	
Approach Delay, s/veh	14.6			7.0	11.0	
Approach LOS	B			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		22.5		12.3	6.0	16.5		
Change Period (Y+Rc), s		5.5		5.5	5.5	5.5		
Max Green Setting (Gmax), s		29.0		15.0	4.0	19.5		
Max Q Clear Time (g_c+I1), s		5.8		6.2	2.3	8.3		
Green Ext Time (p_c), s		3.5		0.9	0.0	2.8		

Intersection Summary	
HCM 2010 Ctrl Delay	10.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	176	710	4	46	352	13	4	142	48	42	165	179
Future Volume (veh/h)	176	710	4	46	352	13	4	142	48	42	165	179
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1900	1900	1810	1900	1900	1810	1900
Adj Flow Rate, veh/h	176	710	4	46	352	13	4	142	48	42	165	179
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	5	5	5	5	5	5
Cap, veh/h	204	748	4	58	575	21	5	166	56	40	158	171
Arrive On Green	0.12	0.42	0.42	0.03	0.33	0.33	0.13	0.13	0.13	0.22	0.22	0.22
Sat Flow, veh/h	1707	1781	10	1707	1718	63	36	1268	429	181	711	772
Grp Volume(v), veh/h	176	0	714	46	0	365	194	0	0	386	0	0
Grp Sat Flow(s),veh/h/ln	1707	0	1791	1707	0	1781	1732	0	0	1664	0	0
Q Serve(g_s), s	11.9	0.0	45.0	3.1	0.0	20.1	12.8	0.0	0.0	26.0	0.0	0.0
Cycle Q Clear(g_c), s	11.9	0.0	45.0	3.1	0.0	20.1	12.8	0.0	0.0	26.0	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.04	0.02		0.25	0.11		0.46
Lane Grp Cap(c), veh/h	204	0	752	58	0	596	227	0	0	369	0	0
V/C Ratio(X)	0.86	0.00	0.95	0.79	0.00	0.61	0.85	0.00	0.00	1.04	0.00	0.00
Avail Cap(c_a), veh/h	259	0	780	64	0	596	385	0	0	369	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	50.6	0.0	32.8	56.2	0.0	32.6	49.8	0.0	0.0	45.6	0.0	0.0
Incr Delay (d2), s/veh	17.7	0.0	21.2	39.8	0.0	2.7	9.1	0.0	0.0	59.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	0.0	26.6	2.1	0.0	10.3	6.7	0.0	0.0	18.0	0.0	0.0
LnGrp Delay(d),s/veh	68.3	0.0	53.9	95.9	0.0	35.4	58.9	0.0	0.0	104.5	0.0	0.0
LnGrp LOS	E		D	F		D	E			F		
Approach Vol, veh/h		890			411			194			386	
Approach Delay, s/veh		56.8			42.1			58.9			104.5	
Approach LOS		E			D			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.6	45.2		32.0	8.6	55.2		21.3
Change Period (Y+Rc), s	4.6	6.0		6.0	4.6	6.0		6.0
Max Green Setting (Gmax), s	17.8	37.6		26.0	4.4	51.0		26.0
Max Q Clear Time (g_c+I1), s	13.9	22.1		28.0	5.1	47.0		14.8
Green Ext Time (p_c), s	0.1	8.8		0.0	0.0	2.1		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	63.6
HCM 2010 LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	673	70	175	857	244	84	334	97	257	837	198
Future Volume (veh/h)	119	673	70	175	857	244	84	334	97	257	837	198
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	119	673	70	175	857	244	84	334	97	257	837	198
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	144	819	85	202	1011	452	107	710	318	288	1073	480
Arrive On Green	0.08	0.26	0.26	0.11	0.29	0.29	0.06	0.20	0.20	0.16	0.31	0.31
Sat Flow, veh/h	1757	3205	333	1757	3505	1568	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	119	368	375	175	857	244	84	334	97	257	837	198
Grp Sat Flow(s),veh/h/ln	1757	1752	1786	1757	1752	1568	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	4.1	12.0	12.1	6.0	14.0	8.0	2.9	5.1	3.2	8.7	13.3	6.1
Cycle Q Clear(g_c), s	4.1	12.0	12.1	6.0	14.0	8.0	2.9	5.1	3.2	8.7	13.3	6.1
Prop In Lane	1.00		0.19	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	144	448	456	202	1011	452	107	710	318	288	1073	480
V/C Ratio(X)	0.83	0.82	0.82	0.87	0.85	0.54	0.79	0.47	0.31	0.89	0.78	0.41
Avail Cap(c_a), veh/h	144	460	469	202	1036	463	144	921	412	288	1209	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.5	21.4	21.4	26.5	20.4	18.3	28.2	21.4	20.6	24.9	19.3	16.8
Incr Delay (d2), s/veh	30.7	11.1	11.0	30.4	6.6	1.2	18.1	0.5	0.5	27.2	3.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	7.2	7.3	4.6	7.7	3.6	1.9	2.5	1.4	6.4	6.8	2.7
LnGrp Delay(d),s/veh	58.2	32.4	32.4	56.9	27.0	19.5	46.4	21.9	21.2	52.1	22.3	17.4
LnGrp LOS	E	C	C	E	C	B	D	C	C	D	C	B
Approach Vol, veh/h		862			1276			515			1292	
Approach Delay, s/veh		36.0			29.7			25.7			27.4	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	16.3	11.0	19.6	7.7	22.6	9.0	21.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	16.0	7.0	16.0	5.0	21.0	5.0	18.0
Max Q Clear Time (g_c+I1), s	10.7	7.1	8.0	14.1	4.9	15.3	6.1	16.0
Green Ext Time (p_c), s	0.0	4.7	0.0	1.5	0.0	3.4	0.0	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	29.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	534	142	126	642	123	102	558	69	109	1172	204
Future Volume (veh/h)	31	534	142	126	642	123	102	558	69	109	1172	204
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	31	534	142	126	642	123	102	558	69	109	1172	204
Adj No. of Lanes	1	2	1	1	2	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	44	667	299	158	749	143	114	1335	165	139	1312	227
Arrive On Green	0.03	0.19	0.19	0.09	0.26	0.26	0.07	0.43	0.43	0.08	0.44	0.44
Sat Flow, veh/h	1757	3505	1568	1757	2936	562	1740	3111	384	1740	2959	513
Grp Volume(v), veh/h	31	534	142	126	383	382	102	311	316	109	685	691
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1746	1740	1736	1759	1740	1736	1736
Q Serve(g_s), s	1.3	11.1	6.1	5.3	15.8	15.9	4.4	9.5	9.5	4.7	27.6	28.0
Cycle Q Clear(g_c), s	1.3	11.1	6.1	5.3	15.8	15.9	4.4	9.5	9.5	4.7	27.6	28.0
Prop In Lane	1.00		1.00	1.00		0.32	1.00		0.22	1.00		0.30
Lane Grp Cap(c), veh/h	44	667	299	158	447	445	114	745	755	139	770	770
V/C Ratio(X)	0.70	0.80	0.48	0.80	0.86	0.86	0.89	0.42	0.42	0.78	0.89	0.90
Avail Cap(c_a), veh/h	92	738	330	162	447	445	114	745	755	229	822	822
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.8	29.4	27.4	33.9	27.0	27.0	35.2	15.1	15.1	34.3	19.4	19.6
Incr Delay (d2), s/veh	17.9	5.8	1.2	23.4	15.1	15.4	51.9	0.4	0.4	9.2	11.4	12.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	5.9	2.8	3.6	9.5	9.5	3.8	4.6	4.6	2.6	15.6	15.8
LnGrp Delay(d),s/veh	54.7	35.1	28.6	57.3	42.1	42.4	87.2	15.5	15.5	43.5	30.8	31.7
LnGrp LOS	D	D	C	E	D	D	F	B	B	D	C	C
Approach Vol, veh/h		707			891			729			1485	
Approach Delay, s/veh		34.7			44.4			25.5			32.1	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.1	36.6	10.8	18.5	9.0	37.7	5.9	23.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	31.0	7.0	16.0	5.0	36.0	4.0	19.0
Max Q Clear Time (g_c+I1), s	6.7	11.5	7.3	13.1	6.4	30.0	3.3	17.9
Green Ext Time (p_c), s	0.1	10.3	0.0	1.4	0.0	3.7	0.0	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	34.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	145	819	182	337	1168	140	169	541	195	161	1214	165
Future Volume (veh/h)	145	819	182	337	1168	140	169	541	195	161	1214	165
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1827	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	145	819	182	337	1168	140	169	541	195	161	1214	165
Adj No. of Lanes	1	3	0	1	2	1	1	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	142	855	189	348	1136	508	174	842	302	190	1199	536
Arrive On Green	0.08	0.21	0.21	0.20	0.33	0.33	0.10	0.34	0.34	0.11	0.35	0.35
Sat Flow, veh/h	1740	4090	903	1740	3471	1553	1740	2504	899	1740	3471	1553
Grp Volume(v), veh/h	145	665	336	337	1168	140	169	374	362	161	1214	165
Grp Sat Flow(s),veh/h/ln	1740	1663	1668	1740	1736	1553	1740	1736	1668	1740	1736	1553
Q Serve(g_s), s	9.0	21.7	22.0	21.1	36.0	7.3	10.7	20.1	20.2	10.0	38.0	8.6
Cycle Q Clear(g_c), s	9.0	21.7	22.0	21.1	36.0	7.3	10.7	20.1	20.2	10.0	38.0	8.6
Prop In Lane	1.00		0.54	1.00		1.00	1.00		0.54	1.00		1.00
Lane Grp Cap(c), veh/h	142	695	349	348	1136	508	174	584	561	190	1199	536
V/C Ratio(X)	1.02	0.96	0.96	0.97	1.03	0.28	0.97	0.64	0.64	0.85	1.01	0.31
Avail Cap(c_a), veh/h	142	695	349	348	1136	508	174	584	561	221	1199	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.5	43.0	43.1	43.7	37.0	27.4	49.3	30.9	30.9	48.1	36.0	26.4
Incr Delay (d2), s/veh	80.4	23.8	38.7	39.7	34.1	0.3	59.6	2.4	2.5	22.7	29.1	0.3
Initial Q Delay(d3),s/veh	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	12.3	13.8	14.0	22.6	3.2	8.0	10.0	9.7	6.0	23.0	3.7
LnGrp Delay(d),s/veh	131.1	66.8	81.8	83.4	71.1	27.6	108.9	33.3	33.5	70.8	65.1	26.7
LnGrp LOS	F	E	F	F	F	C	F	C	C	E	F	C
Approach Vol, veh/h		1146			1645			905			1540	
Approach Delay, s/veh		79.3			69.9			47.5			61.6	
Approach LOS		E			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	41.0	26.0	27.0	15.0	42.0	13.0	40.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	14.0	35.0	22.0	23.0	11.0	38.0	9.0	36.0
Max Q Clear Time (g_c+I1), s	12.0	22.2	23.1	24.0	12.7	40.0	11.0	38.0
Green Ext Time (p_c), s	0.1	8.4	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	65.7
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	141	801	148	210	1020	6	174	141	79	111	764	338
Future Volume (veh/h)	141	801	148	210	1020	6	174	141	79	111	764	338
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	141	801	148	210	1020	6	174	141	79	111	764	338
Adj No. of Lanes	1	2	0	1	2	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	3	3	3	3	3	3
Cap, veh/h	174	855	158	243	1174	7	201	997	446	142	879	393
Arrive On Green	0.10	0.29	0.29	0.14	0.33	0.33	0.11	0.28	0.28	0.08	0.25	0.25
Sat Flow, veh/h	1740	2926	541	1740	3538	21	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	141	475	474	210	500	526	174	141	79	111	764	338
Grp Sat Flow(s),veh/h/ln	1740	1736	1732	1740	1736	1823	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	6.3	21.0	21.0	9.3	21.3	21.3	7.7	2.4	3.0	4.9	16.4	16.2
Cycle Q Clear(g_c), s	6.3	21.0	21.0	9.3	21.3	21.3	7.7	2.4	3.0	4.9	16.4	16.2
Prop In Lane	1.00		0.31	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	174	507	506	243	576	605	201	997	446	142	879	393
V/C Ratio(X)	0.81	0.94	0.94	0.86	0.87	0.87	0.87	0.14	0.18	0.78	0.87	0.86
Avail Cap(c_a), veh/h	177	507	506	243	576	605	201	997	446	223	935	418
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.7	27.2	27.2	33.1	24.7	24.7	34.3	21.0	21.2	35.5	28.3	28.2
Incr Delay (d2), s/veh	23.7	25.2	25.3	26.0	13.4	12.9	30.6	0.1	0.2	9.0	8.5	15.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	13.6	13.6	6.2	12.3	12.8	5.4	1.1	1.3	2.7	9.0	8.7
LnGrp Delay(d),s/veh	58.4	52.4	52.5	59.2	38.1	37.6	64.8	21.1	21.4	44.6	36.7	43.8
LnGrp LOS	E	D	D	E	D	D	E	C	C	D	D	D
Approach Vol, veh/h		1090			1236			394			1213	
Approach Delay, s/veh		53.2			41.5			40.5			39.4	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.4	26.4	15.0	27.0	13.0	23.8	11.9	30.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	20.0	11.0	23.0	9.0	21.0	8.0	26.0
Max Q Clear Time (g_c+I1), s	6.9	5.0	11.3	23.0	9.7	18.4	8.3	23.3
Green Ext Time (p_c), s	0.1	5.6	0.0	0.0	0.0	1.3	0.0	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	44.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	456	19	63	560	70	41	334	78	159	634	823
Future Volume (veh/h)	280	456	19	63	560	70	41	334	78	159	634	823
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1827	1900	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	280	456	19	63	560	70	41	334	78	159	634	823
Adj No. of Lanes	2	2	1	2	2	0	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	326	925	414	134	651	81	105	1124	259	242	1534	686
Arrive On Green	0.10	0.27	0.27	0.04	0.21	0.21	0.03	0.40	0.40	0.07	0.44	0.44
Sat Flow, veh/h	3375	3471	1553	3375	3107	387	3375	2802	646	3375	3471	1553
Grp Volume(v), veh/h	280	456	19	63	312	318	41	205	207	159	634	823
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1688	1736	1759	1688	1736	1713	1688	1736	1553
Q Serve(g_s), s	5.9	8.0	0.7	1.3	12.6	12.6	0.9	5.8	6.0	3.3	9.0	32.0
Cycle Q Clear(g_c), s	5.9	8.0	0.7	1.3	12.6	12.6	0.9	5.8	6.0	3.3	9.0	32.0
Prop In Lane	1.00		1.00	1.00		0.22	1.00		0.38	1.00		1.00
Lane Grp Cap(c), veh/h	326	925	414	134	364	369	105	696	687	242	1534	686
V/C Ratio(X)	0.86	0.49	0.05	0.47	0.86	0.86	0.39	0.29	0.30	0.66	0.41	1.20
Avail Cap(c_a), veh/h	326	925	414	186	383	389	186	696	687	326	1534	686
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.2	22.4	19.7	34.0	27.6	27.6	34.4	14.7	14.8	32.7	13.8	20.2
Incr Delay (d2), s/veh	19.8	0.4	0.0	2.6	16.8	17.1	2.4	0.2	0.2	3.0	0.2	103.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	3.9	0.3	0.7	7.7	7.8	0.4	2.8	2.9	1.6	4.4	33.3
LnGrp Delay(d),s/veh	52.0	22.8	19.8	36.6	44.4	44.8	36.8	15.0	15.0	35.7	14.0	123.7
LnGrp LOS	D	C	B	D	D	D	D	B	B	D	B	F
Approach Vol, veh/h		755			693			453			1616	
Approach Delay, s/veh		33.6			43.9			17.0			72.0	
Approach LOS		C			D			B			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	33.0	6.9	23.3	6.2	36.0	11.0	19.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	29.0	4.0	19.0	4.0	32.0	7.0	16.0
Max Q Clear Time (g_c+I1), s	5.3	8.0	3.3	10.0	2.9	34.0	7.9	14.6
Green Ext Time (p_c), s	0.1	9.6	0.0	3.5	0.0	0.0	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	51.1
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	6	241	50	9	1	104	510	55	1	978	9
Future Volume (veh/h)	1	6	241	50	9	1	104	510	55	1	978	9
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1759	1900	1845	1845	1900	1792	1792	1792	1792	1792	1900
Adj Flow Rate, veh/h	1	6	241	50	9	1	104	510	55	1	978	9
Adj No. of Lanes	0	1	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	8	8	8	3	3	3	6	6	6	6	6	6
Cap, veh/h	1	6	226	70	65	7	129	568	482	571	1021	9
Arrive On Green	0.15	0.15	0.15	0.04	0.04	0.04	0.08	0.32	0.32	0.33	0.58	0.58
Sat Flow, veh/h	6	36	1459	1757	1631	181	1707	1792	1524	1707	1773	16
Grp Volume(v), veh/h	248	0	0	50	0	10	104	510	55	1	0	987
Grp Sat Flow(s),veh/h/ln	1501	0	0	1757	0	1813	1707	1792	1524	1707	0	1790
Q Serve(g_s), s	16.0	0.0	0.0	2.9	0.0	0.6	6.2	28.1	2.6	0.0	0.0	54.0
Cycle Q Clear(g_c), s	16.0	0.0	0.0	2.9	0.0	0.6	6.2	28.1	2.6	0.0	0.0	54.0
Prop In Lane	0.00		0.97	1.00		0.10	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	232	0	0	70	0	72	129	568	482	571	0	1030
V/C Ratio(X)	1.07	0.00	0.00	0.72	0.00	0.14	0.81	0.90	0.11	0.00	0.00	0.96
Avail Cap(c_a), veh/h	232	0	0	272	0	280	132	1178	1001	571	0	1107
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.7	0.0	0.0	49.1	0.0	48.0	47.1	33.8	25.1	22.9	0.0	20.8
Incr Delay (d2), s/veh	78.2	0.0	0.0	12.7	0.0	0.9	29.4	5.4	0.1	0.0	0.0	17.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.6	0.0	0.0	1.7	0.0	0.3	4.0	14.7	1.1	0.0	0.0	31.3
LnGrp Delay(d),s/veh	121.9	0.0	0.0	61.8	0.0	48.8	76.5	39.2	25.2	22.9	0.0	38.1
LnGrp LOS	F			E		D	E	D	C	C		D
Approach Vol, veh/h		248			60			669			988	
Approach Delay, s/veh		121.9			59.6			43.8			38.1	
Approach LOS		F			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	38.6	36.8		20.0	11.8	63.5		8.1
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	68.0		16.0	8.0	64.0		16.0
Max Q Clear Time (g_c+I1), s	2.0	30.1		18.0	8.2	56.0		4.9
Green Ext Time (p_c), s	1.1	2.6		0.0	0.0	3.5		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	51.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	13	21	168	3	165	4	636	219	545	697	1
Future Volume (veh/h)	7	13	21	168	3	165	4	636	219	545	697	1
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	7	13	21	168	3	165	4	636	219	545	697	1
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	12	28	45	150	3	189	7	609	210	514	1385	2
Arrive On Green	0.01	0.04	0.04	0.09	0.12	0.12	0.00	0.46	0.46	0.29	0.75	0.75
Sat Flow, veh/h	1757	636	1027	1757	28	1544	1757	1313	452	1757	1842	3
Grp Volume(v), veh/h	7	0	34	168	0	168	4	0	855	545	0	698
Grp Sat Flow(s),veh/h/ln	1757	0	1663	1757	0	1572	1757	0	1765	1757	0	1844
Q Serve(g_s), s	0.6	0.0	2.8	12.0	0.0	14.7	0.3	0.0	65.0	41.0	0.0	21.1
Cycle Q Clear(g_c), s	0.6	0.0	2.8	12.0	0.0	14.7	0.3	0.0	65.0	41.0	0.0	21.1
Prop In Lane	1.00		0.62	1.00		0.98	1.00		0.26	1.00		0.00
Lane Grp Cap(c), veh/h	12	0	73	150	0	193	7	0	819	514	0	1387
V/C Ratio(X)	0.59	0.00	0.47	1.12	0.00	0.87	0.55	0.00	1.04	1.06	0.00	0.50
Avail Cap(c_a), veh/h	50	0	190	150	0	269	50	0	819	514	0	1387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	69.4	0.0	65.4	64.1	0.0	60.4	69.6	0.0	37.6	49.6	0.0	6.9
Incr Delay (d2), s/veh	38.1	0.0	4.6	108.1	0.0	19.5	52.8	0.0	43.6	56.6	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	1.4	10.3	0.0	7.4	0.3	0.0	41.5	27.9	0.0	10.8
LnGrp Delay(d),s/veh	107.5	0.0	70.0	172.2	0.0	79.9	122.4	0.0	81.2	106.2	0.0	7.2
LnGrp LOS	F		E	F		E	F		F	F		A
Approach Vol, veh/h		41			336			859			1243	
Approach Delay, s/veh		76.4			126.0			81.4			50.6	
Approach LOS		E			F			F			D	

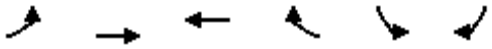
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	45.0	69.0	16.0	10.1	4.6	109.4	5.0	21.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	41.0	65.0	12.0	16.0	4.0	102.0	4.0	24.0
Max Q Clear Time (g_c+I1), s	43.0	67.0	14.0	4.8	2.3	23.1	2.6	16.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.6	0.0	11.6	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	71.9
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	279	12	14	1	6	4	10	503	0	3	645	305
Future Volume (veh/h)	279	12	14	1	6	4	10	503	0	3	645	305
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1900	1845	1900	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	279	12	14	1	6	4	10	503	0	3	645	0
Adj No. of Lanes	0	1	1	0	1	0	1	1	0	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	353	15	328	2	11	7	18	817	0	6	803	683
Arrive On Green	0.21	0.21	0.21	0.01	0.01	0.01	0.01	0.44	0.00	0.00	0.44	0.00
Sat Flow, veh/h	1688	73	1568	157	941	628	1757	1845	0	1757	1845	1568
Grp Volume(v), veh/h	291	0	14	11	0	0	10	503	0	3	645	0
Grp Sat Flow(s),veh/h/ln	1760	0	1568	1726	0	0	1757	1845	0	1757	1845	1568
Q Serve(g_s), s	7.5	0.0	0.3	0.3	0.0	0.0	0.3	10.0	0.0	0.1	14.5	0.0
Cycle Q Clear(g_c), s	7.5	0.0	0.3	0.3	0.0	0.0	0.3	10.0	0.0	0.1	14.5	0.0
Prop In Lane	0.96		1.00	0.09		0.36	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	368	0	328	20	0	0	18	817	0	6	803	683
V/C Ratio(X)	0.79	0.00	0.04	0.56	0.00	0.00	0.55	0.62	0.00	0.52	0.80	0.00
Avail Cap(c_a), veh/h	587	0	523	576	0	0	147	1077	0	147	1077	916
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.0	0.0	15.1	23.6	0.0	0.0	23.6	10.2	0.0	23.9	11.7	0.0
Incr Delay (d2), s/veh	3.9	0.0	0.1	22.7	0.0	0.0	23.1	0.8	0.0	58.3	3.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	0.2	0.3	0.0	0.0	0.2	5.2	0.0	0.1	8.1	0.0
LnGrp Delay(d),s/veh	21.8	0.0	15.2	46.3	0.0	0.0	46.7	11.0	0.0	82.2	15.0	0.0
LnGrp LOS	C		B	D			D	B		F	B	
Approach Vol, veh/h		305			11			513			648	
Approach Delay, s/veh		21.5			46.3			11.7			15.3	
Approach LOS		C			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.2	25.2		14.0	4.5	24.9		4.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	28.0		16.0	4.0	28.0		16.0
Max Q Clear Time (g_c+I1), s	2.1	12.0		9.5	2.3	16.5		2.3
Green Ext Time (p_c), s	0.0	5.1		0.7	0.0	4.3		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		15.6
HCM 2010 LOS		B



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	6	91	528	522	0
Future Volume (veh/h)	0	6	91	528	522	0
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845
Adj Flow Rate, veh/h	0	6	91	528	522	0
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	5	1395	698	624	644	575
Arrive On Green	0.00	0.40	0.40	0.40	0.37	0.00
Sat Flow, veh/h	1757	3597	1845	1568	1757	1568
Grp Volume(v), veh/h	0	6	91	528	522	0
Grp Sat Flow(s),veh/h/ln	1757	1752	1752	1568	1757	1568
Q Serve(g_s), s	0.0	0.0	1.1	10.4	9.1	0.0
Cycle Q Clear(g_c), s	0.0	0.0	1.1	10.4	9.1	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	5	1395	698	624	644	575
V/C Ratio(X)	0.00	0.00	0.13	0.85	0.81	0.00
Avail Cap(c_a), veh/h	207	2475	825	738	930	830
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	6.2	6.5	9.3	9.7	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	7.9	3.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.5	5.8	5.0	0.0
LnGrp Delay(d),s/veh	0.0	6.2	6.6	17.1	13.3	0.0
LnGrp LOS		A	A	B	B	
Approach Vol, veh/h		6	619		522	
Approach Delay, s/veh		6.2	15.6		13.3	
Approach LOS		A	B		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				17.5		16.5	0.0	17.5
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				24.0		18.0	4.0	16.0
Max Q Clear Time (g_c+I1), s				2.0		11.1	0.0	12.4
Green Ext Time (p_c), s				3.2		1.4	0.0	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	14.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	2118	0	64	2112	0	4	3	73	106	4	0
Future Volume (veh/h)	134	2118	0	64	2112	0	4	3	73	106	4	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	134	2118	0	64	2112	0	4	3	73	106	4	0
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	165	2760	0	80	2516	0	6	145	123	135	280	238
Arrive On Green	0.09	0.55	0.00	0.05	0.50	0.00	0.00	0.08	0.08	0.08	0.15	0.00
Sat Flow, veh/h	1757	5202	0	1757	5202	0	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	134	2118	0	64	2112	0	4	3	73	106	4	0
Grp Sat Flow(s),veh/h/ln	1757	1679	0	1757	1679	0	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	4.8	20.9	0.0	2.3	23.0	0.0	0.1	0.1	2.9	3.8	0.1	0.0
Cycle Q Clear(g_c), s	4.8	20.9	0.0	2.3	23.0	0.0	0.1	0.1	2.9	3.8	0.1	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	165	2760	0	80	2516	0	6	145	123	135	280	238
V/C Ratio(X)	0.81	0.77	0.00	0.80	0.84	0.00	0.71	0.02	0.59	0.79	0.01	0.00
Avail Cap(c_a), veh/h	165	2765	0	83	2528	0	83	463	394	138	521	443
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	28.3	11.2	0.0	30.1	13.7	0.0	31.7	27.1	28.4	28.9	23.0	0.0
Incr Delay (d2), s/veh	25.2	1.3	0.0	39.6	2.7	0.0	96.2	0.1	4.5	24.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	10.0	0.0	2.0	11.2	0.0	0.2	0.1	1.4	2.8	0.1	0.0
LnGrp Delay(d),s/veh	53.5	12.6	0.0	69.7	16.4	0.0	127.9	27.2	32.9	53.8	23.0	0.0
LnGrp LOS	D	B		E	B		F	C	C	D	C	
Approach Vol, veh/h		2252			2176			80			110	
Approach Delay, s/veh		15.0			18.0			37.4			52.6	
Approach LOS		B			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	9.0	6.9	38.9	4.2	13.7	10.0	35.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	16.0	3.0	35.0	3.0	18.0	6.0	32.0
Max Q Clear Time (g_c+I1), s	5.8	4.9	4.3	22.9	2.1	2.1	6.8	25.0
Green Ext Time (p_c), s	0.0	0.1	0.0	11.7	0.0	0.2	0.0	6.8

Intersection Summary	
HCM 2010 Ctrl Delay	17.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	295	1331	682	141	982	0	635	158	155	85	267	357
Future Volume (veh/h)	295	1331	682	141	982	0	635	158	155	85	267	357
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	295	1331	682	141	982	0	635	158	155	85	267	357
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	329	1637	510	213	1007	314	682	646	549	109	392	333
Arrive On Green	0.19	0.32	0.32	0.06	0.20	0.00	0.20	0.35	0.35	0.06	0.21	0.21
Sat Flow, veh/h	1757	5036	1568	3408	5036	1568	3408	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	295	1331	682	141	982	0	635	158	155	85	267	357
Grp Sat Flow(s),veh/h/ln	1757	1679	1568	1704	1679	1568	1704	1845	1568	1757	1845	1568
Q Serve(g_s), s	13.1	19.4	26.0	3.2	15.5	0.0	14.7	4.9	5.7	3.8	10.7	17.0
Cycle Q Clear(g_c), s	13.1	19.4	26.0	3.2	15.5	0.0	14.7	4.9	5.7	3.8	10.7	17.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	329	1637	510	213	1007	314	682	646	549	109	392	333
V/C Ratio(X)	0.90	0.81	1.34	0.66	0.97	0.00	0.93	0.24	0.28	0.78	0.68	1.07
Avail Cap(c_a), veh/h	329	1637	510	213	1007	314	682	646	549	198	392	333
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	24.8	27.0	36.7	31.8	0.0	31.5	18.5	18.7	37.0	29.0	31.5
Incr Delay (d2), s/veh	25.4	3.3	165.1	7.4	22.4	0.0	19.6	0.2	0.3	11.1	4.7	69.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	9.5	34.6	1.7	9.3	0.0	8.7	2.5	2.5	2.2	5.9	13.8
LnGrp Delay(d),s/veh	57.2	28.0	192.1	44.1	54.2	0.0	51.1	18.7	19.0	48.1	33.8	101.1
LnGrp LOS	E	C	F	D	D		D	B	B	D	C	F
Approach Vol, veh/h		2308			1123			948			709	
Approach Delay, s/veh		80.2			52.9			40.4			69.4	
Approach LOS		F			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	32.0	9.0	30.0	20.0	21.0	19.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	9.0	24.0	5.0	26.0	16.0	17.0	15.0	16.0
Max Q Clear Time (g_c+I1), s	5.8	7.7	5.2	28.0	16.7	19.0	15.1	17.5
Green Ext Time (p_c), s	0.1	3.4	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	65.3
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	1434	59	33	940	3	184	0	0	4	0	23
Future Volume (veh/h)	44	1434	59	33	940	3	184	0	0	4	0	23
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	44	1434	59	33	940	3	184	0	0	4	0	23
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	51	1932	79	40	1985	6	233	371	316	6	133	113
Arrive On Green	0.03	0.39	0.39	0.02	0.38	0.38	0.13	0.00	0.00	0.00	0.00	0.07
Sat Flow, veh/h	1757	4962	204	1757	5182	17	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	44	970	523	33	609	334	184	0	0	4	0	23
Grp Sat Flow(s),veh/h/ln	1757	1679	1809	1757	1679	1842	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	1.0	10.4	10.4	0.8	5.7	5.7	4.2	0.0	0.0	0.1	0.0	0.6
Cycle Q Clear(g_c), s	1.0	10.4	10.4	0.8	5.7	5.7	4.2	0.0	0.0	0.1	0.0	0.6
Prop In Lane	1.00		0.11	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	51	1307	704	40	1286	705	233	371	316	6	133	113
V/C Ratio(X)	0.86	0.74	0.74	0.82	0.47	0.47	0.79	0.00	0.00	0.70	0.00	0.20
Avail Cap(c_a), veh/h	168	1367	736	126	1286	706	294	928	789	126	751	638
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.2	10.9	10.9	20.3	9.7	9.7	17.5	0.0	0.0	20.8	0.0	18.3
Incr Delay (d2), s/veh	31.0	2.1	3.9	32.0	0.3	0.5	10.7	0.0	0.0	93.4	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	5.1	5.8	0.7	2.7	3.0	2.7	0.0	0.0	0.2	0.0	0.3
LnGrp Delay(d),s/veh	51.1	13.1	14.8	52.3	10.0	10.2	28.2	0.0	0.0	114.2	0.0	19.1
LnGrp LOS	D	B	B	D	A	B	C			F		B
Approach Vol, veh/h		1537			976			184			27	
Approach Delay, s/veh		14.8			11.5			28.2			33.2	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.1	12.4	5.0	20.3	9.5	7.0	5.2	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	21.0	3.0	17.0	7.0	17.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	2.1	0.0	2.8	12.4	6.2	2.6	3.0	7.7
Green Ext Time (p_c), s	0.0	0.0	0.0	3.9	0.1	0.0	0.0	6.5

Intersection Summary	
HCM 2010 Ctrl Delay	14.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	1269	92	64	876	19	50	8	82	92	6	49
Future Volume (veh/h)	75	1269	92	64	876	19	50	8	82	92	6	49
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	75	1269	92	64	876	19	50	8	82	92	6	49
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	93	1902	138	77	1968	43	59	195	165	116	254	216
Arrive On Green	0.05	0.40	0.40	0.04	0.39	0.39	0.03	0.11	0.11	0.07	0.14	0.14
Sat Flow, veh/h	1757	4793	347	1757	5073	110	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	75	889	472	64	579	316	50	8	82	92	6	49
Grp Sat Flow(s),veh/h/ln	1757	1679	1783	1757	1679	1825	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	1.7	9.0	9.0	1.5	5.3	5.3	1.2	0.2	2.0	2.1	0.1	1.1
Cycle Q Clear(g_c), s	1.7	9.0	9.0	1.5	5.3	5.3	1.2	0.2	2.0	2.1	0.1	1.1
Prop In Lane	1.00		0.19	1.00		0.06	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	93	1332	708	77	1303	708	59	195	165	116	254	216
V/C Ratio(X)	0.81	0.67	0.67	0.83	0.44	0.45	0.84	0.04	0.50	0.79	0.02	0.23
Avail Cap(c_a), veh/h	255	1465	778	170	1303	708	255	715	608	255	715	608
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.3	10.2	10.2	19.6	9.3	9.3	19.8	16.6	17.4	19.0	15.4	15.8
Incr Delay (d2), s/veh	15.1	1.0	1.9	19.2	0.2	0.4	25.9	0.1	2.3	11.6	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	4.3	4.7	1.1	2.5	2.7	1.0	0.1	1.0	1.4	0.1	0.5
LnGrp Delay(d),s/veh	34.4	11.2	12.1	38.8	9.6	9.8	45.7	16.7	19.7	30.6	15.4	16.4
LnGrp LOS	C	B	B	D	A	A	D	B	B	C	B	B
Approach Vol, veh/h		1436			959			140			147	
Approach Delay, s/veh		12.7			11.6			28.8			25.2	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.7	8.4	5.8	20.4	5.4	9.7	6.2	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	16.0	4.0	18.0	6.0	16.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	4.1	4.0	3.5	11.0	3.2	3.1	3.7	7.3
Green Ext Time (p_c), s	0.0	0.3	0.0	5.4	0.0	0.3	0.0	6.5

Intersection Summary	
HCM 2010 Ctrl Delay	13.9
HCM 2010 LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	62	25	58	989	1441	104
Future Volume (veh/h)	62	25	58	989	1441	104
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	62	25	58	989	1441	104
Adj No. of Lanes	1	1	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	96	86	71	1433	2163	155
Arrive On Green	0.05	0.05	0.04	0.78	0.65	0.65
Sat Flow, veh/h	1757	1568	1757	1845	3409	238
Grp Volume(v), veh/h	62	25	58	989	759	786
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1845	1752	1803
Q Serve(g_s), s	1.6	0.7	1.6	12.3	12.6	12.8
Cycle Q Clear(g_c), s	1.6	0.7	1.6	12.3	12.6	12.8
Prop In Lane	1.00	1.00	1.00			0.13
Lane Grp Cap(c), veh/h	96	86	71	1433	1143	1176
V/C Ratio(X)	0.64	0.29	0.81	0.69	0.66	0.67
Avail Cap(c_a), veh/h	554	495	333	2018	1438	1479
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.0	21.6	22.6	2.5	5.1	5.1
Incr Delay (d2), s/veh	7.0	1.8	19.2	0.6	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.7	1.1	6.0	6.2	6.4
LnGrp Delay(d),s/veh	29.0	23.4	41.8	3.2	5.9	5.9
LnGrp LOS	C	C	D	A	A	A
Approach Vol, veh/h	87			1047	1545	
Approach Delay, s/veh	27.4			5.3	5.9	
Approach LOS	C			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		40.9		6.6	5.9	35.0		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		52.0		15.0	9.0	39.0		
Max Q Clear Time (g_c+I1), s		14.3		3.6	3.6	14.8		
Green Ext Time (p_c), s		21.3		0.2	0.1	16.2		

Intersection Summary	
HCM 2010 Ctrl Delay	6.4
HCM 2010 LOS	A



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	36	134	225	1167	2150	39
Future Volume (veh/h)	36	134	225	1167	2150	39
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	36	134	225	1167	2150	39
Adj No. of Lanes	1	1	1	3	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	200	179	271	3793	2711	49
Arrive On Green	0.11	0.11	0.15	0.75	0.53	0.53
Sat Flow, veh/h	1757	1568	1757	5202	5259	92
Grp Volume(v), veh/h	36	134	225	1167	1416	773
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1679	1679	1828
Q Serve(g_s), s	1.1	5.0	7.5	4.5	20.6	20.6
Cycle Q Clear(g_c), s	1.1	5.0	7.5	4.5	20.6	20.6
Prop In Lane	1.00	1.00	1.00			0.05
Lane Grp Cap(c), veh/h	200	179	271	3793	1787	973
V/C Ratio(X)	0.18	0.75	0.83	0.31	0.79	0.79
Avail Cap(c_a), veh/h	437	390	292	3928	1839	1001
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	25.9	24.7	2.4	11.4	11.4
Incr Delay (d2), s/veh	0.4	6.1	16.9	0.0	2.4	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	4.5	4.9	2.1	10.0	11.5
LnGrp Delay(d),s/veh	24.6	32.0	41.6	2.4	13.8	15.8
LnGrp LOS	C	C	D	A	B	B
Approach Vol, veh/h	170			1392	2189	
Approach Delay, s/veh	30.4			8.8	14.5	
Approach LOS	C			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		49.4		10.9	13.3	36.1		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		47.0		15.0	10.0	33.0		
Max Q Clear Time (g_c+I1), s		6.5		7.0	9.5	22.6		
Green Ext Time (p_c), s		30.2		0.3	0.0	9.4		

Intersection Summary	
HCM 2010 Ctrl Delay	13.1
HCM 2010 LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	170	47	52	717	988	125
Future Volume (veh/h)	170	47	52	717	988	125
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	170	47	52	717	988	125
Adj No. of Lanes	1	1	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	239	214	61	2176	1455	184
Arrive On Green	0.14	0.14	0.03	0.62	0.46	0.46
Sat Flow, veh/h	1757	1568	1757	3597	3223	396
Grp Volume(v), veh/h	170	47	52	717	553	560
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1752	1752	1775
Q Serve(g_s), s	3.0	0.9	1.0	3.2	8.1	8.1
Cycle Q Clear(g_c), s	3.0	0.9	1.0	3.2	8.1	8.1
Prop In Lane	1.00	1.00	1.00			0.22
Lane Grp Cap(c), veh/h	239	214	61	2176	814	825
V/C Ratio(X)	0.71	0.22	0.86	0.33	0.68	0.68
Avail Cap(c_a), veh/h	374	333	160	2662	958	970
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.6	12.7	15.8	3.0	6.9	6.9
Incr Delay (d2), s/veh	3.9	0.5	27.2	0.1	1.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.8	0.9	1.5	4.2	4.2
LnGrp Delay(d),s/veh	17.5	13.2	43.0	3.1	8.4	8.4
LnGrp LOS	B	B	D	A	A	A
Approach Vol, veh/h	217			769	1113	
Approach Delay, s/veh	16.5			5.8	8.4	
Approach LOS	B			A	A	

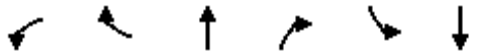
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		24.4		8.5	5.1	19.3		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		25.0		7.0	3.0	18.0		
Max Q Clear Time (g_c+I1), s		5.2		5.0	3.0	10.1		
Green Ext Time (p_c), s		9.4		0.2	0.0	5.2		

Intersection Summary	
HCM 2010 Ctrl Delay	8.3
HCM 2010 LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	248	28	118	873	1106	155
Future Volume (veh/h)	248	28	118	873	1106	155
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	248	28	118	873	1106	155
Adj No. of Lanes	1	1	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	321	287	151	2288	1498	209
Arrive On Green	0.18	0.18	0.09	0.65	0.48	0.48
Sat Flow, veh/h	1757	1568	1757	3597	3181	432
Grp Volume(v), veh/h	248	28	118	873	626	635
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1752	1752	1768
Q Serve(g_s), s	6.5	0.7	3.2	5.6	14.0	14.0
Cycle Q Clear(g_c), s	6.5	0.7	3.2	5.6	14.0	14.0
Prop In Lane	1.00	1.00	1.00			0.24
Lane Grp Cap(c), veh/h	321	287	151	2288	850	857
V/C Ratio(X)	0.77	0.10	0.78	0.38	0.74	0.74
Avail Cap(c_a), veh/h	541	483	217	2664	972	981
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.9	16.5	21.8	3.9	10.1	10.1
Incr Delay (d2), s/veh	3.9	0.1	11.1	0.1	2.6	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.7	2.0	2.7	7.2	7.3
LnGrp Delay(d),s/veh	22.9	16.7	33.0	4.0	12.6	12.7
LnGrp LOS	C	B	C	A	B	B
Approach Vol, veh/h	276			991	1261	
Approach Delay, s/veh	22.2			7.5	12.7	
Approach LOS	C			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		35.8		12.9	8.2	27.6		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		37.0		15.0	6.0	27.0		
Max Q Clear Time (g_c+I1), s		7.6		8.5	5.2	16.0		
Green Ext Time (p_c), s		14.0		0.6	0.0	7.6		

Intersection Summary	
HCM 2010 Ctrl Delay	11.7
HCM 2010 LOS	B



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	105	1579	0	138	2206
Future Volume (veh/h)	0	105	1579	0	138	2206
Number	3	18	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845
Adj Flow Rate, veh/h	0	105	1579	0	138	2206
Adj No. of Lanes	1	1	3	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	148	132	3271	0	179	2826
Arrive On Green	0.00	0.08	0.65	0.00	0.10	0.81
Sat Flow, veh/h	1757	1568	5368	0	1757	3597
Grp Volume(v), veh/h	0	105	1579	0	138	2206
Grp Sat Flow(s),veh/h/ln	1757	1568	1679	0	1757	1752
Q Serve(g_s), s	0.0	4.8	11.7	0.0	5.6	24.0
Cycle Q Clear(g_c), s	0.0	4.8	11.7	0.0	5.6	24.0
Prop In Lane	1.00	1.00		0.00	1.00	
Lane Grp Cap(c), veh/h	148	132	3271	0	179	2826
V/C Ratio(X)	0.00	0.80	0.48	0.00	0.77	0.78
Avail Cap(c_a), veh/h	386	344	3271	0	434	3173
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	32.8	6.5	0.0	31.9	3.7
Incr Delay (d2), s/veh	0.0	10.4	0.1	0.0	6.9	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.5	5.3	0.0	3.0	11.5
LnGrp Delay(d),s/veh	0.0	43.1	6.6	0.0	38.8	4.9
LnGrp LOS		D	A		D	A
Approach Vol, veh/h	105		1579			2344
Approach Delay, s/veh	43.1		6.6			6.9
Approach LOS	D		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		62.8			11.4	51.4		10.1
Change Period (Y+Rc), s		4.0			4.0	4.0		4.0
Max Green Setting (Gmax), s		66.0			18.0	44.0		16.0
Max Q Clear Time (g_c+I1), s		26.0			7.6	13.7		6.8
Green Ext Time (p_c), s		32.8			0.3	27.3		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	7.7
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	665	519	76	706	547	0	156	839	591	51	1606	514
Future Volume (veh/h)	665	519	76	706	547	0	156	839	591	51	1606	514
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	665	519	76	706	547	0	156	839	591	51	1606	514
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	731	645	289	731	645	289	172	1876	584	92	1757	547
Arrive On Green	0.21	0.18	0.18	0.21	0.18	0.00	0.05	0.37	0.37	0.03	0.35	0.35
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	665	519	76	706	547	0	156	839	591	51	1606	514
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	15.1	11.2	3.3	16.3	12.0	0.0	3.6	9.9	29.5	1.2	24.2	25.2
Cycle Q Clear(g_c), s	15.1	11.2	3.3	16.3	12.0	0.0	3.6	9.9	29.5	1.2	24.2	25.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	731	645	289	731	645	289	172	1876	584	92	1757	547
V/C Ratio(X)	0.91	0.80	0.26	0.97	0.85	0.00	0.91	0.45	1.01	0.55	0.91	0.94
Avail Cap(c_a), veh/h	731	664	297	731	664	297	172	1876	584	129	1780	554
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	31.0	27.7	30.8	31.3	0.0	37.4	18.7	24.9	38.1	24.7	25.0
Incr Delay (d2), s/veh	15.4	7.0	0.5	25.0	9.9	0.0	42.9	0.2	40.3	5.1	7.7	24.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	6.0	1.5	10.2	6.7	0.0	2.7	4.6	19.1	0.6	12.4	14.4
LnGrp Delay(d),s/veh	45.7	38.0	28.2	55.8	41.1	0.0	80.3	18.9	65.1	43.2	32.3	49.0
LnGrp LOS	D	D	C	E	D		F	B	F	D	C	D
Approach Vol, veh/h		1260			1253			1586			2171	
Approach Delay, s/veh		41.5			49.4			42.2			36.5	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	33.5	21.0	18.6	8.0	31.6	21.0	18.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	29.0	17.0	15.0	4.0	28.0	17.0	15.0
Max Q Clear Time (g_c+I1), s	3.2	31.5	18.3	13.2	5.6	27.2	17.1	14.0
Green Ext Time (p_c), s	0.0	0.0	0.0	1.0	0.0	0.5	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	41.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	608	102	54	705	24	42	3	30	20	2	81
Future Volume (veh/h)	74	608	102	54	705	24	42	3	30	20	2	81
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	74	608	102	54	705	24	42	3	30	20	2	81
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	89	1062	178	63	1171	40	51	236	200	27	210	179
Arrive On Green	0.05	0.35	0.35	0.04	0.34	0.34	0.03	0.13	0.13	0.02	0.11	0.11
Sat Flow, veh/h	1757	3005	503	1757	3459	118	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	74	354	356	54	357	372	42	3	30	20	2	81
Grp Sat Flow(s),veh/h/ln	1757	1752	1756	1757	1752	1824	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	1.4	5.6	5.6	1.0	5.8	5.8	0.8	0.0	0.6	0.4	0.0	1.7
Cycle Q Clear(g_c), s	1.4	5.6	5.6	1.0	5.8	5.8	0.8	0.0	0.6	0.4	0.0	1.7
Prop In Lane	1.00		0.29	1.00		0.06	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	89	619	621	63	593	617	51	236	200	27	210	179
V/C Ratio(X)	0.83	0.57	0.57	0.86	0.60	0.60	0.83	0.01	0.15	0.75	0.01	0.45
Avail Cap(c_a), veh/h	205	769	770	205	769	800	154	917	779	154	917	779
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.1	9.0	9.0	16.4	9.4	9.4	16.5	13.0	13.3	16.8	13.4	14.2
Incr Delay (d2), s/veh	17.4	0.8	0.8	26.3	1.0	0.9	27.3	0.0	0.3	33.7	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.8	2.8	1.0	2.9	3.1	0.8	0.0	0.3	0.4	0.0	0.8
LnGrp Delay(d),s/veh	33.5	9.8	9.8	42.7	10.4	10.3	43.9	13.1	13.6	50.4	13.5	15.9
LnGrp LOS	C	A	A	D	B	B	D	B	B	D	B	B
Approach Vol, veh/h		784			783			75			103	
Approach Delay, s/veh		12.0			12.6			30.5			22.6	
Approach LOS		B			B			C			C	

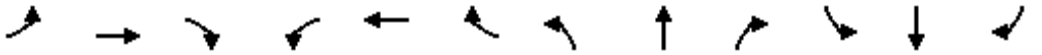
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.5	8.4	5.2	16.1	5.0	7.9	5.7	15.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	17.0	4.0	15.0	3.0	17.0	4.0	15.0
Max Q Clear Time (g_c+I1), s	2.4	2.6	3.0	7.6	2.8	3.7	3.4	7.8
Green Ext Time (p_c), s	0.0	0.3	0.0	3.8	0.0	0.2	0.0	3.8

Intersection Summary	
HCM 2010 Ctrl Delay	13.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	1796	72	45	1577	67	149	8	0	94	10	80
Future Volume (veh/h)	84	1796	72	45	1577	67	149	8	0	94	10	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	84	1796	72	45	1577	67	149	8	0	94	10	80
Adj No. of Lanes	1	3	0	1	3	0	1	1	0	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	106	2316	93	54	2162	92	188	190	0	158	158	134
Arrive On Green	0.06	0.47	0.47	0.03	0.44	0.44	0.11	0.10	0.00	0.09	0.09	0.09
Sat Flow, veh/h	1757	4968	199	1757	4954	210	1757	1845	0	1757	1845	1568
Grp Volume(v), veh/h	84	1213	655	45	1069	575	149	8	0	94	10	80
Grp Sat Flow(s),veh/h/ln	1757	1679	1810	1757	1679	1808	1757	1845	0	1757	1845	1568
Q Serve(g_s), s	2.4	15.6	15.6	1.3	13.6	13.6	4.3	0.2	0.0	2.7	0.3	2.5
Cycle Q Clear(g_c), s	2.4	15.6	15.6	1.3	13.6	13.6	4.3	0.2	0.0	2.7	0.3	2.5
Prop In Lane	1.00		0.11	1.00		0.12	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	106	1565	843	54	1465	789	188	190	0	158	158	134
V/C Ratio(X)	0.79	0.78	0.78	0.84	0.73	0.73	0.79	0.04	0.00	0.60	0.06	0.60
Avail Cap(c_a), veh/h	136	1565	843	102	1499	807	205	609	0	171	573	487
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	11.5	11.5	24.8	12.0	12.0	22.4	20.8	0.0	22.6	21.7	22.7
Incr Delay (d2), s/veh	21.3	2.5	4.6	27.4	1.8	3.3	17.6	0.1	0.0	4.9	0.2	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	7.6	8.7	1.0	6.6	7.4	3.0	0.1	0.0	1.5	0.1	1.2
LnGrp Delay(d),s/veh	45.2	14.0	16.1	52.2	13.8	15.3	40.0	20.9	0.0	27.4	21.8	26.9
LnGrp LOS	D	B	B	D	B	B	D	C		C	C	C
Approach Vol, veh/h		1952			1689			157			184	
Approach Delay, s/veh		16.1			15.3			39.0			26.9	
Approach LOS		B			B			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.6	9.3	5.6	28.0	9.5	8.4	7.1	26.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	17.0	3.0	24.0	6.0	16.0	4.0	23.0
Max Q Clear Time (g_c+I1), s	4.7	2.2	3.3	17.6	6.3	4.5	4.4	15.6
Green Ext Time (p_c), s	0.0	0.2	0.0	6.0	0.0	0.2	0.0	6.9

Intersection Summary	
HCM 2010 Ctrl Delay	17.2
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	1209	1135	30	816	20	977	75	75	40	97	206
Future Volume (veh/h)	132	1209	1135	30	816	20	977	75	75	40	97	206
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	132	1209	1135	30	816	20	977	75	75	40	97	206
Adj No. of Lanes	1	3	1	2	2	1	2	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	162	1945	606	58	1090	488	970	748	636	50	276	234
Arrive On Green	0.09	0.39	0.39	0.02	0.31	0.31	0.28	0.41	0.41	0.03	0.15	0.15
Sat Flow, veh/h	1757	5036	1568	3408	3505	1568	3408	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	132	1209	1135	30	816	20	977	75	75	40	97	206
Grp Sat Flow(s),veh/h/ln	1757	1679	1568	1704	1752	1568	1704	1845	1568	1757	1845	1568
Q Serve(g_s), s	7.3	19.1	38.0	0.9	20.6	0.9	28.0	2.5	2.9	2.2	4.6	12.7
Cycle Q Clear(g_c), s	7.3	19.1	38.0	0.9	20.6	0.9	28.0	2.5	2.9	2.2	4.6	12.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	162	1945	606	58	1090	488	970	748	636	50	276	234
V/C Ratio(X)	0.81	0.62	1.87	0.52	0.75	0.04	1.01	0.10	0.12	0.80	0.35	0.88
Avail Cap(c_a), veh/h	196	1945	606	104	1090	488	970	748	636	107	281	239
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.8	24.4	30.2	47.9	30.4	23.6	35.2	18.1	18.3	47.5	37.6	41.0
Incr Delay (d2), s/veh	19.3	0.6	399.6	6.9	2.9	0.0	30.7	0.1	0.1	23.9	0.8	28.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	9.0	83.6	0.5	10.4	0.4	17.2	1.3	1.3	1.4	2.4	7.3
LnGrp Delay(d),s/veh	63.1	25.0	429.8	54.9	33.3	23.7	65.9	18.2	18.3	71.4	38.3	69.6
LnGrp LOS	E	C	F	D	C	C	F	B	B	E	D	E
Approach Vol, veh/h		2476			866			1127			343	
Approach Delay, s/veh		212.6			33.9			59.5			61.0	
Approach LOS		F			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	43.9	5.7	42.0	32.0	18.7	13.1	34.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	37.0	3.0	38.0	28.0	15.0	11.0	30.0
Max Q Clear Time (g_c+I1), s	4.2	4.9	2.9	40.0	30.0	14.7	9.3	22.6
Green Ext Time (p_c), s	0.0	1.7	0.0	0.0	0.0	0.0	0.1	6.8

Intersection Summary		
HCM 2010 Ctrl Delay		133.8
HCM 2010 LOS		F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	241	540	96	69	394	190	63	232	24	262	453	215
Future Volume (veh/h)	241	540	96	69	394	190	63	232	24	262	453	215
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	241	540	96	69	394	190	63	232	24	262	453	215
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	373	1067	477	132	819	367	124	625	280	403	912	408
Arrive On Green	0.11	0.30	0.30	0.04	0.23	0.23	0.04	0.18	0.18	0.12	0.26	0.26
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	241	540	96	69	394	190	63	232	24	262	453	215
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	3.0	5.6	2.0	0.9	4.3	4.7	0.8	2.6	0.6	3.3	4.9	5.2
Cycle Q Clear(g_c), s	3.0	5.6	2.0	0.9	4.3	4.7	0.8	2.6	0.6	3.3	4.9	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	373	1067	477	132	819	367	124	625	280	403	912	408
V/C Ratio(X)	0.65	0.51	0.20	0.52	0.48	0.52	0.51	0.37	0.09	0.65	0.50	0.53
Avail Cap(c_a), veh/h	460	1421	635	230	1184	530	230	1263	565	537	1578	706
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.0	12.7	11.4	20.9	14.7	14.8	21.0	16.1	15.2	18.7	14.0	14.1
Incr Delay (d2), s/veh	2.2	0.4	0.2	3.2	0.4	1.1	3.2	0.4	0.1	1.8	0.4	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	2.8	0.9	0.5	2.1	2.1	0.4	1.3	0.3	1.6	2.4	2.4
LnGrp Delay(d),s/veh	21.2	13.1	11.6	24.1	15.1	16.0	24.2	16.4	15.4	20.5	14.4	15.1
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		877			653			319			930	
Approach Delay, s/veh		15.1			16.3			17.9			16.3	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.3	11.9	5.7	17.5	5.6	15.6	8.9	14.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	16.0	3.0	18.0	3.0	20.0	6.0	15.0
Max Q Clear Time (g_c+I1), s	5.3	4.6	2.9	7.6	2.8	7.2	5.0	6.7
Green Ext Time (p_c), s	0.2	3.3	0.0	4.2	0.0	3.5	0.1	3.7

Intersection Summary	
HCM 2010 Ctrl Delay	16.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	192	1690	85	144	1471	5	25	962	166	10	949	190
Future Volume (veh/h)	192	1690	85	144	1471	5	25	962	166	10	949	190
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	192	1690	85	144	1471	5	25	962	166	10	949	190
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	255	1808	563	204	1732	539	76	1162	520	35	1120	501
Arrive On Green	0.07	0.36	0.36	0.06	0.34	0.34	0.02	0.33	0.33	0.01	0.32	0.32
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	192	1690	85	144	1471	5	25	962	166	10	949	190
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	3.7	21.6	2.5	2.8	18.1	0.1	0.5	16.9	5.3	0.2	16.9	6.3
Cycle Q Clear(g_c), s	3.7	21.6	2.5	2.8	18.1	0.1	0.5	16.9	5.3	0.2	16.9	6.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	255	1808	563	204	1732	539	76	1162	520	35	1120	501
V/C Ratio(X)	0.75	0.93	0.15	0.71	0.85	0.01	0.33	0.83	0.32	0.29	0.85	0.38
Avail Cap(c_a), veh/h	255	1809	563	204	1733	540	204	1162	520	204	1154	516
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	20.7	14.5	30.8	20.3	14.4	32.2	20.6	16.7	32.8	21.2	17.6
Incr Delay (d2), s/veh	11.9	9.6	0.1	10.6	4.2	0.0	2.5	5.1	0.4	4.5	5.9	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	11.6	1.1	1.6	9.0	0.1	0.3	9.0	2.3	0.1	9.1	2.8
LnGrp Delay(d),s/veh	42.2	30.3	14.6	41.4	24.5	14.4	34.7	25.7	17.0	37.4	27.2	18.1
LnGrp LOS	D	C	B	D	C	B	C	C	B	D	C	B
Approach Vol, veh/h		1967			1620			1153			1149	
Approach Delay, s/veh		30.8			26.0			24.6			25.7	
Approach LOS		C			C			C			C	

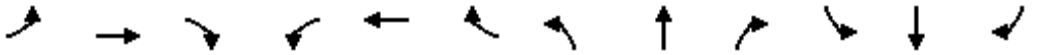
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.7	26.2	8.0	28.0	5.5	25.4	9.0	27.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	22.0	4.0	24.0	4.0	22.0	5.0	23.0
Max Q Clear Time (g_c+I1), s	2.2	18.9	4.8	23.6	2.5	18.9	5.7	20.1
Green Ext Time (p_c), s	0.0	2.6	0.0	0.4	0.0	2.5	0.0	2.8

Intersection Summary	
HCM 2010 Ctrl Delay	27.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	158	1077	0	613	981	0	0	155	558	0	166	206
Future Volume (veh/h)	158	1077	0	613	981	0	0	155	558	0	166	206
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	158	1077	0	613	981	0	0	155	558	0	166	206
Adj No. of Lanes	2	2	0	2	2	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	249	1224	0	708	1696	0	3	910	407	3	910	407
Arrive On Green	0.07	0.35	0.00	0.21	0.48	0.00	0.00	0.26	0.26	0.00	0.26	0.26
Sat Flow, veh/h	3408	3597	0	3408	3597	0	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	158	1077	0	613	981	0	0	155	558	0	166	206
Grp Sat Flow(s),veh/h/ln	1704	1752	0	1704	1752	0	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	2.9	18.9	0.0	11.4	13.1	0.0	0.0	2.2	17.0	0.0	2.4	7.3
Cycle Q Clear(g_c), s	2.9	18.9	0.0	11.4	13.1	0.0	0.0	2.2	17.0	0.0	2.4	7.3
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	249	1224	0	708	1696	0	3	910	407	3	910	407
V/C Ratio(X)	0.63	0.88	0.00	0.87	0.58	0.00	0.00	0.17	1.37	0.00	0.18	0.51
Avail Cap(c_a), veh/h	365	1285	0	729	1696	0	107	910	407	107	910	407
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	29.5	20.0	0.0	25.0	12.1	0.0	0.0	18.8	24.2	0.0	18.8	20.6
Incr Delay (d2), s/veh	2.7	7.1	0.0	10.5	0.5	0.0	0.0	0.1	181.5	0.0	0.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	10.3	0.0	6.4	6.4	0.0	0.0	1.1	27.8	0.0	1.2	3.3
LnGrp Delay(d),s/veh	32.2	27.1	0.0	35.5	12.6	0.0	0.0	18.8	205.8	0.0	18.9	21.7
LnGrp LOS	C	C		D	B			B	F		B	C
Approach Vol, veh/h		1235			1594			713			372	
Approach Delay, s/veh		27.8			21.4			165.1			20.4	
Approach LOS		C			C			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	21.0	17.6	26.8	0.0	21.0	8.8	35.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	17.0	14.0	24.0	4.0	17.0	7.0	31.0
Max Q Clear Time (g_c+I1), s	0.0	19.0	13.4	20.9	0.0	9.3	4.9	15.1
Green Ext Time (p_c), s	0.0	0.0	0.2	2.0	0.0	2.9	0.1	9.9

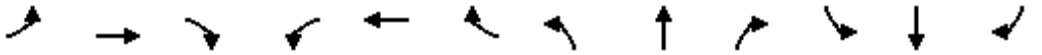
Intersection Summary	
HCM 2010 Ctrl Delay	49.5
HCM 2010 LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	240	0	1216	162	186	0	565	1167	121	425	36
Future Volume (veh/h)	99	240	0	1216	162	186	0	565	1167	121	425	36
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	99	240	0	1216	162	186	0	565	1167	121	425	36
Adj No. of Lanes	1	1	1	2	1	1	1	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	63	211	179	1217	804	683	1	1302	582	146	1552	694
Arrive On Green	0.04	0.11	0.00	0.36	0.44	0.44	0.00	0.37	0.37	0.04	0.44	0.44
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	99	240	0	1216	162	186	0	565	1167	121	425	36
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1752	1568	1704	1752	1568
Q Serve(g_s), s	5.0	16.0	0.0	49.9	7.6	10.6	0.0	16.9	52.0	4.9	10.8	1.8
Cycle Q Clear(g_c), s	5.0	16.0	0.0	49.9	7.6	10.6	0.0	16.9	52.0	4.9	10.8	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	63	211	179	1217	804	683	1	1302	582	146	1552	694
V/C Ratio(X)	1.58	1.14	0.00	1.00	0.20	0.27	0.00	0.43	2.00	0.83	0.27	0.05
Avail Cap(c_a), veh/h	63	211	179	1217	804	683	50	1302	582	146	1552	694
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.5	62.0	0.0	45.0	24.4	25.3	0.0	33.0	44.0	66.5	24.7	22.2
Incr Delay (d2), s/veh	323.1	104.2	0.0	25.5	0.1	0.2	0.0	0.2	457.8	31.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	14.2	0.0	27.8	3.9	4.6	0.0	8.2	96.5	2.9	5.2	0.8
LnGrp Delay(d),s/veh	390.6	166.2	0.0	70.5	24.6	25.5	0.0	33.2	501.8	97.5	24.8	22.3
LnGrp LOS	F	F		E	C	C		C	F	F	C	C
Approach Vol, veh/h		339			1564			1732			582	
Approach Delay, s/veh		231.8			60.4			348.9			39.8	
Approach LOS		F			E			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	56.0	54.0	20.0	0.0	66.0	9.0	65.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	52.0	50.0	16.0	4.0	54.0	5.0	61.0
Max Q Clear Time (g_c+I1), s	6.9	54.0	51.9	18.0	0.0	12.8	7.0	12.6
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	17.8	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	189.8
HCM 2010 LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	1	6	4	1	15	7	197	7	38	249	73
Future Volume (veh/h)	99	1	6	4	1	15	7	197	7	38	249	73
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	99	1	6	4	1	15	7	197	7	38	249	73
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	119	157	134	7	38	32	10	814	29	49	694	199
Arrive On Green	0.07	0.09	0.09	0.00	0.02	0.02	0.01	0.24	0.24	0.03	0.26	0.26
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	3453	122	1757	2689	771
Grp Volume(v), veh/h	99	1	6	4	1	15	7	100	104	38	160	162
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1823	1757	1752	1709
Q Serve(g_s), s	1.4	0.0	0.1	0.1	0.0	0.2	0.1	1.1	1.1	0.5	1.8	1.9
Cycle Q Clear(g_c), s	1.4	0.0	0.1	0.1	0.0	0.2	0.1	1.1	1.1	0.5	1.8	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.07	1.00		0.45
Lane Grp Cap(c), veh/h	119	157	134	7	38	32	10	413	430	49	452	441
V/C Ratio(X)	0.83	0.01	0.04	0.56	0.03	0.47	0.70	0.24	0.24	0.78	0.35	0.37
Avail Cap(c_a), veh/h	356	1270	1079	213	1120	952	213	1135	1181	213	1135	1107
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.4	10.3	10.4	12.3	11.9	12.0	12.3	7.6	7.7	11.9	7.5	7.5
Incr Delay (d2), s/veh	13.5	0.0	0.1	54.9	0.3	10.1	62.0	0.3	0.3	22.5	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.0	0.1	0.0	0.2	0.2	0.6	0.6	0.5	1.0	1.0
LnGrp Delay(d),s/veh	24.8	10.4	10.5	67.2	12.1	22.1	74.3	7.9	7.9	34.4	8.0	8.0
LnGrp LOS	C	B	B	E	B	C	E	A	A	C	A	A
Approach Vol, veh/h		106			20			211			360	
Approach Delay, s/veh		23.9			30.6			10.1			10.8	
Approach LOS		C			C			B			B	

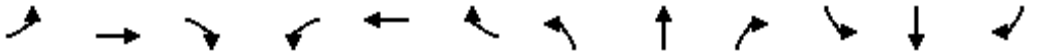
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.7	9.8	4.1	6.1	4.1	10.4	5.7	4.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	16.0	3.0	17.0	3.0	16.0	5.0	15.0
Max Q Clear Time (g_c+I1), s	2.5	3.1	2.1	2.1	2.1	3.9	3.4	2.2
Green Ext Time (p_c), s	0.0	2.5	0.0	0.0	0.0	2.5	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	7	0	0	0	8	372	0	0	525	17
Future Volume (veh/h)	5	0	7	0	0	0	8	372	0	0	525	17
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	5	0	7	0	0	0	8	372	0	0	525	17
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	8	18	15	8	9	7	11	2139	0	8	1434	46
Arrive On Green	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.61	0.00	0.00	0.41	0.41
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	3597	0	1757	3465	112
Grp Volume(v), veh/h	5	0	7	0	0	0	8	372	0	0	265	277
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	0	1757	1752	1825
Q Serve(g_s), s	0.1	0.0	0.1	0.0	0.0	0.0	0.1	1.0	0.0	0.0	2.2	2.2
Cycle Q Clear(g_c), s	0.1	0.0	0.1	0.0	0.0	0.0	0.1	1.0	0.0	0.0	2.2	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		0.06
Lane Grp Cap(c), veh/h	8	18	15	8	9	7	11	2139	0	8	725	755
V/C Ratio(X)	0.60	0.00	0.46	0.00	0.00	0.00	0.70	0.17	0.00	0.00	0.37	0.37
Avail Cap(c_a), veh/h	417	1490	1266	250	1314	1117	250	2664	0	250	1332	1387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	10.5	0.0	10.4	0.0	0.0	0.0	10.4	1.8	0.0	0.0	4.3	4.3
Incr Delay (d2), s/veh	53.7	0.0	20.4	0.0	0.0	0.0	55.9	0.0	0.0	0.0	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.1	0.0	0.0	0.0	0.2	0.5	0.0	0.0	1.1	1.1
LnGrp Delay(d),s/veh	64.1	0.0	30.7	0.0	0.0	0.0	66.3	1.8	0.0	0.0	4.6	4.6
LnGrp LOS	E		C				E	A			A	A
Approach Vol, veh/h		12			0			380			542	
Approach Delay, s/veh		44.7			0.0			3.2			4.6	
Approach LOS		D						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	16.8	0.0	4.2	4.1	12.7	4.1	0.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	16.0	3.0	17.0	3.0	16.0	5.0	15.0
Max Q Clear Time (g_c+I1), s	0.0	3.0	0.0	2.1	2.1	4.2	2.1	0.0
Green Ext Time (p_c), s	0.0	4.8	0.0	0.0	0.0	4.5	0.0	0.0

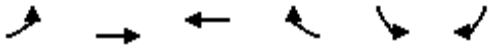
Intersection Summary	
HCM 2010 Ctrl Delay	4.5
HCM 2010 LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	11	28	102	25	117	15	299	63	62	412	45
Future Volume (veh/h)	25	11	28	102	25	117	15	299	63	62	412	45
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	25	11	28	102	25	117	15	299	63	62	412	45
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	33	157	133	126	254	216	21	786	163	72	961	104
Arrive On Green	0.02	0.08	0.08	0.07	0.14	0.14	0.01	0.27	0.27	0.04	0.30	0.30
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	2890	601	1757	3189	347
Grp Volume(v), veh/h	25	11	28	102	25	117	15	180	182	62	225	232
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1739	1757	1752	1784
Q Serve(g_s), s	0.4	0.2	0.5	1.7	0.4	2.1	0.3	2.5	2.6	1.1	3.1	3.1
Cycle Q Clear(g_c), s	0.4	0.2	0.5	1.7	0.4	2.1	0.3	2.5	2.6	1.1	3.1	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.35	1.00		0.19
Lane Grp Cap(c), veh/h	33	157	133	126	254	216	21	477	473	72	528	538
V/C Ratio(X)	0.76	0.07	0.21	0.81	0.10	0.54	0.73	0.38	0.39	0.86	0.43	0.43
Avail Cap(c_a), veh/h	175	917	780	291	1040	884	175	872	865	233	930	946
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.7	12.7	12.9	13.8	11.4	12.1	14.9	8.9	8.9	14.4	8.4	8.5
Incr Delay (d2), s/veh	29.0	0.2	0.8	11.8	0.2	2.1	38.2	0.5	0.5	23.6	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.1	0.2	1.2	0.2	1.0	0.3	1.3	1.3	1.0	1.6	1.6
LnGrp Delay(d),s/veh	43.7	12.9	13.6	25.6	11.5	14.2	53.1	9.4	9.4	37.9	9.0	9.0
LnGrp LOS	D	B	B	C	B	B	D	A	A	D	A	A
Approach Vol, veh/h		64			244			377			519	
Approach Delay, s/veh		25.3			18.7			11.2			12.5	
Approach LOS		C			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.2	12.2	6.2	6.6	4.4	13.1	4.6	8.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	15.0	5.0	15.0	3.0	16.0	3.0	17.0
Max Q Clear Time (g_c+I1), s	3.1	4.6	3.7	2.5	2.3	5.1	2.4	4.1
Green Ext Time (p_c), s	0.0	3.6	0.0	0.5	0.0	3.7	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	14.0
HCM 2010 LOS	B



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	160	918	518	53	27	138
Future Volume (veh/h)	160	918	518	53	27	138
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845
Adj Flow Rate, veh/h	160	918	518	53	27	138
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	204	2147	1170	119	215	192
Arrive On Green	0.12	0.61	0.36	0.36	0.12	0.12
Sat Flow, veh/h	1757	3597	3304	328	1757	1568
Grp Volume(v), veh/h	160	918	282	289	27	138
Grp Sat Flow(s),veh/h/ln	1757	1752	1752	1787	1757	1568
Q Serve(g_s), s	2.7	4.2	3.7	3.7	0.4	2.6
Cycle Q Clear(g_c), s	2.7	4.2	3.7	3.7	0.4	2.6
Prop In Lane	1.00			0.18	1.00	1.00
Lane Grp Cap(c), veh/h	204	2147	638	651	215	192
V/C Ratio(X)	0.78	0.43	0.44	0.44	0.13	0.72
Avail Cap(c_a), veh/h	349	3017	928	947	931	831
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.0	3.1	7.3	7.3	11.8	12.8
Incr Delay (d2), s/veh	6.5	0.1	0.5	0.5	0.3	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	2.0	1.8	1.9	0.2	2.4
LnGrp Delay(d),s/veh	19.5	3.2	7.8	7.8	12.1	17.7
LnGrp LOS	B	A	A	A	B	B
Approach Vol, veh/h		1078	571		165	
Approach Delay, s/veh		5.6	7.8		16.8	
Approach LOS		A	A		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				22.5		7.7	7.5	15.0
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				26.0		16.0	6.0	16.0
Max Q Clear Time (g_c+I1), s				6.2		4.6	4.7	5.7
Green Ext Time (p_c), s				7.5		0.4	0.1	5.3

Intersection Summary	
HCM 2010 Ctrl Delay	7.3
HCM 2010 LOS	A



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	21	10	308	32	20	550
Future Volume (veh/h)	21	10	308	32	20	550
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845
Adj Flow Rate, veh/h	21	10	308	32	20	550
Adj No. of Lanes	1	1	2	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	56	50	1127	116	37	2002
Arrive On Green	0.03	0.03	0.35	0.35	0.02	0.57
Sat Flow, veh/h	1757	1568	3300	331	1757	3597
Grp Volume(v), veh/h	21	10	167	173	20	550
Grp Sat Flow(s),veh/h/ln	1757	1568	1752	1786	1757	1752
Q Serve(g_s), s	0.2	0.1	1.4	1.4	0.2	1.6
Cycle Q Clear(g_c), s	0.2	0.1	1.4	1.4	0.2	1.6
Prop In Lane	1.00	1.00		0.19	1.00	
Lane Grp Cap(c), veh/h	56	50	616	628	37	2002
V/C Ratio(X)	0.38	0.20	0.27	0.28	0.54	0.27
Avail Cap(c_a), veh/h	1396	1246	1566	1597	349	4525
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.6	9.5	4.7	4.7	9.8	2.2
Incr Delay (d2), s/veh	4.2	2.0	0.2	0.2	11.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.7	0.7	0.2	0.8
LnGrp Delay(d),s/veh	13.7	11.5	4.9	4.9	21.5	2.3
LnGrp LOS	B	B	A	A	C	A
Approach Vol, veh/h	31		340			570
Approach Delay, s/veh	13.0		4.9			2.9
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	4.4	11.1				15.5		4.6
Change Period (Y+Rc), s	4.0	4.0				4.0		4.0
Max Green Setting (Gmax), s	4.0	18.0				26.0		16.0
Max Q Clear Time (g_c+I1), s	2.2	3.4				3.6		2.2
Green Ext Time (p_c), s	0.0	3.7				4.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	4.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	14	65	57	12	32	52	193	96	55	389	127
Future Volume (veh/h)	115	14	65	57	12	32	52	193	96	55	389	127
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	115	14	65	57	12	32	52	193	96	55	389	127
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	146	245	208	87	183	156	81	630	301	85	719	232
Arrive On Green	0.08	0.13	0.13	0.05	0.10	0.10	0.05	0.27	0.27	0.05	0.28	0.28
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	2303	1100	1757	2608	841
Grp Volume(v), veh/h	115	14	65	57	12	32	52	145	144	55	260	256
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1651	1757	1752	1696
Q Serve(g_s), s	2.1	0.2	1.2	1.0	0.2	0.6	0.9	2.1	2.2	1.0	4.1	4.2
Cycle Q Clear(g_c), s	2.1	0.2	1.2	1.0	0.2	0.6	0.9	2.1	2.2	1.0	4.1	4.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.67	1.00		0.50
Lane Grp Cap(c), veh/h	146	245	208	87	183	156	81	479	451	85	483	467
V/C Ratio(X)	0.79	0.06	0.31	0.65	0.07	0.21	0.64	0.30	0.32	0.65	0.54	0.55
Avail Cap(c_a), veh/h	381	972	826	327	915	778	218	923	870	218	923	894
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.5	12.2	12.7	15.1	13.2	13.4	15.1	9.3	9.3	15.1	9.9	10.0
Incr Delay (d2), s/veh	9.1	0.1	0.8	8.0	0.1	0.6	8.1	0.4	0.4	8.1	0.9	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.1	0.6	0.7	0.1	0.3	0.6	1.1	1.1	0.7	2.1	2.1
LnGrp Delay(d),s/veh	23.6	12.3	13.5	23.1	13.3	14.0	23.3	9.6	9.7	23.2	10.9	11.0
LnGrp LOS	C	B	B	C	B	B	C	A	A	C	B	B
Approach Vol, veh/h		194			101			341			571	
Approach Delay, s/veh		19.4			19.1			11.8			12.1	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.6	12.8	5.6	8.3	5.5	12.9	6.7	7.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	17.0	6.0	17.0	4.0	17.0	7.0	16.0
Max Q Clear Time (g_c+I1), s	3.0	4.2	3.0	3.2	2.9	6.2	4.1	2.6
Green Ext Time (p_c), s	0.0	2.9	0.0	0.3	0.0	2.7	0.1	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	13.8
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	6.3
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	0	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	0	307	65	310
Demand Flow Rate, veh/h	0	316	67	319
Vehicles Circulating, veh/h	333	67	0	70
Vehicles Exiting, veh/h	56	0	333	313
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	6.5	3.8	6.5
Approach LOS	-	A	A	A

Lane	Left	Left	Left
Designated Moves	LTR	LT	TR
Assumed Moves	LTR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	316	67	319
Cap Entry Lane, veh/h	1057	1130	1054
Entry HV Adj Factor	0.971	0.973	0.972
Flow Entry, veh/h	307	65	310
Cap Entry, veh/h	1026	1099	1024
V/C Ratio	0.299	0.059	0.303
Control Delay, s/veh	6.5	3.8	6.5
LOS	A	A	A
95th %tile Queue, veh	1	0	1

Intersection	
Intersection Delay, s/veh	6.2
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	0	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	156	0	77	322
Demand Flow Rate, veh/h	160	0	80	332
Vehicles Circulating, veh/h	332	69	370	0
Vehicles Exiting, veh/h	0	381	122	69
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.7	0.0	5.8	6.1
Approach LOS	A	-	A	A

Lane	Left	Left	Left
Designated Moves	LTR	TR	LT
Assumed Moves	LTR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	160	80	332
Cap Entry Lane, veh/h	811	780	1130
Entry HV Adj Factor	0.975	0.965	0.969
Flow Entry, veh/h	156	77	322
Cap Entry, veh/h	790	753	1095
V/C Ratio	0.197	0.102	0.294
Control Delay, s/veh	6.7	5.8	6.1
LOS	A	A	A
95th %tile Queue, veh	1	0	1

Intersection	
Intersection Delay, s/veh	24.2
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	0	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	0	201	1586	1486
Demand Flow Rate, veh/h	0	207	1634	1531
Vehicles Circulating, veh/h	1464	1634	0	376
Vehicles Exiting, veh/h	443	0	1464	1465
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	26.2	15.3	33.5
Approach LOS	-	D	C	D

Lane	Left	Left	Right	Left	Right
Designated Moves	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Critical Headway, s	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	207	768	866	720	811
Cap Entry Lane, veh/h	360	1130	1130	852	868
Entry HV Adj Factor	0.971	0.971	0.971	0.970	0.971
Flow Entry, veh/h	201	746	841	699	788
Cap Entry, veh/h	349	1097	1097	827	844
V/C Ratio	0.575	0.680	0.766	0.845	0.934
Control Delay, s/veh	26.2	13.3	17.0	27.3	38.9
LOS	D	B	C	D	E
95th %tile Queue, veh	3	6	8	10	14

Intersection	
Intersection Delay, s/veh	18.2
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	2	0	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	352	0	1503	1422
Demand Flow Rate, veh/h	363	0	1548	1465
Vehicles Circulating, veh/h	1465	1633	238	0
Vehicles Exiting, veh/h	0	153	1590	1633
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	19.8	0.0	23.1	12.5
Approach LOS	C	-	C	B

Lane	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	TR
Assumed Moves	LT	TR	LT	TR	LT	TR
RT Channelized						
Lane Util	0.471	0.529	0.470	0.530	0.470	0.530
Critical Headway, s	4.293	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	171	192	728	820	689	776
Cap Entry Lane, veh/h	377	405	945	957	1130	1130
Entry HV Adj Factor	0.968	0.972	0.971	0.972	0.970	0.971
Flow Entry, veh/h	165	187	707	797	668	754
Cap Entry, veh/h	364	394	917	929	1096	1098
V/C Ratio	0.454	0.474	0.770	0.857	0.610	0.687
Control Delay, s/veh	20.1	19.5	19.6	26.3	11.3	13.6
LOS	C	C	C	D	B	B
95th %tile Queue, veh	2	2	8	11	4	6

Intersection	
Intersection Delay, s/veh	21.8
Intersection LOS	C

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	290	634	825
Demand Flow Rate, veh/h	299	653	850
Vehicles Circulating, veh/h	569	338	94
Vehicles Exiting, veh/h	422	606	774
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	13.1	25.1	22.2
Approach LOS	B	D	C

Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	299	653	850
Cap Entry Lane, veh/h	640	806	1029
Entry HV Adj Factor	0.970	0.972	0.971
Flow Entry, veh/h	290	634	825
Cap Entry, veh/h	620	783	998
V/C Ratio	0.467	0.810	0.826
Control Delay, s/veh	13.1	25.1	22.2
LOS	B	D	C
95th %tile Queue, veh	2	9	10

Intersection	
Intersection Delay, s/veh	13.7
Intersection LOS	B

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	335	596	588
Demand Flow Rate, veh/h	345	614	605
Vehicles Circulating, veh/h	501	155	193
Vehicles Exiting, veh/h	268	644	653
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	13.3	13.4	14.3
Approach LOS	B	B	B

Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	345	614	605
Cap Entry Lane, veh/h	685	968	932
Entry HV Adj Factor	0.971	0.971	0.972
Flow Entry, veh/h	335	596	588
Cap Entry, veh/h	665	940	905
V/C Ratio	0.504	0.634	0.649
Control Delay, s/veh	13.3	13.4	14.3
LOS	B	B	B
95th %tile Queue, veh	3	5	5

Intersection	
Intersection Delay, s/veh	13.2
Intersection LOS	B

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	252	652	625
Demand Flow Rate, veh/h	260	672	643
Vehicles Circulating, veh/h	481	112	127
Vehicles Exiting, veh/h	303	658	614
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	10.3	14.0	13.5
Approach LOS	B	B	B

Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	260	672	643
Cap Entry Lane, veh/h	698	1010	995
Entry HV Adj Factor	0.969	0.970	0.971
Flow Entry, veh/h	252	652	625
Cap Entry, veh/h	677	980	967
V/C Ratio	0.372	0.665	0.646
Control Delay, s/veh	10.3	14.0	13.5
LOS	B	B	B
95th %tile Queue, veh	2	5	5

Intersection	
Intersection Delay, s/veh	68.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	356	17	2	621	4	10	8	2	61	11	402
Future Vol, veh/h	62	356	17	2	621	4	10	8	2	61	11	402
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	4	4	4	4	4	4	3	3	3	3	3	3
Mvmt Flow	62	356	17	2	621	4	10	8	2	61	11	402
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	34.8	118.7	12.9	36.4
HCM LOS	D	F	B	E

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	50%	14%	0%	13%
Vol Thru, %	40%	82%	99%	2%
Vol Right, %	10%	4%	1%	85%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	435	627	474
LT Vol	10	62	2	61
Through Vol	8	356	621	11
RT Vol	2	17	4	402
Lane Flow Rate	20	435	627	474
Geometry Grp	1	1	1	1
Degree of Util (X)	0.049	0.817	1.17	0.843
Departure Headway (Hd)	9.433	7.172	6.715	6.817
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	382	509	545	536
Service Time	7.433	5.172	4.718	4.817
HCM Lane V/C Ratio	0.052	0.855	1.15	0.884
HCM Control Delay	12.9	34.8	118.7	36.4
HCM Lane LOS	B	D	F	E
HCM 95th-tile Q	0.2	7.9	22.1	8.7

Intersection	
Intersection Delay, s/veh	108
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	97	3	22	0	1	1	14	285	1	1	680	325
Future Vol, veh/h	97	3	22	0	1	1	14	285	1	1	680	325
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	97	3	22	0	1	1	14	285	1	1	680	325
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.9	10.1	12.8	148.2
HCM LOS	B	B	B	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	80%	0%	0%
Vol Thru, %	95%	2%	50%	68%
Vol Right, %	0%	18%	50%	32%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	300	122	2	1006
LT Vol	14	97	0	1
Through Vol	285	3	1	680
RT Vol	1	22	1	325
Lane Flow Rate	300	122	2	1006
Geometry Grp	1	1	1	1
Degree of Util (X)	0.437	0.217	0.004	1.271
Departure Headway (Hd)	5.574	6.978	7.065	4.55
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	651	517	510	795
Service Time	3.574	4.978	5.065	2.595
HCM Lane V/C Ratio	0.461	0.236	0.004	1.265
HCM Control Delay	12.8	11.9	10.1	148.2
HCM Lane LOS	B	B	B	F
HCM 95th-tile Q	2.2	0.8	0	36.7

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	288	0	103	0	19	77	195	136	0
Future Vol, veh/h	0	0	0	288	0	103	0	19	77	195	136	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	0	288	0	103	0	19	77	195	136	0
Number of Lanes	0	1	0	0	1	0	0	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	0	14	9	11.2
HCM LOS	-	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	0%	0%	74%	100%	0%
Vol Thru, %	20%	100%	0%	0%	100%
Vol Right, %	80%	0%	26%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	96	0	391	195	136
LT Vol	0	0	288	195	0
Through Vol	19	0	0	0	136
RT Vol	77	0	103	0	0
Lane Flow Rate	96	0	391	195	136
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.137	0	0.544	0.339	0.217
Departure Headway (Hd)	5.151	5.73	5.012	6.262	5.756
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	700	0	712	577	627
Service Time	3.157	3.749	3.093	3.965	3.459
HCM Lane V/C Ratio	0.137	0	0.549	0.338	0.217
HCM Control Delay	9	8.7	14	12.1	10
HCM Lane LOS	A	N	B	B	A
HCM 95th-tile Q	0.5	0	3.3	1.5	0.8

Intersection	
Intersection Delay, s/veh	14.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	25	0	12	1	333	6	190	355	0
Future Vol, veh/h	0	0	0	25	0	12	1	333	6	190	355	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	20	20	20	5	5	5	6	6	6
Mvmt Flow	0	0	0	25	0	12	1	333	6	190	355	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	9.6	11.3	17
HCM LOS	-	A	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	68%	35%
Vol Thru, %	98%	100%	0%	65%
Vol Right, %	2%	0%	32%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	340	0	37	545
LT Vol	1	0	25	190
Through Vol	333	0	0	355
RT Vol	6	0	12	0
Lane Flow Rate	340	0	37	545
Geometry Grp	1	1	1	1
Degree of Util (X)	0.44	0	0.063	0.688
Departure Headway (Hd)	4.66	5.977	6.113	4.547
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	772	0	583	796
Service Time	2.691	4.056	4.182	2.575
HCM Lane V/C Ratio	0.44	0	0.063	0.685
HCM Control Delay	11.3	9.1	9.6	17
HCM Lane LOS	B	N	A	C
HCM 95th-tile Q	2.3	0	0.2	5.6

Intersection	
Intersection Delay, s/veh	82.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	151	52	19	288	3	68	214	9	18	512	135
Future Vol, veh/h	36	151	52	19	288	3	68	214	9	18	512	135
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	3	3	3
Mvmt Flow	36	151	52	19	288	3	68	214	9	18	512	135
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	20.4	26	23.2	156.5
HCM LOS	C	D	C	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	23%	15%	6%	3%
Vol Thru, %	74%	63%	93%	77%
Vol Right, %	3%	22%	1%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	291	239	310	665
LT Vol	68	36	19	18
Through Vol	214	151	288	512
RT Vol	9	52	3	135
Lane Flow Rate	291	239	310	665
Geometry Grp	1	1	1	1
Degree of Util (X)	0.611	0.518	0.657	1.266
Departure Headway (Hd)	8.184	8.583	8.361	6.853
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	445	423	434	532
Service Time	6.184	6.583	6.361	4.922
HCM Lane V/C Ratio	0.654	0.565	0.714	1.25
HCM Control Delay	23.2	20.4	26	156.5
HCM Lane LOS	C	C	D	F
HCM 95th-tile Q	4	2.9	4.6	26.6

Intersection	
Int Delay, s/veh	4.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	66	93	859	95	255	102
Future Vol, veh/h	66	93	859	95	255	102
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	70	0	-	-	85	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	4	4	3	3	3	3
Mvmt Flow	66	93	859	95	255	102

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1468	477	0	0	954	0
Stage 1	907	-	-	-	-	-
Stage 2	561	-	-	-	-	-
Critical Hdwy	6.88	6.98	-	-	4.16	-
Critical Hdwy Stg 1	5.88	-	-	-	-	-
Critical Hdwy Stg 2	5.88	-	-	-	-	-
Follow-up Hdwy	3.54	3.34	-	-	2.23	-
Pot Cap-1 Maneuver	116	529	-	-	710	-
Stage 1	349	-	-	-	-	-
Stage 2	529	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	74	529	-	-	710	-
Mov Cap-2 Maneuver	191	-	-	-	-	-
Stage 1	349	-	-	-	-	-
Stage 2	339	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.7	0	9.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	191	529	710	-
HCM Lane V/C Ratio	-	-	0.346	0.176	0.359	-
HCM Control Delay (s)	-	-	33.5	13.3	12.9	-
HCM Lane LOS	-	-	D	B	B	-
HCM 95th %tile Q(veh)	-	-	1.4	0.6	1.6	-

Intersection	
Int Delay, s/veh	10.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	299	32	317	158	22	179
Future Vol, veh/h	299	32	317	158	22	179
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	4	4	4	4
Mvmt Flow	299	32	317	158	22	179

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	619	396	0	0	475	0
Stage 1	396	-	-	-	-	-
Stage 2	223	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.14	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.236	-
Pot Cap-1 Maneuver	451	651	-	-	1077	-
Stage 1	678	-	-	-	-	-
Stage 2	812	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	441	651	-	-	1077	-
Mov Cap-2 Maneuver	441	-	-	-	-	-
Stage 1	678	-	-	-	-	-
Stage 2	793	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	31.3	0	0.9
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	455	1077	-
HCM Lane V/C Ratio	-	-	0.727	0.02	-
HCM Control Delay (s)	-	-	31.3	8.4	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	5.8	0.1	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	83	2302	2106	25	14	30
Future Vol, veh/h	83	2302	2106	25	14	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	190	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	6	6	6	6	3	3
Mvmt Flow	83	2302	2106	25	14	30

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2131	0	-	0	3436	1066
Stage 1	-	-	-	-	2119	-
Stage 2	-	-	-	-	1317	-
Critical Hdwy	4.22	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.26	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	238	-	-	-	~ 5	217
Stage 1	-	-	-	-	77	-
Stage 2	-	-	-	-	213	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	238	-	-	-	~ 3	217
Mov Cap-2 Maneuver	-	-	-	-	46	-
Stage 1	-	-	-	-	77	-
Stage 2	-	-	-	-	139	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	67.7
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	238	-	-	-	99
HCM Lane V/C Ratio	0.349	-	-	-	0.444
HCM Control Delay (s)	28	-	-	-	67.7
HCM Lane LOS	D	-	-	-	F
HCM 95th %tile Q(veh)	1.5	-	-	-	1.9

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	1	2	0	2	0	69	6	1	466	4
Future Vol, veh/h	2	0	1	2	0	2	0	69	6	1	466	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	2	0	1	2	0	2	0	69	6	1	466	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	543	545	468	543	544	72	470	0	0	75	0	0
Stage 1	470	470	-	72	72	-	-	-	-	-	-	-
Stage 2	73	75	-	471	472	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	449	444	593	449	445	987	1086	-	-	1518	-	-
Stage 1	572	558	-	935	833	-	-	-	-	-	-	-
Stage 2	934	831	-	571	557	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	448	444	593	448	445	987	1086	-	-	1518	-	-
Mov Cap-2 Maneuver	448	444	-	448	445	-	-	-	-	-	-	-
Stage 1	572	557	-	935	833	-	-	-	-	-	-	-
Stage 2	932	831	-	569	556	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.4	10.9	0	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1086	-	-	488	616	1518	-	-
HCM Lane V/C Ratio	-	-	-	0.006	0.006	0.001	-	-
HCM Control Delay (s)	0	-	-	12.4	10.9	7.4	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	67	34	33	707	789	132
Future Vol, veh/h	67	34	33	707	789	132
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	67	34	33	707	789	132

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1628	855	921	0	-	0
Stage 1	855	-	-	-	-	-
Stage 2	773	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	112	356	737	-	-	-
Stage 1	415	-	-	-	-	-
Stage 2	454	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	107	356	737	-	-	-
Mov Cap-2 Maneuver	107	-	-	-	-	-
Stage 1	415	-	-	-	-	-
Stage 2	434	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	78.8	0.5	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	737	-	140	-	-
HCM Lane V/C Ratio	0.045	-	0.721	-	-
HCM Control Delay (s)	10.1	-	78.8	-	-
HCM Lane LOS	B	-	F	-	-
HCM 95th %tile Q(veh)	0.1	-	4.2	-	-

Intersection	
Int Delay, s/veh	41.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	322	119	381	288	168	303
Future Vol, veh/h	322	119	381	288	168	303
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	300	250	-	150	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	322	119	381	288	168	303

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	322	0	1372	322
Stage 1	-	-	-	-	322	-
Stage 2	-	-	-	-	1050	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1232	-	~ 160	717
Stage 1	-	-	-	-	732	-
Stage 2	-	-	-	-	335	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1232	-	~ 111	717
Mov Cap-2 Maneuver	-	-	-	-	~ 111	-
Stage 1	-	-	-	-	732	-
Stage 2	-	-	-	-	231	-

Approach	EB	WB	NB
HCM Control Delay, s	0	5.3	130.5
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	111	717	-	-	1232	-
HCM Lane V/C Ratio	1.514	0.423	-	-	0.309	-
HCM Control Delay (s)	$ 341.2	13.6	-	-	9.2	-
HCM Lane LOS	F	B	-	-	A	-
HCM 95th %tile Q(veh)	12.3	2.1	-	-	1.3	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	35.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	125	140	7	0	216	1	8	98	0	1	262	216
Future Vol, veh/h	125	140	7	0	216	1	8	98	0	1	262	216
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	8	8	8	10	10	10	8	8	8	8	8	8
Mvmt Flow	125	140	7	0	216	1	8	98	0	1	262	216

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	217	0	0	147	0	0	850	611	144	660	614	217
Stage 1	-	-	-	-	-	-	394	394	-	217	217	-
Stage 2	-	-	-	-	-	-	456	217	-	443	397	-
Critical Hdwy	4.18	-	-	4.2	-	-	7.18	6.58	6.28	7.18	6.58	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Follow-up Hdwy	2.272	-	-	2.29	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	1318	-	-	1387	-	-	274	401	888	368	399	808
Stage 1	-	-	-	-	-	-	619	595	-	772	712	-
Stage 2	-	-	-	-	-	-	573	712	-	582	593	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1318	-	-	1387	-	-	76	360	888	269	358	808
Mov Cap-2 Maneuver	-	-	-	-	-	-	76	360	-	269	358	-
Stage 1	-	-	-	-	-	-	555	534	-	692	712	-
Stage 2	-	-	-	-	-	-	265	712	-	426	532	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.7	0	25.4	71.3
HCM LOS			D	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	281	1318	-	-	1387	-	-	478
HCM Lane V/C Ratio	0.377	0.095	-	-	-	-	-	1.002
HCM Control Delay (s)	25.4	8	0	-	0	-	-	71.3
HCM Lane LOS	D	A	A	-	A	-	-	F
HCM 95th %tile Q(veh)	1.7	0.3	-	-	0	-	-	13.5

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	84	47	41	110	55	24
Future Vol, veh/h	84	47	41	110	55	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	84	47	41	110	55	24

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	259	67	79	0	-	0
Stage 1	67	-	-	-	-	-
Stage 2	192	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	728	994	1513	-	-	-
Stage 1	953	-	-	-	-	-
Stage 2	838	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	707	994	1513	-	-	-
Mov Cap-2 Maneuver	707	-	-	-	-	-
Stage 1	953	-	-	-	-	-
Stage 2	814	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.5	2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1513	-	789	-	-
HCM Lane V/C Ratio	0.027	-	0.166	-	-
HCM Control Delay (s)	7.4	0	10.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	15	8	142	92	4
Future Vol, veh/h	8	15	8	142	92	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	8	15	8	142	92	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	252	94	96	0	-	0
Stage 1	94	-	-	-	-	-
Stage 2	158	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	734	960	1491	-	-	-
Stage 1	927	-	-	-	-	-
Stage 2	868	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	730	960	1491	-	-	-
Mov Cap-2 Maneuver	730	-	-	-	-	-
Stage 1	927	-	-	-	-	-
Stage 2	863	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	0.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1491	-	865	-	-
HCM Lane V/C Ratio	0.005	-	0.027	-	-
HCM Control Delay (s)	7.4	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	8.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	187	92	129	130	79	119
Future Vol, veh/h	187	92	129	130	79	119
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	187	92	129	130	79	119

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	527	139	198	0	-	0
Stage 1	139	-	-	-	-	-
Stage 2	388	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	510	907	1369	-	-	-
Stage 1	885	-	-	-	-	-
Stage 2	683	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	458	907	1369	-	-	-
Mov Cap-2 Maneuver	458	-	-	-	-	-
Stage 1	885	-	-	-	-	-
Stage 2	613	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.2	3.9	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1369	-	547	-	-
HCM Lane V/C Ratio	0.094	-	0.51	-	-
HCM Control Delay (s)	7.9	0	18.2	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.3	-	2.9	-	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	57	2	5	106	98	40
Future Vol, veh/h	57	2	5	106	98	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	150	0	150	-	-	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	57	2	5	106	98	40

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	214	98	98	0	-	0
Stage 1	98	-	-	-	-	-
Stage 2	116	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	772	955	1489	-	-	-
Stage 1	923	-	-	-	-	-
Stage 2	906	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	769	955	1489	-	-	-
Mov Cap-2 Maneuver	769	-	-	-	-	-
Stage 1	923	-	-	-	-	-
Stage 2	903	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	0.3	0
HCM LOS	B		

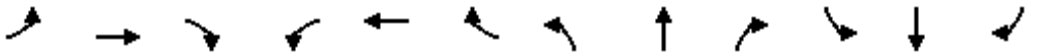
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1489	-	769	955	-	-
HCM Lane V/C Ratio	0.003	-	0.074	0.002	-	-
HCM Control Delay (s)	7.4	-	10.1	8.8	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	0	-	-

Appendix B

Cumulative Synchro Reports

Cumulative No Project

AM

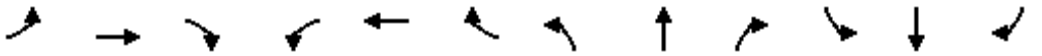


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	161	0	313	213	485	1251	0	1831	600	0	1693	485
Future Volume (vph)	161	0	313	213	485	1251	0	1831	600	0	1693	485
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00		0.88	0.86	0.81	0.91		0.91	1.00		0.86	1.00
Frt	1.00		0.85	1.00	0.92	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00	1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)	1752		2760	2985	2712	1413		4988	1553		6285	1553
Flt Permitted	0.95		1.00	0.95	1.00	1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)	1752		2760	2985	2712	1413		4988	1553		6285	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	161	0	313	213	485	1251	0	1831	600	0	1693	485
RTOR Reduction (vph)	0	0	275	0	36	36	0	0	0	0	0	176
Lane Group Flow (vph)	161	0	38	192	1096	589	0	1831	600	0	1693	309
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot		Perm	Split	NA	Perm		NA	Free		NA	Perm
Protected Phases	4			8	8			2			6	
Permitted Phases			4			8			Free			6
Actuated Green, G (s)	14.4		14.4	47.0	47.0	47.0		45.0	118.4		45.0	45.0
Effective Green, g (s)	14.4		14.4	47.0	47.0	47.0		45.0	118.4		45.0	45.0
Actuated g/C Ratio	0.12		0.12	0.40	0.40	0.40		0.38	1.00		0.38	0.38
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0		4.0			4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	213		335	1184	1076	560		1895	1553		2388	590
v/s Ratio Prot	c0.09			0.06	0.40			c0.37			0.27	
v/s Ratio Perm			0.01			c0.42			0.39			0.20
v/c Ratio	0.76		0.11	0.16	1.11dr	1.05		0.97	0.39		0.71	0.52
Uniform Delay, d1	50.3		46.3	23.0	35.7	35.7		36.0	0.0		31.1	28.4
Progression Factor	1.00		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	14.1		0.2	0.1	32.1	52.3		13.5	0.7		1.0	0.8
Delay (s)	64.4		46.5	23.1	67.8	88.0		49.4	0.7		32.1	29.2
Level of Service	E		D	C	E	F		D	A		C	C
Approach Delay (s)		52.6			69.9			37.4			31.5	
Approach LOS		D			E			D			C	

Intersection Summary			
HCM 2000 Control Delay	45.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	118.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	105.9%	ICU Level of Service	G
Analysis Period (min)	15		

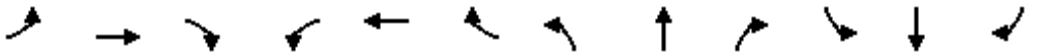
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group



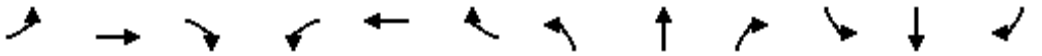
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	613	0	1630	0	0	0	0	1772	785	0	1090	656
Future Volume (vph)	613	0	1630	0	0	0	0	1772	785	0	1090	656
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	4.0		4.0	4.0
Lane Util. Factor	0.97		0.88					0.91	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3367		2733					4988	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3367		2733					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	613	0	1630	0	0	0	0	1772	785	0	1090	656
RTOR Reduction (vph)	0	0	14	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	613	0	1616	0	0	0	0	1772	785	0	1090	656
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	56.0		56.0					36.0	100.0		36.0	100.0
Effective Green, g (s)	56.0		56.0					36.0	100.0		36.0	100.0
Actuated g/C Ratio	0.56		0.56					0.36	1.00		0.36	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	1885		1530					1795	1553		1795	1553
v/s Ratio Prot								c0.36			0.22	
v/s Ratio Perm	0.18		c0.59						0.51			0.42
v/c Ratio	0.33		1.06					0.99	0.51		0.61	0.42
Uniform Delay, d1	11.8		22.0					31.8	0.0		26.2	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1		39.5					18.1	1.2		0.6	0.8
Delay (s)	11.9		61.5					49.9	1.2		26.8	0.8
Level of Service	B		E					D	A		C	A
Approach Delay (s)		48.0			0.0			34.9			17.0	
Approach LOS		D			A			C			B	

Intersection Summary			
HCM 2000 Control Delay	34.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	84.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



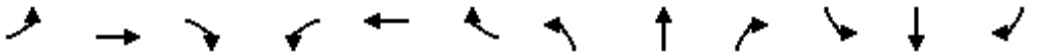
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	152	470	100	104	1046	722	489	1681	87	1131	1601	95
Future Volume (vph)	152	470	100	104	1046	722	489	1681	87	1131	1601	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		0.97	0.95	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	3380		3367	3471	2733	3367	4988	1553	3367	4988	1553
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	3380		3367	3471	2733	3367	4988	1553	3367	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	152	470	100	104	1046	722	489	1681	87	1131	1601	95
RTOR Reduction (vph)	0	16	0	0	0	542	0	0	60	0	0	56
Lane Group Flow (vph)	152	554	0	104	1046	181	489	1681	27	1131	1601	39
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	4.0	24.7		9.3	30.0	30.0	20.3	37.0	37.0	33.0	49.7	49.7
Effective Green, g (s)	4.0	24.7		9.3	30.0	30.0	20.3	37.0	37.0	33.0	49.7	49.7
Actuated g/C Ratio	0.03	0.21		0.08	0.25	0.25	0.17	0.31	0.31	0.28	0.41	0.41
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	112	695		260	867	683	569	1537	478	925	2065	643
v/s Ratio Prot	c0.05	0.16		0.03	c0.30		0.15	c0.34		c0.34	0.32	
v/s Ratio Perm						0.07			0.02			0.03
v/c Ratio	1.36	0.80		0.40	1.21	0.26	0.86	1.09	0.06	1.22	0.78	0.06
Uniform Delay, d1	58.0	45.3		52.7	45.0	36.1	48.5	41.5	29.2	43.5	30.3	21.1
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	207.9	6.3		1.0	103.8	0.2	12.3	53.0	0.0	110.0	1.9	0.0
Delay (s)	265.9	51.6		53.7	148.8	36.3	60.8	94.5	29.3	153.5	32.2	21.2
Level of Service	F	D		D	F	D	E	F	C	F	C	C
Approach Delay (s)		96.7			100.1			84.7			80.3	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	88.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	111.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	142	230	1093	5	499	27	1053	12	2	20	14	210
Future Volume (vph)	142	230	1093	5	499	27	1053	12	2	20	14	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.97	1.00
Satd. Flow (prot)	1736	3471	1553	1736	3471	1553	1618	1624	1524		1792	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.97	1.00
Satd. Flow (perm)	1736	3471	1553	1736	3471	1553	1618	1624	1524		1792	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	142	230	1093	5	499	27	1053	12	2	20	14	210
RTOR Reduction (vph)	0	0	315	0	0	21	0	0	1	0	0	140
Lane Group Flow (vph)	142	230	778	5	499	6	537	528	1	0	34	70
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4	2	3	8		2	2		6	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	7.0	24.5	54.6	0.7	18.2	18.2	30.1	30.1	30.1		9.0	9.0
Effective Green, g (s)	7.0	24.5	54.6	0.7	18.2	18.2	30.1	30.1	30.1		9.0	9.0
Actuated g/C Ratio	0.09	0.31	0.68	0.01	0.23	0.23	0.37	0.37	0.37		0.11	0.11
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	151	1059	1133	15	786	351	606	608	571		200	175
v/s Ratio Prot	c0.08	0.07	c0.26	0.00	0.14		c0.33	0.33			0.02	
v/s Ratio Perm			0.24			0.00			0.00			c0.04
v/c Ratio	0.94	0.22	0.69	0.33	0.63	0.02	0.89	0.87	0.00		0.17	0.40
Uniform Delay, d1	36.4	20.8	7.7	39.6	28.0	24.1	23.5	23.3	15.7		32.3	33.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	55.4	0.1	1.7	12.7	1.7	0.0	14.5	12.5	0.0		0.4	1.5
Delay (s)	91.9	20.9	9.5	52.2	29.7	24.1	38.0	35.8	15.7		32.7	34.6
Level of Service	F	C	A	D	C	C	D	D	B		C	C
Approach Delay (s)		19.2			29.7			36.9			34.4	
Approach LOS		B			C			D			C	

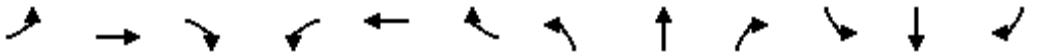
Intersection Summary			
HCM 2000 Control Delay	27.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	80.3	Sum of lost time (s)	20.0
Intersection Capacity Utilization	84.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	196	32	192	353	66	208	105	368	110	127	34
Future Volume (vph)	26	196	32	192	353	66	208	105	368	110	127	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		0.95	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85		0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00		0.98	
Satd. Flow (prot)	1752	3505	1568	1752	3422		1665	1723	1568		3370	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00		0.98	
Satd. Flow (perm)	1752	3505	1568	1752	3422		1665	1723	1568		3370	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	26	196	32	192	353	66	208	105	368	110	127	34
RTOR Reduction (vph)	0	0	26	0	17	0	0	0	295	0	15	0
Lane Group Flow (vph)	26	196	6	192	402	0	154	159	73	0	256	0
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4						2			
Actuated Green, G (s)	1.7	11.4	11.4	10.5	20.2		11.9	11.9	11.9		9.8	
Effective Green, g (s)	1.7	11.4	11.4	10.5	20.2		11.9	11.9	11.9		9.8	
Actuated g/C Ratio	0.03	0.19	0.19	0.18	0.34		0.20	0.20	0.20		0.16	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	49	670	299	308	1159		332	344	313		554	
v/s Ratio Prot	0.01	0.06		c0.11	c0.12		c0.09	0.09			c0.08	
v/s Ratio Perm			0.00						0.05			
v/c Ratio	0.53	0.29	0.02	0.62	0.35		0.46	0.46	0.23		0.46	
Uniform Delay, d1	28.6	20.6	19.6	22.7	14.8		21.0	21.0	20.0		22.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	10.6	0.2	0.0	3.9	0.2		1.0	1.0	0.4		0.6	
Delay (s)	39.2	20.9	19.6	26.6	14.9		22.1	22.0	20.4		23.1	
Level of Service	D	C	B	C	B		C	C	C		C	
Approach Delay (s)		22.6			18.6			21.2			23.1	
Approach LOS		C			B			C			C	

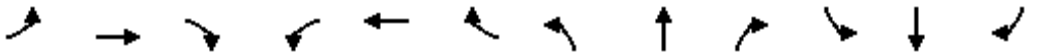
Intersection Summary			
HCM 2000 Control Delay	20.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	59.6	Sum of lost time (s)	20.0
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



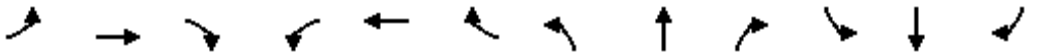
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	718	314	468	773	19	698	48	329	28	144	39
Future Volume (vph)	21	718	314	468	773	19	698	48	329	28	144	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	3.9	3.9	5.5	4.0	4.0	4.3	4.3		5.1	5.1	5.1
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.87		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1568	3400	3505	1568	3367	3017		1752	3505	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	3505	1568	3400	3505	1568	3367	3017		1752	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	21	718	314	468	773	19	698	48	329	28	144	39
RTOR Reduction (vph)	0	0	218	0	0	10	0	245	0	0	0	36
Lane Group Flow (vph)	21	718	96	468	773	9	698	132	0	28	144	3
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	3%	3%	3%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		8	8		4	4	
Permitted Phases			6			2						4
Actuated Green, G (s)	2.1	28.7	28.7	16.1	42.6	42.6	24.2	24.2		7.2	7.2	7.2
Effective Green, g (s)	2.1	28.7	28.7	16.1	42.6	42.6	24.2	24.2		7.2	7.2	7.2
Actuated g/C Ratio	0.02	0.30	0.30	0.17	0.45	0.45	0.25	0.25		0.08	0.08	0.08
Clearance Time (s)	5.5	3.9	3.9	5.5	4.0	4.0	4.3	4.3		5.1	5.1	5.1
Vehicle Extension (s)	1.0	4.9	4.9	1.0	4.1	4.1	2.0	2.0		1.0	1.0	1.0
Lane Grp Cap (vph)	38	1058	473	576	1571	703	857	768		132	265	118
v/s Ratio Prot	0.01	c0.20		c0.14	0.22		c0.21	0.04		0.02	c0.04	
v/s Ratio Perm			0.06			0.01						0.00
v/c Ratio	0.55	0.68	0.20	0.81	0.49	0.01	0.81	0.17		0.21	0.54	0.03
Uniform Delay, d1	46.0	29.1	24.6	38.0	18.5	14.5	33.3	27.6		41.2	42.3	40.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.5	2.2	0.4	8.1	0.4	0.0	5.7	0.0		0.3	1.2	0.0
Delay (s)	55.5	31.3	25.1	46.1	18.9	14.5	39.0	27.6		41.5	43.5	40.7
Level of Service	E	C	C	D	B	B	D	C		D	D	D
Approach Delay (s)		29.9			28.9			35.0			42.7	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	31.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	22.9
Intersection Capacity Utilization	72.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



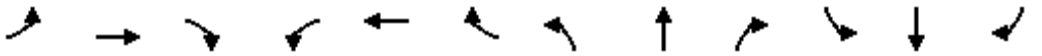
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	956	0	642	0	1270	970	0	604	389
Future Volume (vph)	0	0	0	956	0	642	0	1270	970	0	604	389
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.6		4.6		3.5	4.0		5.1	4.0
Lane Util. Factor				0.97		0.88		0.91	1.00		0.91	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3367		2733		4988	1553		4988	1553
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3367		2733		4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	956	0	642	0	1270	970	0	604	389
RTOR Reduction (vph)	0	0	0	0	0	29	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	956	0	613	0	1270	970	0	604	389
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type				Prot		Perm		NA	Free		NA	Free
Protected Phases				4				6			2	
Permitted Phases						4			Free			Free
Actuated Green, G (s)				14.7		14.7		15.7	38.5		14.1	38.5
Effective Green, g (s)				14.7		14.7		15.7	38.5		14.1	38.5
Actuated g/C Ratio				0.38		0.38		0.41	1.00		0.37	1.00
Clearance Time (s)				4.6		4.6		3.5			5.1	
Vehicle Extension (s)				1.0		1.0		1.0			1.0	
Lane Grp Cap (vph)				1285		1043		2034	1553		1826	1553
v/s Ratio Prot				0.28				0.25			0.12	
v/s Ratio Perm						0.22			c0.62			0.25
v/c Ratio				0.74		0.59		0.62	0.62		0.33	0.25
Uniform Delay, d1				10.3		9.5		9.1	0.0		8.8	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				2.1		0.5		0.4	1.9		0.0	0.4
Delay (s)				12.4		10.0		9.5	1.9		8.8	0.4
Level of Service				B		B		A	A		A	A
Approach Delay (s)		0.0			11.4			6.2			5.5	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	38.5	Sum of lost time (s)	9.7
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	756	0	1447	0	0	0	0	1484	1387	0	1309	247
Future Volume (vph)	756	0	1447	0	0	0	0	1484	1387	0	1309	247
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4		6.4					5.1	4.0		4.6	4.0
Lane Util. Factor	0.97		0.88					0.91	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3367		2733					4988	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3367		2733					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	756	0	1447	0	0	0	0	1484	1387	0	1309	247
RTOR Reduction (vph)	0	0	14	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	756	0	1433	0	0	0	0	1484	1387	0	1309	247
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	42.3		42.3					25.5	79.3		26.0	79.3
Effective Green, g (s)	42.3		42.3					25.5	79.3		26.0	79.3
Actuated g/C Ratio	0.53		0.53					0.32	1.00		0.33	1.00
Clearance Time (s)	6.4		6.4					5.1			4.6	
Vehicle Extension (s)	1.0		1.0					1.0			1.0	
Lane Grp Cap (vph)	1796		1457					1603	1553		1635	1553
v/s Ratio Prot								0.30			0.26	
v/s Ratio Perm	0.22		0.52						c0.89			0.16
v/c Ratio	0.42		0.98					0.93	0.89		0.80	0.16
Uniform Delay, d1	11.1		18.2					26.0	0.0		24.3	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1		19.6					9.4	8.3		2.7	0.2
Delay (s)	11.2		37.8					35.3	8.3		27.0	0.2
Level of Service	B		D					D	A		C	A
Approach Delay (s)		28.7			0.0			22.3			22.8	
Approach LOS		C			A			C			C	

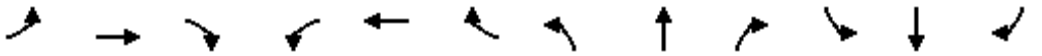
Intersection Summary			
HCM 2000 Control Delay	24.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	79.3	Sum of lost time (s)	11.5
Intersection Capacity Utilization	85.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	457	2	16	8	1	1	118	151	2	0	41	217
Future Volume (vph)	457	2	16	8	1	1	118	151	2	0	41	217
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	0.95			0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.93		1.00	1.00			1.00	0.85
Flt Protected	0.95	0.95	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1665	1670	1568	1752	1706		1752	3498			3505	1568
Flt Permitted	0.95	0.95	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (perm)	1665	1670	1568	1752	1706		1752	3498			3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	457	2	16	8	1	1	118	151	2	0	41	217
RTOR Reduction (vph)	0	0	12	0	1	0	0	1	0	0	0	174
Lane Group Flow (vph)	228	231	4	8	1	0	118	152	0	0	41	43
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	10.9	10.9	10.9	0.9	0.9		4.6	16.7			8.1	8.1
Effective Green, g (s)	10.9	10.9	10.9	0.9	0.9		4.6	16.7			8.1	8.1
Actuated g/C Ratio	0.27	0.27	0.27	0.02	0.02		0.11	0.41			0.20	0.20
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	448	449	422	38	37		198	1442			701	313
v/s Ratio Prot	0.14	c0.14		c0.00	0.00		c0.07	0.04			0.01	
v/s Ratio Perm			0.00									c0.03
v/c Ratio	0.51	0.51	0.01	0.21	0.03		0.60	0.11			0.06	0.14
Uniform Delay, d1	12.5	12.6	10.8	19.5	19.4		17.1	7.3			13.1	13.3
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.9	1.0	0.0	2.8	0.3		4.8	0.0			0.0	0.2
Delay (s)	13.4	13.6	10.9	22.2	19.7		21.8	7.3			13.1	13.5
Level of Service	B	B	B	C	B		C	A			B	B
Approach Delay (s)		13.4			21.7			13.6			13.5	
Approach LOS		B			C			B			B	

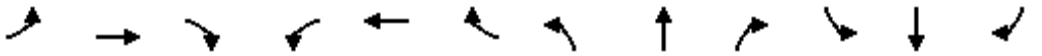
Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	40.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	39.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



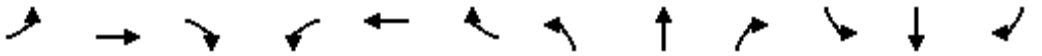
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	928	0	379	0	1283	639	0	1108	218
Future Volume (vph)	0	0	0	928	0	379	0	1283	639	0	1108	218
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.9	4.9			4.8	4.0		4.8	4.0
Lane Util. Factor				0.95	0.95			0.91	1.00		0.91	1.00
Frt				1.00	0.91			1.00	0.85		1.00	0.85
Flt Protected				0.95	0.98			1.00	1.00		1.00	1.00
Satd. Flow (prot)				1649	1548			4988	1553		4988	1553
Flt Permitted				0.95	0.98			1.00	1.00		1.00	1.00
Satd. Flow (perm)				1649	1548			4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	928	0	379	0	1283	639	0	1108	218
RTOR Reduction (vph)	0	0	0	0	21	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	677	609	0	0	1283	639	0	1108	218
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type				Perm	NA			NA	Free		NA	Free
Protected Phases					8			2			6	
Permitted Phases				8					Free			Free
Actuated Green, G (s)				21.5	21.5			14.9	46.1		14.9	46.1
Effective Green, g (s)				21.5	21.5			14.9	46.1		14.9	46.1
Actuated g/C Ratio				0.47	0.47			0.32	1.00		0.32	1.00
Clearance Time (s)				4.9	4.9			4.8			4.8	
Vehicle Extension (s)				1.0	1.0			1.0			1.0	
Lane Grp Cap (vph)				769	721			1612	1553		1612	1553
v/s Ratio Prot								c0.26			0.22	
v/s Ratio Perm				c0.41	0.39				0.41			0.14
v/c Ratio				0.88	0.84			0.80	0.41		0.69	0.14
Uniform Delay, d1				11.1	10.8			14.2	0.0		13.6	0.0
Progression Factor				1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2				11.2	8.6			2.6	0.8		1.0	0.2
Delay (s)				22.3	19.5			16.8	0.8		14.6	0.2
Level of Service				C	B			B	A		B	A
Approach Delay (s)		0.0			20.9			11.5			12.2	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	46.1	Sum of lost time (s)	9.7
Intersection Capacity Utilization	70.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



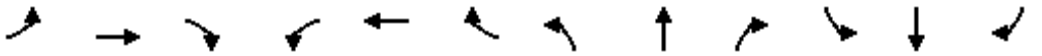
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	339	0	1162	0	0	0	0	1636	427	0	1643	345
Future Volume (vph)	339	0	1162	0	0	0	0	1636	427	0	1643	345
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	5.1					4.9	4.0		4.8	4.0
Lane Util. Factor	0.95	0.91	0.95					0.91	1.00		0.91	1.00
Frt	1.00	0.86	0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	1649	1423	1475					4988	1553		4988	1553
Flt Permitted	0.95	1.00	1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	1649	1423	1475					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	339	0	1162	0	0	0	0	1636	427	0	1643	345
RTOR Reduction (vph)	0	19	19	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	305	584	574	0	0	0	0	1636	427	0	1643	345
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA	Perm					NA	Free		NA	Free
Protected Phases		4						2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	25.3	25.3	25.3					21.8	57.1		21.9	57.1
Effective Green, g (s)	25.3	25.3	25.3					21.8	57.1		21.9	57.1
Actuated g/C Ratio	0.44	0.44	0.44					0.38	1.00		0.38	1.00
Clearance Time (s)	5.1	5.1	5.1					4.9			4.8	
Vehicle Extension (s)	1.0	1.0	1.0					1.0			1.0	
Lane Grp Cap (vph)	730	630	653					1904	1553		1913	1553
v/s Ratio Prot								0.33			c0.33	
v/s Ratio Perm	0.18	0.41	0.39						0.27			0.22
v/c Ratio	0.42	0.93	0.88					0.86	0.27		0.86	0.22
Uniform Delay, d1	10.9	15.0	14.5					16.2	0.0		16.2	0.0
Progression Factor	1.00	1.00	1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1	19.4	12.4					4.0	0.4		3.9	0.3
Delay (s)	11.0	34.4	26.9					20.2	0.4		20.1	0.3
Level of Service	B	C	C					C	A		C	A
Approach Delay (s)		26.7			0.0			16.1			16.7	
Approach LOS		C			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	57.1	Sum of lost time (s)	10.0
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	1277	0	230	0	720	1105	0	897	1590
Future Volume (vph)	0	0	0	1277	0	230	0	720	1105	0	897	1590
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.8		6.8		4.6	4.0		4.6	4.0
Lane Util. Factor				0.97		1.00		0.91	1.00		0.91	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3400		1568		5036	1568		5036	1568
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3400		1568		5036	1568		5036	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	1277	0	230	0	720	1105	0	897	1590
RTOR Reduction (vph)	0	0	0	0	0	25	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	1277	0	205	0	720	1105	0	897	1590
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				Perm		Perm		NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases				8		8			Free			Free
Actuated Green, G (s)				20.6		20.6		12.5	44.5		12.5	44.5
Effective Green, g (s)				20.6		20.6		12.5	44.5		12.5	44.5
Actuated g/C Ratio				0.46		0.46		0.28	1.00		0.28	1.00
Clearance Time (s)				6.8		6.8		4.6			4.6	
Vehicle Extension (s)				1.0		1.0		1.0			1.0	
Lane Grp Cap (vph)				1573		725		1414	1568		1414	1568
v/s Ratio Prot								0.14			0.18	
v/s Ratio Perm				0.38		0.13			0.70			c1.01
v/c Ratio				0.81		0.28		0.51	0.70		0.63	1.01
Uniform Delay, d1				10.3		7.4		13.4	0.0		14.0	22.2
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				3.1		0.1		0.1	2.7		0.7	26.3
Delay (s)				13.4		7.5		13.5	2.7		14.7	48.5
Level of Service				B		A		B	A		B	D
Approach Delay (s)		0.0			12.5			7.0			36.3	
Approach LOS		A			B			A			D	

Intersection Summary			
HCM 2000 Control Delay	20.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	44.5	Sum of lost time (s)	11.4
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

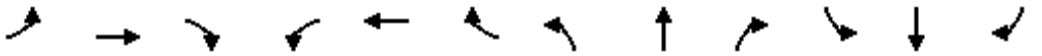


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	182	917	1602	0	0	134	0	3409	9	0	2003	182
Future Volume (vph)	182	917	1602	0	0	134	0	3409	9	0	2003	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0		4.0			4.0	4.0
Lane Util. Factor	0.91	0.86	0.91			0.88		0.86			0.91	1.00
Frt	1.00	0.93	0.85			0.85		1.00			1.00	0.85
Flt Protected	0.95	1.00	1.00			1.00		1.00			1.00	1.00
Satd. Flow (prot)	1595	2952	1427			2733		6343			5036	1568
Flt Permitted	0.95	1.00	1.00			1.00		1.00			1.00	1.00
Satd. Flow (perm)	1595	2952	1427			2733		6343			5036	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	182	917	1602	0	0	134	0	3409	9	0	2003	182
RTOR Reduction (vph)	0	2	20	0	0	130	0	0	0	0	0	48
Lane Group Flow (vph)	164	1734	781	0	0	4	0	3418	0	0	2003	134
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Turn Type	Split	NA	Perm			Prot		NA			NA	custom
Protected Phases	4	4				1		2			6	
Permitted Phases			4									2
Actuated Green, G (s)	68.0	68.0	68.0			4.0		66.0			74.0	66.0
Effective Green, g (s)	68.0	68.0	68.0			4.0		66.0			74.0	66.0
Actuated g/C Ratio	0.45	0.45	0.45			0.03		0.44			0.49	0.44
Clearance Time (s)	4.0	4.0	4.0			4.0		4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	723	1338	646			72		2790			2484	689
v/s Ratio Prot	0.10	c0.59				0.00		c0.54			c0.40	
v/s Ratio Perm			0.55									0.09
v/c Ratio	0.23	1.30	1.21			0.05		1.23			0.81	0.20
Uniform Delay, d1	25.0	41.0	41.0			71.1		42.0			32.0	25.7
Progression Factor	1.00	1.00	1.00			1.00		1.00			1.00	1.00
Incremental Delay, d2	0.2	138.8	108.3			0.3		104.7			2.0	0.1
Delay (s)	25.1	179.8	149.3			71.4		146.7			34.0	25.9
Level of Service	C	F	F			E		F			C	C
Approach Delay (s)		161.3			71.4			146.7			33.3	
Approach LOS		F			E			F			C	

Intersection Summary			
HCM 2000 Control Delay	120.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	111.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

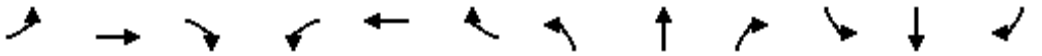
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	664	0	9	914	0	6	316	19	24	98	126
Future Volume (vph)	23	664	0	9	914	0	6	316	19	24	98	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			0.99			0.93	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1703	1792		1703	1792			1744			1631	
Flt Permitted	0.95	1.00		0.95	1.00			0.99			0.92	
Satd. Flow (perm)	1703	1792		1703	1792			1736			1514	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	23	664	0	9	914	0	6	316	19	24	98	126
RTOR Reduction (vph)	0	0	0	0	0	0	0	3	0	0	49	0
Lane Group Flow (vph)	23	664	0	9	914	0	0	338	0	0	199	0
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	8%	8%	8%	8%	8%	8%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	1.4	39.2		0.7	38.5			16.4			16.4	
Effective Green, g (s)	1.4	39.2		0.7	38.5			16.4			16.4	
Actuated g/C Ratio	0.02	0.57		0.01	0.56			0.24			0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	34	1028		17	1010			416			363	
v/s Ratio Prot	c0.01	0.37		0.01	c0.51							
v/s Ratio Perm								c0.19			0.13	
v/c Ratio	0.68	0.65		0.53	0.90			0.81			0.55	
Uniform Delay, d1	33.2	9.9		33.6	13.3			24.5			22.7	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	42.2	1.4		26.7	11.3			11.5			1.7	
Delay (s)	75.4	11.3		60.3	24.5			36.0			24.4	
Level of Service	E	B		E	C			D			C	
Approach Delay (s)		13.4			24.9			36.0			24.4	
Approach LOS		B			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	23.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	68.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	169	0	516	0	2866	251	0	1928	2178
Future Volume (vph)	0	0	0	169	0	516	0	2866	251	0	1928	2178
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.5		3.5		4.8	4.0		5.1	4.0
Lane Util. Factor				0.97		0.88		0.91	1.00		0.91	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3303		2682		4988	1553		4988	1553
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3303		2682		4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	169	0	516	0	2866	251	0	1928	2178
RTOR Reduction (vph)	0	0	0	0	0	28	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	169	0	488	0	2866	251	0	1928	2178
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	4%	4%	4%	4%	4%	4%
Turn Type				Perm		Perm		NA	Free		NA	Free
Protected Phases								6			2	
Permitted Phases				8		8			Free			Free
Actuated Green, G (s)				12.8		12.8		41.2	62.3		40.9	62.3
Effective Green, g (s)				12.8		12.8		41.2	62.3		40.9	62.3
Actuated g/C Ratio				0.21		0.21		0.66	1.00		0.66	1.00
Clearance Time (s)				3.5		3.5		4.8			5.1	
Vehicle Extension (s)				1.0		1.0		1.0			1.0	
Lane Grp Cap (vph)				678		551		3298	1553		3274	1553
v/s Ratio Prot								0.57			0.39	
v/s Ratio Perm				0.05		0.18			0.16			c1.40
v/c Ratio				0.25		0.89		0.87	0.16		0.59	1.40
Uniform Delay, d1				20.7		24.0		8.4	0.0		6.0	31.1
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				0.1		15.3		2.6	0.2		0.2	185.1
Delay (s)				20.8		39.4		11.0	0.2		6.2	216.2
Level of Service				C		D		B	A		A	F
Approach Delay (s)		0.0			34.8			10.1			117.6	
Approach LOS		A			C			B			F	

Intersection Summary			
HCM 2000 Control Delay	68.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.63		
Actuated Cycle Length (s)	62.3	Sum of lost time (s)	8.6
Intersection Capacity Utilization	80.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



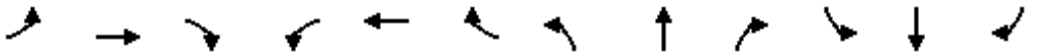
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	890	0	748	0	0	0	0	2234	421	0	1698	397
Future Volume (vph)	890	0	748	0	0	0	0	2234	421	0	1698	397
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		3.5					4.8	4.0		5.1	4.0
Lane Util. Factor	0.94		0.88					0.86	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	4894		2733					6285	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	4894		2733					6285	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	890	0	748	0	0	0	0	2234	421	0	1698	397
RTOR Reduction (vph)	0	0	32	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	890	0	716	0	0	0	0	2234	421	0	1698	397
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								6			2	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	14.1		14.1					23.1	45.5		22.8	45.5
Effective Green, g (s)	14.1		14.1					23.1	45.5		22.8	45.5
Actuated g/C Ratio	0.31		0.31					0.51	1.00		0.50	1.00
Clearance Time (s)	3.5		3.5					4.8			5.1	
Vehicle Extension (s)	1.0		1.0					1.0			1.0	
Lane Grp Cap (vph)	1516		846					3190	1553		2499	1553
v/s Ratio Prot								c0.36			0.34	
v/s Ratio Perm	0.18		c0.26						0.27			0.26
v/c Ratio	0.59		0.85					0.70	0.27		0.68	0.26
Uniform Delay, d1	13.2		14.7					8.6	0.0		8.6	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.4		7.5					0.6	0.4		0.6	0.4
Delay (s)	13.6		22.2					9.1	0.4		9.2	0.4
Level of Service	B		C					A	A		A	A
Approach Delay (s)		17.6			0.0			7.8			7.5	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	45.5	Sum of lost time (s)	8.6
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



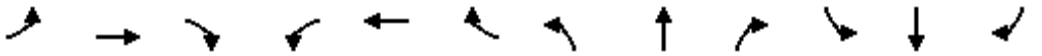
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	156	575	2158	119	98	634
Future Volume (vph)	156	575	2158	119	98	634
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.0	5.0	5.5	5.0
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3400	1568	4988	1553	3367	3471
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3400	1568	4988	1553	3367	3471
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	156	575	2158	119	98	634
RTOR Reduction (vph)	0	282	0	39	0	0
Lane Group Flow (vph)	156	293	2158	80	98	634
Heavy Vehicles (%)	3%	3%	4%	4%	4%	4%
Turn Type	Prot	Prot	NA	Perm	Prot	NA
Protected Phases	4	4	6		5	2
Permitted Phases				6		
Actuated Green, G (s)	16.6	16.6	38.6	38.6	4.8	48.9
Effective Green, g (s)	16.6	16.6	38.6	38.6	4.8	48.9
Actuated g/C Ratio	0.22	0.22	0.51	0.51	0.06	0.64
Clearance Time (s)	5.5	5.5	5.0	5.0	5.5	5.0
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lane Grp Cap (vph)	742	342	2533	788	212	2233
v/s Ratio Prot	0.05	c0.19	c0.43		0.03	c0.18
v/s Ratio Perm				0.05		
v/c Ratio	0.21	0.86	0.85	0.10	0.46	0.28
Uniform Delay, d1	24.3	28.6	16.2	9.7	34.4	5.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	17.9	2.9	0.0	0.6	0.0
Delay (s)	24.4	46.5	19.1	9.7	34.9	5.9
Level of Service	C	D	B	A	C	A
Approach Delay (s)	41.8		18.6			9.8
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	21.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	76.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	86.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



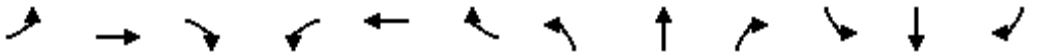
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1015	779	7	0	1192	15	8	30	5	7	6	572
Future Volume (vph)	1015	779	7	0	1192	15	8	30	5	7	6	572
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.9	6.9		6.0			6.1			6.2	5.5
Lane Util. Factor	1.00	0.95	1.00		0.95			1.00			1.00	1.00
Frt	1.00	1.00	0.85		1.00			0.98			1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00			0.99			0.97	1.00
Satd. Flow (prot)	1703	3406	1524		3432			1799			1779	1553
Flt Permitted	0.95	1.00	1.00		1.00			0.99			0.97	1.00
Satd. Flow (perm)	1703	3406	1524		3432			1799			1779	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1015	779	7	0	1192	15	8	30	5	7	6	572
RTOR Reduction (vph)	0	0	1	0	1	0	0	3	0	0	0	215
Lane Group Flow (vph)	1015	779	6	0	1206	0	0	40	0	0	13	357
Heavy Vehicles (%)	6%	6%	6%	5%	5%	5%	3%	3%	3%	4%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	Over
Protected Phases	1	6		5	2		8	8		4	4	1
Permitted Phases			6									
Actuated Green, G (s)	58.6	106.0	106.0		42.8			3.0			2.1	58.6
Effective Green, g (s)	58.6	106.0	106.0		42.8			3.0			2.1	58.6
Actuated g/C Ratio	0.45	0.81	0.81		0.33			0.02			0.02	0.45
Clearance Time (s)	5.5	6.9	6.9		6.0			6.1			6.2	5.5
Vehicle Extension (s)	1.0	1.0	1.0		1.0			1.0			1.0	1.0
Lane Grp Cap (vph)	765	2770	1239		1127			41			28	698
v/s Ratio Prot	c0.60	0.23			c0.35			c0.02			c0.01	0.23
v/s Ratio Perm			0.00									
v/c Ratio	1.33	0.28	0.00		1.07			0.98			0.46	0.51
Uniform Delay, d1	35.9	2.9	2.3		43.8			63.6			63.5	25.6
Progression Factor	1.00	1.00	1.00		1.00			1.00			1.00	1.00
Incremental Delay, d2	156.1	0.0	0.0		47.8			130.1			4.4	0.3
Delay (s)	191.9	3.0	2.3		91.5			193.8			67.9	25.9
Level of Service	F	A	A		F			F			E	C
Approach Delay (s)		109.4			91.5			193.8			26.8	
Approach LOS		F			F			F			C	

Intersection Summary			
HCM 2000 Control Delay	91.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	130.3	Sum of lost time (s)	24.7
Intersection Capacity Utilization	113.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	296	55	176	932	426	3321	0	0	4734	133
Future Volume (vph)	0	0	296	55	176	932	426	3321	0	0	4734	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.6		6.2	6.2	4.6	5.0			5.3	5.3
Lane Util. Factor			1.00		1.00	0.88	0.97	0.91			0.86	1.00
Frt			0.86		1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected			1.00		0.99	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)			1596		1771	2682	3303	4893			6166	1524
Flt Permitted			1.00		0.99	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)			1596		1771	2682	3303	4893			6166	1524
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	296	55	176	932	426	3321	0	0	4734	133
RTOR Reduction (vph)	0	0	190	0	0	39	0	0	0	0	0	26
Lane Group Flow (vph)	0	0	106	0	231	893	426	3321	0	0	4734	107
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type			Over	Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases			1	4	4		1	6			2	
Permitted Phases						4						2
Actuated Green, G (s)			20.0		31.8	31.8	20.0	107.0			82.1	82.1
Effective Green, g (s)			20.0		31.8	31.8	20.0	107.0			82.1	82.1
Actuated g/C Ratio			0.13		0.21	0.21	0.13	0.71			0.55	0.55
Clearance Time (s)			4.6		6.2	6.2	4.6	5.0			5.3	5.3
Vehicle Extension (s)			3.0		3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)			212		375	568	440	3490			3374	834
v/s Ratio Prot			0.07		0.13		0.13	c0.68			c0.77	
v/s Ratio Perm						c0.33						0.07
v/c Ratio			0.50		0.62	1.57	0.97	0.95			1.40	0.13
Uniform Delay, d1			60.4		53.6	59.1	64.7	19.2			34.0	16.5
Progression Factor			1.00		1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2			1.9		3.0	265.6	34.3	7.0			183.2	0.1
Delay (s)			62.2		56.6	324.7	99.0	26.2			217.2	16.6
Level of Service			E		E	F	F	C			F	B
Approach Delay (s)		62.2			271.4			34.5			211.7	
Approach LOS		E			F			C			F	

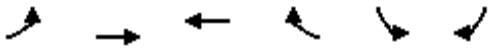
Intersection Summary			
HCM 2000 Control Delay	148.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.1
Intersection Capacity Utilization	112.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1960	0	117	0	0	0	0	1893	39	0	1521	1198
Future Volume (vph)	1960	0	117	0	0	0	0	1893	39	0	1521	1198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0			4.0	4.0
Lane Util. Factor	0.94		0.88					0.91			0.91	1.00
Frt	1.00		0.85					1.00			1.00	0.85
Flt Protected	0.95		1.00					1.00			1.00	1.00
Satd. Flow (prot)	4942		2760					5021			5036	1568
Flt Permitted	0.95		1.00					1.00			1.00	1.00
Satd. Flow (perm)	4942		2760					5021			5036	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1960	0	117	0	0	0	0	1893	39	0	1521	1198
RTOR Reduction (vph)	0	0	11	0	0	0	0	4	0	0	0	0
Lane Group Flow (vph)	1960	0	106	0	0	0	0	1928	0	0	1521	1198
Turn Type	Prot		Perm					NA			NA	Free
Protected Phases	4							2			6	
Permitted Phases			4									Free
Actuated Green, G (s)	24.0		24.0					23.0			23.0	55.0
Effective Green, g (s)	24.0		24.0					23.0			23.0	55.0
Actuated g/C Ratio	0.44		0.44					0.42			0.42	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	2156		1204					2099			2105	1568
v/s Ratio Prot	c0.40							c0.38			0.30	
v/s Ratio Perm			0.04									0.76
v/c Ratio	0.91		0.09					0.92			0.72	0.76
Uniform Delay, d1	14.5		9.1					15.1			13.3	0.0
Progression Factor	1.00		1.00					1.00			1.00	1.00
Incremental Delay, d2	6.1		0.0					7.0			1.3	3.6
Delay (s)	20.6		9.1					22.1			14.6	3.6
Level of Service	C		A					C			B	A
Approach Delay (s)		19.9			0.0			22.1			9.7	
Approach LOS		B			A			C			A	

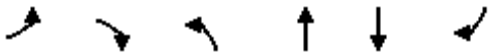
Intersection Summary			
HCM 2000 Control Delay	16.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1103	1565	1451	230	20	762
Future Volume (vph)	1103	1565	1451	230	20	762
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	0.88
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3242	3343	3343	1495	3400	2760
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3242	3343	3343	1495	3400	2760
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1103	1565	1451	230	20	762
RTOR Reduction (vph)	0	0	0	48	0	703
Lane Group Flow (vph)	1103	1565	1451	182	20	59
Heavy Vehicles (%)	8%	8%	8%	8%	3%	3%
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	43.1	102.2	55.1	55.1	9.3	9.3
Effective Green, g (s)	43.1	102.2	55.1	55.1	9.3	9.3
Actuated g/C Ratio	0.36	0.86	0.46	0.46	0.08	0.08
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1169	2859	1541	689	264	214
v/s Ratio Prot	c0.34	0.47	c0.43		0.01	
v/s Ratio Perm				0.12		c0.02
v/c Ratio	0.94	0.55	0.94	0.26	0.08	0.28
Uniform Delay, d1	37.0	2.4	30.7	19.8	51.1	51.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	14.7	0.2	11.8	0.2	0.1	0.7
Delay (s)	51.7	2.6	42.4	20.0	51.2	52.6
Level of Service	D	A	D	B	D	D
Approach Delay (s)		22.9	39.4		52.6	
Approach LOS		C	D		D	

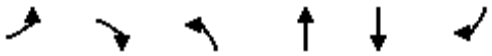
Intersection Summary			
HCM 2000 Control Delay	32.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	119.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	598	11	67	2116	1249	953
Future Volume (vph)	598	11	67	2116	1249	953
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3400	1568	1752	3505	3505	1568
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3400	1568	1752	3505	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	598	11	67	2116	1249	953
RTOR Reduction (vph)	0	11	0	0	0	618
Lane Group Flow (vph)	598	0	67	2116	1249	335
Turn Type	Prot	Over	Prot	NA	NA	Over
Protected Phases	4	5	5	2	6	4
Permitted Phases						
Actuated Green, G (s)	15.7	2.4	2.4	37.6	31.2	15.7
Effective Green, g (s)	15.7	2.4	2.4	37.6	31.2	15.7
Actuated g/C Ratio	0.26	0.04	0.04	0.61	0.51	0.26
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	870	61	68	2149	1783	401
v/s Ratio Prot	0.18	0.00	0.04	c0.60	0.36	c0.21
v/s Ratio Perm						
v/c Ratio	0.69	0.01	0.99	0.98	0.70	0.83
Uniform Delay, d1	20.6	28.3	29.4	11.6	11.5	21.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.3	0.0	103.3	15.8	1.3	13.9
Delay (s)	22.9	28.4	132.8	27.4	12.7	35.5
Level of Service	C	C	F	C	B	D
Approach Delay (s)	23.0			30.6	22.6	
Approach LOS	C			C	C	

Intersection Summary			
HCM 2000 Control Delay	26.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	61.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		

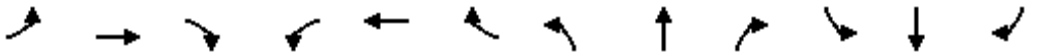
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	432	633	1071	1743	1168	92
Future Volume (vph)	432	633	1071	1743	1168	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.97	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1752	1568	3400	3505	3505	1568
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1752	1568	3400	3505	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	432	633	1071	1743	1168	92
RTOR Reduction (vph)	0	392	0	0	0	61
Lane Group Flow (vph)	432	241	1071	1743	1168	31
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	24.0	24.0	30.0	68.0	34.0	34.0
Effective Green, g (s)	24.0	24.0	30.0	68.0	34.0	34.0
Actuated g/C Ratio	0.24	0.24	0.30	0.68	0.34	0.34
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	420	376	1020	2383	1191	533
v/s Ratio Prot	c0.25		c0.32	0.50	c0.33	
v/s Ratio Perm		0.15				0.02
v/c Ratio	1.03	0.64	1.05	0.73	0.98	0.06
Uniform Delay, d1	38.0	34.1	35.0	10.2	32.7	22.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	51.4	3.7	42.2	1.2	21.4	0.0
Delay (s)	89.4	37.8	77.2	11.4	54.1	22.3
Level of Service	F	D	E	B	D	C
Approach Delay (s)	58.8			36.4	51.8	
Approach LOS	E			D	D	

Intersection Summary			
HCM 2000 Control Delay	44.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.8%	ICU Level of Service	F
Analysis Period (min)	15		

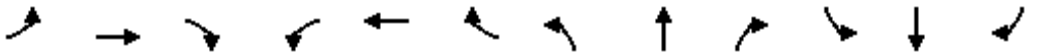
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	696	0	909	0	0	0	0	3557	710	0	1790	1584
Future Volume (vph)	696	0	909	0	0	0	0	3557	710	0	1790	1584
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	4.0		4.0	4.0
Lane Util. Factor	0.97		0.88					0.86	1.00		0.86	0.86
Frt	1.00		0.85					1.00	0.85		0.95	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3400		2760					6346	1568		4540	1348
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3400		2760					6346	1568		4540	1348
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	696	0	909	0	0	0	0	3557	710	0	1790	1584
RTOR Reduction (vph)	0	0	21	0	0	0	0	0	0	0	99	0
Lane Group Flow (vph)	696	0	888	0	0	0	0	3557	710	0	2483	792
Turn Type	Prot		Perm					NA	Free		NA	Free
Protected Phases	4							2			6	
Permitted Phases			4						Free			Free
Actuated Green, G (s)	25.0		25.0					47.0	80.0		47.0	80.0
Effective Green, g (s)	25.0		25.0					47.0	80.0		47.0	80.0
Actuated g/C Ratio	0.31		0.31					0.59	1.00		0.59	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	1062		862					3728	1568		2667	1348
v/s Ratio Prot	0.20							c0.56			0.55	
v/s Ratio Perm			c0.32						0.45			0.59
v/c Ratio	0.66		1.03					0.95	0.45		0.93	0.59
Uniform Delay, d1	23.8		27.5					15.5	0.0		15.0	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	1.5		38.8					6.9	0.9		6.6	1.9
Delay (s)	25.2		66.3					22.4	0.9		21.7	1.9
Level of Service	C		E					C	A		C	A
Approach Delay (s)		48.5			0.0			18.8			17.0	
Approach LOS		D			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	23.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	84.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	513	0	1449	0	2059	2190	0	3836	1304
Future Volume (vph)	0	0	0	513	0	1449	0	2059	2190	0	3836	1304
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0		4.0		4.0	4.0		4.0	4.0
Lane Util. Factor				0.97		0.76		0.86	0.86		0.81	0.81
Frt				1.00		0.85		0.95	0.85		0.99	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3400		3575		4511	1348		5894	1270
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3400		3575		4511	1348		5894	1270
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	513	0	1449	0	2059	2190	0	3836	1304
RTOR Reduction (vph)	0	0	0	0	0	17	0	74	0	0	12	0
Lane Group Flow (vph)	0	0	0	513	0	1432	0	3080	1095	0	4215	913
Turn Type				Prot		Perm		NA	Free		NA	Free
Protected Phases				8				2			6	
Permitted Phases						8			Free			Free
Actuated Green, G (s)				42.0		42.0		80.0	130.0		80.0	130.0
Effective Green, g (s)				42.0		42.0		80.0	130.0		80.0	130.0
Actuated g/C Ratio				0.32		0.32		0.62	1.00		0.62	1.00
Clearance Time (s)				4.0		4.0		4.0			4.0	
Vehicle Extension (s)				3.0		3.0		3.0			3.0	
Lane Grp Cap (vph)				1098		1155		2776	1348		3627	1270
v/s Ratio Prot				0.15				0.68			c0.72	
v/s Ratio Perm						c0.40			0.81			0.72
v/c Ratio				0.47		1.24		1.11	0.81		1.16	0.72
Uniform Delay, d1				35.1		44.0		25.0	0.0		25.0	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				0.3		115.5		55.2	5.4		76.4	3.5
Delay (s)				35.4		159.5		80.2	5.4		101.4	3.5
Level of Service				D		F		F	A		F	A
Approach Delay (s)		0.0			127.0			60.9			84.0	
Approach LOS		A			F			E			F	

Intersection Summary			
HCM 2000 Control Delay	82.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	96.5%	ICU Level of Service	F
Analysis Period (min)	15		

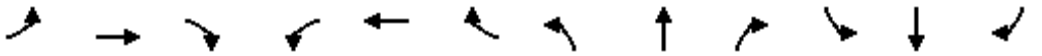
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	812	276	255	1155	234	243
Future Volume (vph)	812	276	255	1155	234	243
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3154	1411	1577	3154	3060	1411
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3154	1411	1577	3154	3060	1411
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	812	276	255	1155	234	243
RTOR Reduction (vph)	0	151	0	0	0	199
Lane Group Flow (vph)	812	125	255	1155	234	44
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	18.3	18.3	12.3	34.6	9.5	9.5
Effective Green, g (s)	18.3	18.3	12.3	34.6	9.5	9.5
Actuated g/C Ratio	0.35	0.35	0.24	0.66	0.18	0.18
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1107	495	372	2094	557	257
v/s Ratio Prot	c0.26		c0.16	0.37	c0.08	
v/s Ratio Perm		0.09				0.03
v/c Ratio	0.73	0.25	0.69	0.55	0.42	0.17
Uniform Delay, d1	14.8	12.0	18.1	4.6	18.9	18.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.6	0.3	5.2	0.3	0.5	0.3
Delay (s)	17.3	12.3	23.3	5.0	19.4	18.3
Level of Service	B	B	C	A	B	B
Approach Delay (s)	16.0			8.3	18.8	
Approach LOS	B			A	B	

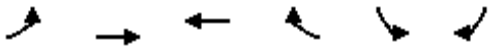
Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	52.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	58.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	219	407	0	1	467	57	1	1	0	56	2	455
Future Volume (vph)	219	407	0	1	467	57	1	1	0	56	2	455
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00		0.95	0.95	1.00
Frt	1.00	1.00		1.00	0.98			1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98		0.95	0.96	1.00
Satd. Flow (prot)	1736	3471		1736	3415			1800		1665	1674	1568
Flt Permitted	0.95	1.00		0.95	1.00			0.98		0.95	0.96	1.00
Satd. Flow (perm)	1736	3471		1736	3415			1800		1665	1674	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	219	407	0	1	467	57	1	1	0	56	2	455
RTOR Reduction (vph)	0	0	0	0	11	0	0	0	0	0	0	387
Lane Group Flow (vph)	219	407	0	1	513	0	0	2	0	29	29	68
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases												6
Actuated Green, G (s)	10.8	26.7		0.7	16.6			5.7		8.7	8.7	8.7
Effective Green, g (s)	10.8	26.7		0.7	16.6			5.7		8.7	8.7	8.7
Actuated g/C Ratio	0.19	0.46		0.01	0.29			0.10		0.15	0.15	0.15
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	324	1603		21	980			177		250	251	236
v/s Ratio Prot	c0.13	0.12		0.00	c0.15			c0.00		0.02	0.02	
v/s Ratio Perm												c0.04
v/c Ratio	0.68	0.25		0.05	0.52			0.01		0.12	0.12	0.29
Uniform Delay, d1	21.9	9.5		28.2	17.3			23.5		21.2	21.2	21.8
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2	5.5	0.1		0.9	0.5			0.0		0.2	0.2	0.7
Delay (s)	27.4	9.6		29.2	17.8			23.5		21.4	21.4	22.5
Level of Service	C	A		C	B			C		C	C	C
Approach Delay (s)		15.8			17.8			23.5			22.4	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	18.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	57.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	268	706	1874	1043	0
Future Volume (vph)	0	268	706	1874	1043	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95	0.95	1.00	0.97	
Frt		1.00	1.00	0.85	1.00	
Flt Protected		1.00	1.00	1.00	0.95	
Satd. Flow (prot)		3505	3505	1568	3400	
Flt Permitted		1.00	1.00	1.00	0.95	
Satd. Flow (perm)		3505	3505	1568	3400	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	268	706	1874	1043	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	268	706	1874	1043	0
Turn Type	Prot	NA	NA	custom	Prot	
Protected Phases	4	5	5	2	6	
Permitted Phases						
Actuated Green, G (s)		33.4	33.4	130.0	88.6	
Effective Green, g (s)		33.4	33.4	130.0	88.6	
Actuated g/C Ratio		0.26	0.26	1.00	0.68	
Clearance Time (s)		4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		900	900	1568	2317	
v/s Ratio Prot		0.08	0.20	c1.20	0.31	
v/s Ratio Perm						
v/c Ratio		0.30	0.78	1.20	0.45	
Uniform Delay, d1		38.9	44.9	65.0	9.5	
Progression Factor		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.2	4.5	94.4	0.1	
Delay (s)		39.1	49.5	159.4	9.6	
Level of Service		D	D	F	A	
Approach Delay (s)		39.1	129.3		9.6	
Approach LOS		D	F		A	

Intersection Summary			
HCM 2000 Control Delay	91.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	119.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0
Turn Type			Prot		Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases						2
Actuated Green, G (s)						
Effective Green, g (s)						
Actuated g/C Ratio						
Clearance Time (s)						
Vehicle Extension (s)						
Lane Grp Cap (vph)						
v/s Ratio Prot						
v/s Ratio Perm						
v/c Ratio						
Uniform Delay, d1						
Progression Factor						
Incremental Delay, d2						
Delay (s)						
Level of Service						
Approach Delay (s)	0.0			0.0	0.0	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	0.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.00		
Actuated Cycle Length (s)	24.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		

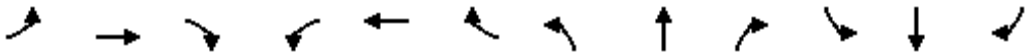
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	2164	0	1718	0
Future Volume (vph)	0	0	2164	0	1718	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	4.0	4.0	
Lane Util. Factor			0.95	0.95	0.97	
Frt			1.00	1.00	1.00	
Flt Protected			0.95	0.95	0.95	
Satd. Flow (prot)			1665	1665	3400	
Flt Permitted			0.95	0.95	0.95	
Satd. Flow (perm)			1665	1665	3400	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	2164	0	1718	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	1082	1082	1718	0
Turn Type			Split	NA	Prot	
Protected Phases			4	4	2	
Permitted Phases						
Actuated Green, G (s)			79.0	79.0	63.0	
Effective Green, g (s)			79.0	79.0	63.0	
Actuated g/C Ratio			0.53	0.53	0.42	
Clearance Time (s)			4.0	4.0	4.0	
Vehicle Extension (s)			3.0	3.0	3.0	
Lane Grp Cap (vph)			876	876	1428	
v/s Ratio Prot			c0.65	0.65	c0.51	
v/s Ratio Perm						
v/c Ratio			1.24	1.24	1.20	
Uniform Delay, d1			35.5	35.5	43.5	
Progression Factor			1.00	1.00	1.00	
Incremental Delay, d2			115.7	115.7	98.3	
Delay (s)			151.2	151.2	141.8	
Level of Service			F	F	F	
Approach Delay (s)	0.0			151.2	141.8	
Approach LOS	A			F	F	

Intersection Summary			
HCM 2000 Control Delay	147.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	115.6%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	461	0	0	0	0	1718	2145	0	2164	0
Future Volume (vph)	0	0	461	0	0	0	0	1718	2145	0	2164	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0					4.0	4.0		4.0	
Lane Util. Factor		0.95	0.95					0.91	0.91		0.95	
Frt		0.85	0.85					0.95	0.85		1.00	
Flt Protected		1.00	1.00					1.00	1.00		1.00	
Satd. Flow (prot)		1490	1490					3179	1427		3505	
Flt Permitted		1.00	1.00					1.00	1.00		1.00	
Satd. Flow (perm)		1490	1490					3179	1427		3505	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	461	0	0	0	0	1718	2145	0	2164	0
RTOR Reduction (vph)	0	34	0	0	0	0	0	37	204	0	0	0
Lane Group Flow (vph)	0	197	230	0	0	0	0	2625	997	0	2164	0
Turn Type		NA	Free					NA	Perm	Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases			Free						2			
Actuated Green, G (s)		17.0	133.6					108.6	108.6		108.6	
Effective Green, g (s)		17.0	133.6					108.6	108.6		108.6	
Actuated g/C Ratio		0.13	1.00					0.81	0.81		0.81	
Clearance Time (s)		4.0						4.0	4.0		4.0	
Vehicle Extension (s)		3.0						3.0	3.0		3.0	
Lane Grp Cap (vph)		189	1490					2584	1159		2849	
v/s Ratio Prot		c0.13						c0.83			0.62	
v/s Ratio Perm			0.15						0.70			
v/c Ratio		1.04	0.15					1.02	0.86		0.76	
Uniform Delay, d1		58.3	0.0					12.5	7.8		6.1	
Progression Factor		1.00	1.00					1.00	1.00		1.00	
Incremental Delay, d2		77.0	0.2					21.8	6.7		1.2	
Delay (s)		135.3	0.2					34.3	14.5		7.3	
Level of Service		F	A					C	B		A	
Approach Delay (s)		67.9			0.0			28.1			7.3	
Approach LOS		E			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	24.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	133.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	115.6%	ICU Level of Service	H
Analysis Period (min)	15		

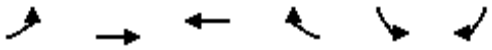
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	266	259	3832	128	11	2639
Future Volume (vph)	266	259	3832	128	11	2639
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.91
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3400	1568	5036	1568	3400	5036
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3400	1568	5036	1568	3400	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	266	259	3832	128	11	2639
RTOR Reduction (vph)	0	42	0	22	0	0
Lane Group Flow (vph)	266	217	3832	106	11	2639
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Actuated Green, G (s)	16.0	16.0	91.7	91.7	0.8	96.5
Effective Green, g (s)	16.0	16.0	91.7	91.7	0.8	96.5
Actuated g/C Ratio	0.13	0.13	0.76	0.76	0.01	0.80
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	451	208	3832	1193	22	4032
v/s Ratio Prot	0.08		c0.76		0.00	c0.52
v/s Ratio Perm		c0.14		0.07		
v/c Ratio	0.59	1.05	1.00	0.09	0.50	0.65
Uniform Delay, d1	49.2	52.2	14.4	3.7	59.7	5.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.0	74.7	14.5	0.0	16.8	0.4
Delay (s)	51.1	127.0	28.9	3.7	76.4	5.4
Level of Service	D	F	C	A	E	A
Approach Delay (s)	88.6		28.1			5.7
Approach LOS	F		C			A

Intersection Summary			
HCM 2000 Control Delay	24.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	120.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	364	1243	1822	138	197	705
Future Volume (vph)	364	1243	1822	138	197	705
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1752	3505	3505	1568	1752	1568
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1752	3505	3505	1568	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	364	1243	1822	138	197	705
RTOR Reduction (vph)	0	0	0	36	0	242
Lane Group Flow (vph)	364	1243	1822	102	197	463
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	25.0	90.0	61.0	61.0	32.0	32.0
Effective Green, g (s)	25.0	90.0	61.0	61.0	32.0	32.0
Actuated g/C Ratio	0.19	0.69	0.47	0.47	0.25	0.25
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	336	2426	1644	735	431	385
v/s Ratio Prot	c0.21	0.35	c0.52		0.11	
v/s Ratio Perm				0.06		c0.30
v/c Ratio	1.08	0.51	1.11	0.14	0.46	1.20
Uniform Delay, d1	52.5	9.5	34.5	19.6	41.6	49.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	73.2	0.2	58.1	0.1	0.8	113.5
Delay (s)	125.7	9.7	92.6	19.7	42.4	162.5
Level of Service	F	A	F	B	D	F
Approach Delay (s)		36.0	87.5		136.3	
Approach LOS		D	F		F	

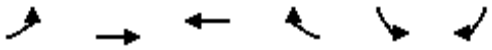
Intersection Summary			
HCM 2000 Control Delay	78.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	100.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	592	87	273	1290	161	54
Future Volume (vph)	592	87	273	1290	161	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	0.97	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3505	1568	3400	3505	1752	1568
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3505	1568	3400	3505	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	592	87	273	1290	161	54
RTOR Reduction (vph)	0	59	0	0	0	42
Lane Group Flow (vph)	592	28	273	1290	161	12
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	13.1	13.1	6.1	23.2	9.1	9.1
Effective Green, g (s)	13.1	13.1	6.1	23.2	9.1	9.1
Actuated g/C Ratio	0.33	0.33	0.15	0.58	0.23	0.23
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1139	509	514	2017	395	354
v/s Ratio Prot	0.17		0.08	c0.37	c0.09	
v/s Ratio Perm		0.02				0.01
v/c Ratio	0.52	0.06	0.53	0.64	0.41	0.03
Uniform Delay, d1	11.0	9.3	15.8	5.7	13.3	12.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.0	1.1	0.7	0.7	0.0
Delay (s)	11.4	9.4	16.8	6.4	14.0	12.2
Level of Service	B	A	B	A	B	B
Approach Delay (s)	11.2			8.2	13.5	
Approach LOS	B			A	B	

Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	40.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		

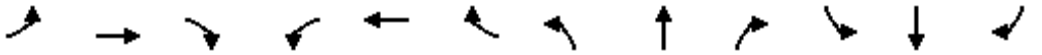
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	85	90	133	31	42	249
Future Volume (vph)	85	90	133	31	42	249
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	
Frt		1.00	0.97		0.88	
Flt Protected		0.98	1.00		0.99	
Satd. Flow (prot)		1801	1798		1620	
Flt Permitted		0.76	1.00		0.99	
Satd. Flow (perm)		1409	1798		1620	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	85	90	133	31	42	249
RTOR Reduction (vph)	0	0	25	0	132	0
Lane Group Flow (vph)	0	175	139	0	159	0
Turn Type	Perm	NA	NA		Prot	
Protected Phases		4	8		6	
Permitted Phases	4					
Actuated Green, G (s)		5.2	5.2		11.7	
Effective Green, g (s)		5.2	5.2		11.7	
Actuated g/C Ratio		0.21	0.21		0.47	
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		294	375		761	
v/s Ratio Prot			0.08		c0.10	
v/s Ratio Perm		c0.12				
v/c Ratio		0.60	0.37		0.21	
Uniform Delay, d1		8.9	8.4		3.9	
Progression Factor		1.00	1.00		1.00	
Incremental Delay, d2		3.2	0.6		0.1	
Delay (s)		12.1	9.1		4.0	
Level of Service		B	A		A	
Approach Delay (s)		12.1	9.1		4.0	
Approach LOS		B	A		A	

Intersection Summary			
HCM 2000 Control Delay	7.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	24.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	320	136	89	642	483	182	1918	79	138	968	82
Future Volume (veh/h)	99	320	136	89	642	483	182	1918	79	138	968	82
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1827	1827	1827	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	99	320	136	89	642	483	182	1918	79	138	968	82
Adj No. of Lanes	1	2	0	1	1	1	1	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	4	4	4	4	4	4
Cap, veh/h	125	808	337	115	602	512	208	1951	80	143	1794	558
Arrive On Green	0.07	0.33	0.33	0.07	0.33	0.33	0.12	0.40	0.40	0.08	0.36	0.36
Sat Flow, veh/h	1757	2414	1006	1740	1827	1553	1740	4914	202	1740	4988	1553
Grp Volume(v), veh/h	99	231	225	89	642	483	182	1297	700	138	968	82
Grp Sat Flow(s),veh/h/ln	1757	1752	1667	1740	1827	1553	1740	1663	1791	1740	1663	1553
Q Serve(g_s), s	7.4	13.5	13.9	6.7	44.0	40.4	13.7	51.5	51.7	10.6	20.6	4.8
Cycle Q Clear(g_c), s	7.4	13.5	13.9	6.7	44.0	40.4	13.7	51.5	51.7	10.6	20.6	4.8
Prop In Lane	1.00		0.60	1.00		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	125	586	558	115	602	512	208	1320	711	143	1794	558
V/C Ratio(X)	0.79	0.39	0.40	0.77	1.07	0.94	0.87	0.98	0.98	0.96	0.54	0.15
Avail Cap(c_a), veh/h	211	586	558	235	602	512	300	1320	711	143	1794	558
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.0	34.0	34.2	61.3	44.8	43.6	57.8	39.8	39.9	61.1	34.0	28.9
Incr Delay (d2), s/veh	10.6	0.4	0.5	10.4	55.6	26.4	17.5	20.6	29.9	63.6	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	6.6	6.5	3.6	31.4	21.1	7.6	27.4	31.4	7.6	9.5	2.1
LnGrp Delay(d),s/veh	71.6	34.5	34.7	71.8	100.4	69.9	75.3	60.4	69.7	124.7	34.3	29.0
LnGrp LOS	E	C	C	E	F	E	E	E	E	F	C	C
Approach Vol, veh/h		555			1214			2179			1188	
Approach Delay, s/veh		41.2			86.2			64.6			44.4	
Approach LOS		D			F			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	57.0	12.8	48.7	20.0	52.0	13.5	48.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	11.0	53.0	18.0	42.0	23.0	41.0	16.0	44.0
Max Q Clear Time (g_c+I1), s	12.6	53.7	8.7	15.9	15.7	22.6	9.4	46.0
Green Ext Time (p_c), s	0.0	0.0	0.1	10.8	0.3	7.4	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	62.5
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	440	502	24	40	398	427	69	1477	47	373	466	190
Future Volume (veh/h)	440	502	24	40	398	427	69	1477	47	373	466	190
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	440	502	24	40	398	427	69	1477	47	373	466	190
Adj No. of Lanes	1	2	0	1	2	1	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	383	1140	54	51	510	228	114	1374	44	307	1587	710
Arrive On Green	0.22	0.33	0.33	0.03	0.15	0.15	0.03	0.40	0.40	0.09	0.46	0.46
Sat Flow, veh/h	1757	3406	163	1757	3505	1568	3375	3434	109	3375	3471	1553
Grp Volume(v), veh/h	440	258	268	40	398	427	69	745	779	373	466	190
Grp Sat Flow(s),veh/h/ln	1757	1752	1816	1757	1752	1568	1688	1736	1808	1688	1736	1553
Q Serve(g_s), s	24.0	12.6	12.7	2.5	12.0	16.0	2.2	44.0	44.0	10.0	9.3	8.3
Cycle Q Clear(g_c), s	24.0	12.6	12.7	2.5	12.0	16.0	2.2	44.0	44.0	10.0	9.3	8.3
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	383	587	608	51	510	228	114	694	723	307	1587	710
V/C Ratio(X)	1.15	0.44	0.44	0.79	0.78	1.87	0.61	1.07	1.08	1.22	0.29	0.27
Avail Cap(c_a), veh/h	383	587	608	96	510	228	153	694	723	307	1587	710
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.0	28.5	28.6	53.1	45.3	47.0	52.4	33.0	33.0	50.0	18.7	18.5
Incr Delay (d2), s/veh	92.7	0.5	0.5	23.2	7.7	408.8	5.1	55.6	56.2	123.1	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.5	6.2	6.4	1.5	6.3	32.8	1.1	31.7	33.2	9.9	4.4	3.6
LnGrp Delay(d),s/veh	135.7	29.1	29.1	76.3	53.0	455.8	57.5	88.6	89.2	173.1	18.8	18.7
LnGrp LOS	F	C	C	E	D	F	E	F	F	F	B	B
Approach Vol, veh/h		966			865			1593			1029	
Approach Delay, s/veh		77.6			252.9			87.5			74.7	
Approach LOS		E			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	48.0	7.2	40.8	7.7	54.3	28.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	44.0	6.0	34.0	5.0	49.0	24.0	16.0
Max Q Clear Time (g_c+I1), s	12.0	46.0	4.5	14.7	4.2	11.3	26.0	18.0
Green Ext Time (p_c), s	0.0	0.0	0.0	7.6	0.0	22.5	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	114.5
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	851	284	270	1426	126	11	562	185	25	314	7
Future Volume (veh/h)	12	851	284	270	1426	126	11	562	185	25	314	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1900	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	12	851	284	270	1426	126	11	562	185	25	314	7
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	20	1175	525	315	1640	144	19	742	332	39	782	17
Arrive On Green	0.01	0.34	0.34	0.18	0.52	0.52	0.01	0.21	0.21	0.02	0.22	0.22
Sat Flow, veh/h	1707	3406	1524	1707	3168	278	1757	3505	1568	1757	3505	78
Grp Volume(v), veh/h	12	851	284	270	763	789	11	562	185	25	157	164
Grp Sat Flow(s),veh/h/ln	1707	1703	1524	1707	1703	1743	1757	1752	1568	1757	1752	1831
Q Serve(g_s), s	0.5	14.8	10.2	10.4	26.5	27.0	0.4	10.2	7.1	1.0	5.2	5.2
Cycle Q Clear(g_c), s	0.5	14.8	10.2	10.4	26.5	27.0	0.4	10.2	7.1	1.0	5.2	5.2
Prop In Lane	1.00		1.00	1.00		0.16	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	20	1175	525	315	882	903	19	742	332	39	391	408
V/C Ratio(X)	0.59	0.72	0.54	0.86	0.87	0.87	0.57	0.76	0.56	0.64	0.40	0.40
Avail Cap(c_a), veh/h	101	1207	540	378	882	903	104	828	371	104	414	433
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.3	19.4	17.9	26.7	14.3	14.4	33.3	25.0	23.8	32.8	22.4	22.5
Incr Delay (d2), s/veh	24.2	2.1	1.0	15.2	9.0	9.5	23.4	3.6	1.5	16.3	0.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	7.2	4.4	6.2	14.5	15.1	0.3	5.3	3.2	0.6	2.6	2.7
LnGrp Delay(d),s/veh	57.5	21.5	18.9	41.9	23.3	23.9	56.8	28.7	25.3	49.1	23.1	23.1
LnGrp LOS	E	C	B	D	C	C	E	C	C	D	C	C
Approach Vol, veh/h		1147			1822			758			346	
Approach Delay, s/veh		21.2			26.3			28.3			25.0	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	18.3	16.5	27.3	4.7	19.1	4.8	39.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	15.0	24.0	4.0	16.0	4.0	35.0
Max Q Clear Time (g_c+I1), s	3.0	12.2	12.4	16.8	2.4	7.2	2.5	29.0
Green Ext Time (p_c), s	0.0	2.2	0.2	6.6	0.0	4.1	0.0	5.6

Intersection Summary	
HCM 2010 Ctrl Delay	25.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	262	361	89	317	81	433	550	122	7	209	59
Future Volume (veh/h)	43	262	361	89	317	81	433	550	122	7	209	59
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	43	262	361	89	317	81	433	550	122	7	209	59
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	59	883	395	113	785	198	487	1487	665	13	542	243
Arrive On Green	0.03	0.25	0.25	0.06	0.28	0.28	0.28	0.42	0.42	0.01	0.15	0.15
Sat Flow, veh/h	1757	3505	1568	1757	2775	699	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	43	262	361	89	198	200	433	550	122	7	209	59
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1721	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	1.5	3.8	14.2	3.2	5.8	6.0	15.0	6.8	3.1	0.3	3.4	2.1
Cycle Q Clear(g_c), s	1.5	3.8	14.2	3.2	5.8	6.0	15.0	6.8	3.1	0.3	3.4	2.1
Prop In Lane	1.00		1.00	1.00		0.41	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	59	883	395	113	496	487	487	1487	665	13	542	243
V/C Ratio(X)	0.73	0.30	0.91	0.79	0.40	0.41	0.89	0.37	0.18	0.54	0.39	0.24
Avail Cap(c_a), veh/h	138	883	395	138	496	487	581	1876	839	111	938	420
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	19.2	23.1	29.3	18.4	18.5	22.0	12.5	11.4	31.4	24.1	23.6
Incr Delay (d2), s/veh	15.9	0.2	25.3	21.1	0.5	0.6	14.0	0.2	0.1	31.4	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	1.9	8.8	2.2	2.9	2.9	9.1	3.3	1.4	0.2	1.7	0.9
LnGrp Delay(d),s/veh	46.3	19.4	48.4	50.4	18.9	19.0	36.0	12.6	11.5	62.8	24.6	24.1
LnGrp LOS	D	B	D	D	B	B	D	B	B	E	C	C
Approach Vol, veh/h		666			487			1105			275	
Approach Delay, s/veh		36.9			24.7			21.7			25.4	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.5	31.0	8.1	20.0	21.6	13.8	6.1	22.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	34.0	5.0	16.0	21.0	17.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	2.3	8.8	5.2	16.2	17.0	5.4	3.5	8.0
Green Ext Time (p_c), s	0.0	6.2	0.0	0.0	0.6	4.4	0.0	3.4

Intersection Summary	
HCM 2010 Ctrl Delay	26.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	481	113	75	700	352	66	828	168	200	345	35
Future Volume (veh/h)	167	481	113	75	700	352	66	828	168	200	345	35
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	167	481	113	75	700	352	66	828	168	200	345	35
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	191	1062	475	96	871	390	83	945	423	218	1214	543
Arrive On Green	0.11	0.30	0.30	0.05	0.25	0.25	0.05	0.27	0.27	0.12	0.35	0.35
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	167	481	113	75	700	352	66	828	168	200	345	35
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1568	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	6.0	7.1	3.5	2.7	12.1	14.0	2.4	14.5	5.6	7.2	4.6	1.0
Cycle Q Clear(g_c), s	6.0	7.1	3.5	2.7	12.1	14.0	2.4	14.5	5.6	7.2	4.6	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	191	1062	475	96	871	390	83	945	423	218	1214	543
V/C Ratio(X)	0.87	0.45	0.24	0.78	0.80	0.90	0.79	0.88	0.40	0.92	0.28	0.06
Avail Cap(c_a), veh/h	191	1062	475	191	872	390	164	981	439	218	1214	543
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.2	18.1	16.8	30.0	22.7	23.4	30.3	22.5	19.2	27.8	15.2	14.1
Incr Delay (d2), s/veh	33.0	0.3	0.3	13.1	5.5	23.6	15.3	8.8	0.6	38.5	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	3.5	1.5	1.7	6.5	8.6	1.5	8.2	2.5	5.8	2.2	0.4
LnGrp Delay(d),s/veh	61.3	18.4	17.1	43.1	28.2	47.0	45.6	31.3	19.8	66.3	15.4	14.1
LnGrp LOS	E	B	B	D	C	D	D	C	B	E	B	B
Approach Vol, veh/h		761			1127			1062			580	
Approach Delay, s/veh		27.6			35.1			30.4			32.9	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	21.3	7.5	23.5	7.1	26.3	11.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	18.0	7.0	16.0	6.0	20.0	7.0	16.0
Max Q Clear Time (g_c+I1), s	9.2	16.5	4.7	9.1	4.4	6.6	8.0	16.0
Green Ext Time (p_c), s	0.0	0.8	0.0	4.8	0.0	7.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	31.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	380	450	99	356	432	664	42	3223	447	620	2418	552
Future Volume (veh/h)	380	450	99	356	432	664	42	3223	447	620	2418	552
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	380	450	99	356	432	664	42	3223	447	620	2418	552
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	215	885	396	215	885	557	67	2224	692	348	2638	821
Arrive On Green	0.06	0.25	0.25	0.06	0.25	0.25	0.02	0.45	0.45	0.10	0.53	0.53
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	380	450	99	356	432	664	42	3223	447	620	2418	552
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	9.5	16.6	7.6	9.5	15.8	38.0	1.9	67.1	33.7	15.5	66.7	39.1
Cycle Q Clear(g_c), s	9.5	16.6	7.6	9.5	15.8	38.0	1.9	67.1	33.7	15.5	66.7	39.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	215	885	396	215	885	557	67	2224	692	348	2638	821
V/C Ratio(X)	1.77	0.51	0.25	1.65	0.49	1.19	0.62	1.45	0.65	1.78	0.92	0.67
Avail Cap(c_a), veh/h	215	885	396	215	885	557	67	2224	692	348	2638	821
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.5	48.2	44.9	70.5	48.0	48.5	73.2	41.7	32.4	67.5	32.4	25.9
Incr Delay (d2), s/veh	363.2	0.2	0.1	314.5	0.2	102.9	12.7	204.8	1.6	364.0	5.5	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.3	8.0	3.3	13.8	7.7	39.0	1.0	72.8	14.8	24.8	31.8	17.1
LnGrp Delay(d),s/veh	433.7	48.4	45.0	385.0	48.1	151.4	85.9	246.5	34.1	431.5	38.0	27.7
LnGrp LOS	F	D	D	F	D	F	F	F	C	F	D	C
Approach Vol, veh/h		929			1452			3712			3590	
Approach Delay, s/veh		205.6			177.9			219.1			104.3	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	84.4	15.0	42.6	21.0	71.9	15.0	42.6
Change Period (Y+Rc), s	5.5	4.8	5.5	* 4.6	5.5	* 4.8	5.5	4.6
Max Green Setting (Gmax), s	3.0	79.4	9.5	* 38	15.5	* 67	9.5	37.7
Max Q Clear Time (g_c+I1), s	3.9	68.7	11.5	40.0	17.5	69.1	11.5	18.6
Green Ext Time (p_c), s	0.0	10.5	0.0	0.0	0.0	0.0	0.0	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	169.1
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	2	10	0	114	0	3123	87	76	2270	6
Future Volume (veh/h)	10	0	2	10	0	114	0	3123	87	76	2270	6
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	10	0	2	10	0	114	0	3123	87	76	2270	6
Adj No. of Lanes	0	1	0	1	0	2	1	3	1	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	12	0	2	96	0	171	2	3353	1044	87	3975	11
Arrive On Green	0.01	0.00	0.01	0.05	0.00	0.05	0.00	0.67	0.67	0.05	0.77	0.77
Sat Flow, veh/h	1435	0	287	1757	0	3136	1740	4988	1553	1740	5136	14
Grp Volume(v), veh/h	12	0	0	10	0	114	0	3123	87	76	1469	807
Grp Sat Flow(s),veh/h/ln	1722	0	0	1757	0	1568	1740	1663	1553	1740	1663	1825
Q Serve(g_s), s	0.7	0.0	0.0	0.5	0.0	3.5	0.0	53.9	1.9	4.3	17.6	17.6
Cycle Q Clear(g_c), s	0.7	0.0	0.0	0.5	0.0	3.5	0.0	53.9	1.9	4.3	17.6	17.6
Prop In Lane	0.83		0.17	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	15	0	0	96	0	171	2	3353	1044	87	2574	1412
V/C Ratio(X)	0.82	0.00	0.00	0.10	0.00	0.67	0.00	0.93	0.08	0.88	0.57	0.57
Avail Cap(c_a), veh/h	53	0	0	215	0	383	53	3512	1093	87	2574	1412
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.6	0.0	0.0	44.2	0.0	45.6	0.0	14.1	5.6	46.4	4.5	4.5
Incr Delay (d2), s/veh	31.6	0.0	0.0	0.2	0.0	1.7	0.0	5.7	0.1	56.3	0.7	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	0.3	0.0	1.6	0.0	26.1	0.9	3.4	8.2	9.2
LnGrp Delay(d),s/veh	80.3	0.0	0.0	44.3	0.0	47.2	0.0	19.9	5.7	102.7	5.2	5.8
LnGrp LOS	F			D		D		B	A	F	A	A
Approach Vol, veh/h		12			124			3210			2352	
Approach Delay, s/veh		80.3			47.0			19.5			8.5	
Approach LOS		F			D			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	81.1		6.3	10.0	71.1		10.9
Change Period (Y+Rc), s	* 4.6	5.0		5.5	* 5.1	* 5		5.5
Max Green Setting (Gmax), s	* 3	71.4		3.0	* 4.9	* 69		12.0
Max Q Clear Time (g_c+I1), s	0.0	19.6		2.7	6.3	55.9		5.5
Green Ext Time (p_c), s	0.0	51.6		0.0	0.0	10.1		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	15.7
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	161	23	219	256	484	34	2872	286	181	2207	0
Future Volume (veh/h)	0	161	23	219	256	484	34	2872	286	181	2207	0
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1845	1845	1845	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	0	161	23	219	256	484	34	2872	286	181	2207	0
Adj No. of Lanes	2	2	1	2	2	1	2	3	0	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	2	508	227	208	864	492	60	2627	253	227	3079	0
Arrive On Green	0.00	0.15	0.15	0.06	0.25	0.25	0.02	0.57	0.57	0.07	0.62	0.00
Sat Flow, veh/h	3375	3471	1553	3408	3505	1568	3375	4627	446	3375	5152	0
Grp Volume(v), veh/h	0	161	23	219	256	484	34	2038	1120	181	2207	0
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1704	1752	1568	1688	1663	1748	1688	1663	0
Q Serve(g_s), s	0.0	5.8	1.8	8.5	8.3	34.4	1.4	79.2	79.2	7.4	42.4	0.0
Cycle Q Clear(g_c), s	0.0	5.8	1.8	8.5	8.3	34.4	1.4	79.2	79.2	7.4	42.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.26	1.00		0.00
Lane Grp Cap(c), veh/h	2	508	227	208	864	492	60	1888	993	227	3079	0
V/C Ratio(X)	0.00	0.32	0.10	1.05	0.30	0.98	0.57	1.08	1.13	0.80	0.72	0.00
Avail Cap(c_a), veh/h	73	722	323	208	864	492	102	1888	993	278	3089	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	53.3	51.6	65.5	42.7	47.5	68.0	30.1	30.1	64.1	18.3	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.1	77.6	0.1	36.0	3.1	45.9	70.7	10.0	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.8	0.8	6.2	4.0	23.4	0.7	48.2	57.6	3.8	19.4	0.0
LnGrp Delay(d),s/veh	0.0	53.4	51.7	143.1	42.8	83.5	71.0	76.1	100.9	74.1	19.0	0.0
LnGrp LOS		D	D	F	D	F	E	F	F	E	B	
Approach Vol, veh/h		184			959			3192			2388	
Approach Delay, s/veh		53.2			86.2			84.7			23.2	
Approach LOS		D			F			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	91.4	0.0	40.1	14.9	84.5	14.0	26.1
Change Period (Y+Rc), s	5.5	5.3	5.5	* 5.7	5.5	* 5.3	5.5	* 5.7
Max Green Setting (Gmax), s	4.2	86.4	3.0	* 34	11.5	* 79	8.5	* 29
Max Q Clear Time (g_c+I1), s	3.4	44.4	0.0	36.4	9.4	81.2	10.5	7.8
Green Ext Time (p_c), s	0.0	35.6	0.0	0.0	0.0	0.0	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	62.2
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	46	103	3020	24	61	2438
Future Volume (veh/h)	46	103	3020	24	61	2438
Number	3	18	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1827	1900	1827	1827
Adj Flow Rate, veh/h	46	103	3020	24	61	2438
Adj No. of Lanes	1	1	3	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	4	4	4	4
Cap, veh/h	103	92	3583	28	77	2802
Arrive On Green	0.06	0.06	0.70	0.70	0.04	0.81
Sat Flow, veh/h	1757	1568	5269	40	1740	3563
Grp Volume(v), veh/h	46	103	1965	1079	61	2438
Grp Sat Flow(s),veh/h/ln	1757	1568	1663	1820	1740	1736
Q Serve(g_s), s	1.9	4.5	33.1	33.4	2.7	34.9
Cycle Q Clear(g_c), s	1.9	4.5	33.1	33.4	2.7	34.9
Prop In Lane	1.00	1.00		0.02	1.00	
Lane Grp Cap(c), veh/h	103	92	2334	1277	77	2802
V/C Ratio(X)	0.45	1.12	0.84	0.85	0.79	0.87
Avail Cap(c_a), veh/h	103	92	2334	1277	161	2946
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	36.2	8.3	8.4	36.4	4.8
Incr Delay (d2), s/veh	1.1	130.4	2.8	5.1	6.6	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	5.2	15.6	18.0	1.4	17.0
LnGrp Delay(d),s/veh	36.1	166.6	11.1	13.5	43.0	7.6
LnGrp LOS	D	F	B	B	D	A
Approach Vol, veh/h	149		3044			2499
Approach Delay, s/veh	126.3		12.0			8.5
Approach LOS	F		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		66.8			8.1	58.7		10.0
Change Period (Y+Rc), s		4.8			* 4.7	4.8		5.5
Max Green Setting (Gmax), s		65.2			* 7.1	53.4		4.5
Max Q Clear Time (g_c+I1), s		36.9			4.7	35.4		6.5
Green Ext Time (p_c), s		25.1			0.0	16.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.4
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	636	391	83	1099	844	511	2223	86	531	2041	205
Future Volume (veh/h)	77	636	391	83	1099	844	511	2223	86	531	2041	205
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	77	636	391	83	1099	844	511	2223	86	531	2041	205
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	4	4	4	4	4	4
Cap, veh/h	69	1167	522	123	1235	553	403	1796	559	407	1796	559
Arrive On Green	0.02	0.34	0.34	0.04	0.36	0.36	0.12	0.36	0.36	0.12	0.36	0.36
Sat Flow, veh/h	3312	3406	1524	3312	3406	1524	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	77	636	391	83	1099	844	511	2223	86	531	2041	205
Grp Sat Flow(s),veh/h/ln	1656	1703	1524	1656	1703	1524	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	3.0	21.9	32.9	3.6	44.0	52.6	17.3	52.2	5.4	17.5	52.2	14.1
Cycle Q Clear(g_c), s	3.0	21.9	32.9	3.6	44.0	52.6	17.3	52.2	5.4	17.5	52.2	14.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	69	1167	522	123	1235	553	403	1796	559	407	1796	559
V/C Ratio(X)	1.12	0.54	0.75	0.67	0.89	1.53	1.27	1.24	0.15	1.30	1.14	0.37
Avail Cap(c_a), veh/h	69	1167	522	174	1235	553	403	1796	559	407	1796	559
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.0	38.5	42.1	68.9	43.5	46.2	63.8	46.4	31.4	63.8	46.4	34.2
Incr Delay (d2), s/veh	146.4	0.3	5.3	2.4	8.0	246.3	139.3	112.1	0.0	153.4	69.0	0.1
Initial Q Delay(d3),s/veh	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	10.3	14.6	1.7	22.0	60.0	15.8	42.6	2.3	16.8	35.4	6.0
LnGrp Delay(d),s/veh	217.6	38.8	47.4	71.3	51.5	292.5	203.2	158.5	31.5	217.2	115.4	34.4
LnGrp LOS	F	D	D	E	D	F	F	F	C	F	F	C
Approach Vol, veh/h		1104			2026			2820			2777	
Approach Delay, s/veh		54.3			152.7			162.7			128.9	
Approach LOS		D			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	58.0	22.0	57.0	10.9	55.1	22.0	57.0
Change Period (Y+Rc), s	5.0	* 5.4	* 4.7	4.8	5.5	* 5.4	4.5	4.8
Max Green Setting (Gmax), s	3.0	* 53	* 17	52.2	7.6	* 48	17.5	52.2
Max Q Clear Time (g_c+I1), s	5.0	54.6	19.3	54.2	5.6	34.9	19.5	54.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	5.7	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	135.9
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	119	64	94	37	244	257	2717	201	18	2135	416
Future Volume (veh/h)	128	119	64	94	37	244	257	2717	201	18	2135	416
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	128	119	64	94	37	244	257	2717	201	18	2135	416
Adj No. of Lanes	1	1	1	1	1	0	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	139	288	245	118	30	196	266	2878	896	21	2207	687
Arrive On Green	0.08	0.16	0.16	0.07	0.14	0.14	0.15	0.58	0.58	0.01	0.44	0.44
Sat Flow, veh/h	1757	1845	1568	1757	211	1389	1740	4988	1553	1740	4988	1553
Grp Volume(v), veh/h	128	119	64	94	0	281	257	2717	201	18	2135	416
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1600	1740	1663	1553	1740	1663	1553
Q Serve(g_s), s	7.9	6.4	3.9	5.8	0.0	15.5	16.1	55.6	6.9	1.1	45.8	22.4
Cycle Q Clear(g_c), s	7.9	6.4	3.9	5.8	0.0	15.5	16.1	55.6	6.9	1.1	45.8	22.4
Prop In Lane	1.00		1.00	1.00		0.87	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	139	288	245	118	0	226	266	2878	896	21	2207	687
V/C Ratio(X)	0.92	0.41	0.26	0.80	0.00	1.24	0.97	0.94	0.22	0.86	0.97	0.61
Avail Cap(c_a), veh/h	139	288	245	144	0	226	266	2878	896	48	2249	700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.2	41.8	40.7	50.5	0.0	47.1	46.2	21.6	11.3	54.1	29.8	23.3
Incr Delay (d2), s/veh	51.7	0.4	0.2	18.3	0.0	141.4	45.1	7.3	0.0	28.6	12.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	3.3	1.7	3.4	0.0	15.6	11.0	27.1	2.9	0.7	23.4	9.8
LnGrp Delay(d),s/veh	101.9	42.1	40.9	68.7	0.0	188.5	91.3	28.9	11.3	82.8	41.9	24.3
LnGrp LOS	F	D	D	E		F	F	C	B	F	D	C
Approach Vol, veh/h		311			375			3175			2569	
Approach Delay, s/veh		66.5			158.5			32.8			39.3	
Approach LOS		E			F			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.4	53.4	14.2	20.8	6.6	68.1	12.6	22.4
Change Period (Y+Rc), s	* 4.6	4.8	5.5	* 5.3	* 5.3	4.8	* 5.2	* 5.3
Max Green Setting (Gmax), s	* 17	49.5	8.7	* 16	* 3	62.6	* 9	* 15
Max Q Clear Time (g_c+I1), s	18.1	47.8	9.9	17.5	3.1	57.6	7.8	8.4
Green Ext Time (p_c), s	0.0	0.8	0.0	0.0	0.0	4.9	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	44.4
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	181	552	82	3	972	790	294	2416	28	835	882	558
Future Volume (veh/h)	181	552	82	3	972	790	294	2416	28	835	882	558
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	181	552	82	3	972	790	294	2416	28	835	882	558
Adj No. of Lanes	2	1	1	1	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	237	601	511	43	984	440	346	1753	546	324	1746	544
Arrive On Green	0.07	0.33	0.33	0.02	0.28	0.28	0.10	0.35	0.35	0.10	0.35	0.35
Sat Flow, veh/h	3408	1845	1568	1757	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	181	552	82	3	972	790	294	2416	28	835	882	558
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1757	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	6.4	35.1	4.5	0.2	33.6	34.2	10.4	42.8	1.5	11.7	17.0	42.6
Cycle Q Clear(g_c), s	6.4	35.1	4.5	0.2	33.6	34.2	10.4	42.8	1.5	11.7	17.0	42.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	237	601	511	43	984	440	346	1753	546	324	1746	544
V/C Ratio(X)	0.76	0.92	0.16	0.07	0.99	1.79	0.85	1.38	0.05	2.57	0.51	1.03
Avail Cap(c_a), veh/h	896	601	511	462	984	440	385	1753	546	324	1746	544
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.7	39.5	29.2	58.0	43.6	43.8	53.7	39.5	26.1	55.0	31.2	39.6
Incr Delay (d2), s/veh	1.9	18.9	0.1	0.2	25.5	366.3	13.8	173.9	0.0	717.6	0.1	45.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	20.9	2.0	0.1	19.7	59.6	5.5	47.7	0.6	37.7	7.9	25.2
LnGrp Delay(d),s/veh	57.6	58.4	29.3	58.3	69.1	410.1	67.6	213.4	26.1	772.6	31.3	85.1
LnGrp LOS	E	E	C	E	E	F	E	F	C	F	C	F
Approach Vol, veh/h		815			1765			2738			2275	
Approach Delay, s/veh		55.3			221.7			195.8			316.6	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.2	47.7	15.6	41.3	17.0	47.9	10.1	46.8
Change Period (Y+Rc), s	* 4.7	5.1	7.1	* 7.1	* 5.3	5.1	7.1	7.1
Max Green Setting (Gmax), s	* 14	41.2	32.0	* 34	* 12	42.8	32.0	33.9
Max Q Clear Time (g_c+I1), s	12.4	44.6	8.4	36.2	13.7	44.8	2.2	37.1
Green Ext Time (p_c), s	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		222.9
HCM 2010 LOS		F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	942	280	138	13	452	10	896	2252	129	9	810	643
Future Volume (veh/h)	942	280	138	13	452	10	896	2252	129	9	810	643
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	942	280	138	13	452	10	896	2252	129	9	810	643
Adj No. of Lanes	1	2	1	1	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	636	1633	730	15	391	175	609	1873	583	21	1023	319
Arrive On Green	0.37	0.47	0.47	0.01	0.11	0.11	0.18	0.38	0.38	0.01	0.21	0.21
Sat Flow, veh/h	1740	3471	1553	1740	3471	1553	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	942	280	138	13	452	10	896	2252	129	9	810	643
Grp Sat Flow(s),veh/h/ln	1740	1736	1553	1740	1736	1553	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	54.9	7.0	7.8	1.1	16.9	0.9	27.1	56.4	8.5	0.4	23.1	30.8
Cycle Q Clear(g_c), s	54.9	7.0	7.8	1.1	16.9	0.9	27.1	56.4	8.5	0.4	23.1	30.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	636	1633	730	15	391	175	609	1873	583	21	1023	319
V/C Ratio(X)	1.48	0.17	0.19	0.86	1.16	0.06	1.47	1.20	0.22	0.43	0.79	2.02
Avail Cap(c_a), veh/h	636	1633	730	58	391	175	609	1873	583	67	1023	319
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.6	22.9	23.1	74.3	66.6	59.5	61.5	46.9	31.9	74.3	56.6	59.7
Incr Delay (d2), s/veh	224.5	0.2	0.6	36.8	95.5	0.6	220.5	96.5	0.9	5.0	6.3	469.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	66.0	3.4	3.4	0.7	13.3	0.4	31.3	42.6	3.8	0.2	11.2	54.7
LnGrp Delay(d),s/veh	272.1	23.1	23.7	111.1	162.1	60.1	282.0	143.4	32.8	79.3	62.9	528.6
LnGrp LOS	F	C	C	F	F	E	F	F	C	E	E	F
Approach Vol, veh/h		1360			475			3277			1462	
Approach Delay, s/veh		195.6			158.6			176.9			267.8	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	32.0	36.0	60.0	22.1	6.4	61.6	6.3	75.8
Change Period (Y+Rc), s	* 4.9	* 5.2	* 5.1	* 5.2	5.5	* 5.2	5.0	* 5.2
Max Green Setting (Gmax), s	* 27	* 31	* 55	* 17	3.0	* 55	5.0	* 67
Max Q Clear Time (g_c+I1), s	29.1	32.8	56.9	18.9	2.4	58.4	3.1	9.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.4

Intersection Summary	
HCM 2010 Ctrl Delay	199.7
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	470	369	116	884	333	513	2624	203	76	965	88
Future Volume (veh/h)	95	470	369	116	884	333	513	2624	203	76	965	88
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	95	470	369	116	884	333	513	2624	203	76	965	88
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	109	811	363	163	867	388	562	2642	822	93	1948	606
Arrive On Green	0.03	0.23	0.23	0.05	0.25	0.25	0.17	0.53	0.53	0.03	0.39	0.39
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	95	470	369	116	884	333	513	2624	203	76	965	88
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	3.7	16.1	31.2	4.5	33.4	27.4	20.2	70.5	9.5	3.0	19.7	4.9
Cycle Q Clear(g_c), s	3.7	16.1	31.2	4.5	33.4	27.4	20.2	70.5	9.5	3.0	19.7	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	109	811	363	163	867	388	562	2642	822	93	1948	606
V/C Ratio(X)	0.88	0.58	1.02	0.71	1.02	0.86	0.91	0.99	0.25	0.82	0.50	0.15
Avail Cap(c_a), veh/h	109	811	363	227	867	388	758	2642	822	93	1948	606
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.1	46.1	51.9	63.3	50.8	48.5	55.3	31.5	17.2	65.3	31.1	26.6
Incr Delay (d2), s/veh	48.2	3.0	51.6	2.6	35.5	19.7	10.7	16.0	0.5	40.1	0.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	8.1	18.7	2.2	20.4	14.0	10.2	36.0	4.2	1.9	9.1	2.2
LnGrp Delay(d),s/veh	113.3	49.1	103.6	66.0	86.3	68.2	66.0	47.5	17.7	105.4	31.7	26.9
LnGrp LOS	F	D	F	E	F	E	E	D	B	F	C	C
Approach Vol, veh/h		934			1333			3340			1129	
Approach Delay, s/veh		77.1			80.0			48.5			36.3	
Approach LOS		E			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.0	58.2	9.8	39.0	9.2	77.0	12.0	36.8
Change Period (Y+Rc), s	5.5	* 5.5	5.5	5.6	5.5	* 5.5	5.5	* 5.6
Max Green Setting (Gmax), s	30.3	* 45	4.3	33.4	3.7	* 72	9.0	* 29
Max Q Clear Time (g_c+I1), s	22.2	21.7	5.7	35.4	5.0	72.5	6.5	33.2
Green Ext Time (p_c), s	0.3	23.2	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	56.7
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	943	33	15	1389	8	466	42	186	7	16	55
Future Volume (veh/h)	14	943	33	15	1389	8	466	42	186	7	16	55
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	14	943	33	15	1389	8	466	42	186	7	16	55
Adj No. of Lanes	1	2	1	1	2	1	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	22	1581	707	23	1583	708	494	106	468	12	27	92
Arrive On Green	0.01	0.46	0.46	0.01	0.46	0.46	0.28	0.36	0.36	0.01	0.07	0.07
Sat Flow, veh/h	1707	3406	1524	1707	3406	1524	1757	297	1315	1757	366	1257
Grp Volume(v), veh/h	14	943	33	15	1389	8	466	0	228	7	0	71
Grp Sat Flow(s),veh/h/ln	1707	1703	1524	1707	1703	1524	1757	0	1613	1757	0	1623
Q Serve(g_s), s	0.9	22.9	1.3	1.0	41.1	0.3	28.9	0.0	11.8	0.4	0.0	4.7
Cycle Q Clear(g_c), s	0.9	22.9	1.3	1.0	41.1	0.3	28.9	0.0	11.8	0.4	0.0	4.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.82	1.00		0.77
Lane Grp Cap(c), veh/h	22	1581	707	23	1583	708	494	0	574	12	0	119
V/C Ratio(X)	0.65	0.60	0.05	0.66	0.88	0.01	0.94	0.00	0.40	0.57	0.00	0.60
Avail Cap(c_a), veh/h	61	1581	707	84	1608	719	546	0	747	63	0	306
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.8	22.1	16.4	54.7	26.9	16.0	39.2	0.0	26.9	55.2	0.0	50.0
Incr Delay (d2), s/veh	20.1	0.8	0.0	19.9	6.1	0.0	23.5	0.0	0.4	25.2	0.0	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	10.9	0.6	0.6	20.6	0.1	17.2	0.0	5.3	0.3	0.0	2.3
LnGrp Delay(d),s/veh	74.9	22.9	16.4	74.6	33.0	16.0	62.7	0.0	27.3	80.3	0.0	54.3
LnGrp LOS	E	C	B	E	C	B	E		C	F		D
Approach Vol, veh/h		990			1412			694			78	
Approach Delay, s/veh		23.5			33.4			51.1			56.6	
Approach LOS		C			C			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.0	58.1	35.7	12.6	4.9	58.2	4.3	44.0
Change Period (Y+Rc), s	3.5	6.4	4.4	* 4.4	3.5	6.4	3.5	4.4
Max Green Setting (Gmax), s	5.5	51.1	34.6	* 21	4.0	52.6	4.0	51.6
Max Q Clear Time (g_c+I1), s	3.0	24.9	30.9	6.7	2.9	43.1	2.4	13.8
Green Ext Time (p_c), s	0.0	23.9	0.4	1.4	0.0	8.7	0.0	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	34.7
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	778	662	5	1191	560	640	485	25	176	236	1
Future Volume (veh/h)	1	778	662	5	1191	560	640	485	25	176	236	1
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	1	778	662	5	1191	560	640	485	25	176	236	1
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	1	799	658	7	1038	465	541	627	533	192	261	222
Arrive On Green	0.00	0.44	0.44	0.00	0.44	0.44	0.31	0.34	0.34	0.11	0.14	0.14
Sat Flow, veh/h	1757	1827	1505	1757	2356	1055	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	1	745	695	5	870	881	640	485	25	176	236	1
Grp Sat Flow(s),veh/h/ln	1757	1752	1579	1757	1752	1659	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	0.1	60.9	64.0	0.4	64.4	64.4	45.0	34.4	1.6	14.5	18.4	0.1
Cycle Q Clear(g_c), s	0.1	60.9	64.0	0.4	64.4	64.4	45.0	34.4	1.6	14.5	18.4	0.1
Prop In Lane	1.00		0.95	1.00		0.64	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1	767	691	7	772	731	541	627	533	192	261	222
V/C Ratio(X)	0.70	0.97	1.01	0.75	1.13	1.21	1.18	0.77	0.05	0.92	0.90	0.00
Avail Cap(c_a), veh/h	48	767	691	48	772	731	541	631	536	192	265	225
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.1	40.3	41.1	72.8	40.9	40.9	50.6	43.2	32.4	64.5	61.8	53.9
Incr Delay (d2), s/veh	231.3	25.7	35.5	96.4	73.5	105.1	100.5	5.9	0.0	41.9	31.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	34.9	34.7	0.4	46.8	50.8	36.9	18.5	0.7	9.3	11.6	0.0
LnGrp Delay(d),s/veh	304.3	65.9	76.7	169.2	114.4	146.0	151.1	49.2	32.4	106.4	93.0	53.9
LnGrp LOS	F	E	F	F	F	F	F	D	C	F	F	D
Approach Vol, veh/h		1441			1756			1150			413	
Approach Delay, s/veh		71.3			130.4			105.5			98.6	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	53.7	4.6	68.0	49.0	24.7	4.1	68.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	50.0	4.0	64.0	45.0	21.0	4.0	64.0
Max Q Clear Time (g_c+I1), s	16.5	36.4	2.4	66.0	47.0	20.4	2.1	66.4
Green Ext Time (p_c), s	0.0	3.9	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	103.7
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	176	238	5	36	435	6	10	54	48	11	30	30
Future Volume (veh/h)	176	238	5	36	435	6	10	54	48	11	30	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1900	1845	1900	1900	1845	1900
Adj Flow Rate, veh/h	176	238	5	36	435	6	10	54	48	11	30	30
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	3	3	3	3	3	3
Cap, veh/h	222	1176	25	58	855	12	19	105	93	15	41	41
Arrive On Green	0.13	0.34	0.34	0.03	0.24	0.24	0.13	0.13	0.13	0.06	0.06	0.06
Sat Flow, veh/h	1740	3477	73	1740	3506	48	152	823	732	264	720	720
Grp Volume(v), veh/h	176	119	124	36	215	226	112	0	0	71	0	0
Grp Sat Flow(s),veh/h/ln	1740	1736	1814	1740	1736	1818	1708	0	0	1704	0	0
Q Serve(g_s), s	3.5	1.7	1.8	0.7	3.9	3.9	2.2	0.0	0.0	1.5	0.0	0.0
Cycle Q Clear(g_c), s	3.5	1.7	1.8	0.7	3.9	3.9	2.2	0.0	0.0	1.5	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.03	0.09		0.43	0.15		0.42
Lane Grp Cap(c), veh/h	222	587	614	58	423	444	217	0	0	96	0	0
V/C Ratio(X)	0.79	0.20	0.20	0.62	0.51	0.51	0.51	0.00	0.00	0.74	0.00	0.00
Avail Cap(c_a), veh/h	290	819	857	242	771	808	759	0	0	757	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.2	8.5	8.5	17.2	11.7	11.7	14.7	0.0	0.0	16.7	0.0	0.0
Incr Delay (d2), s/veh	10.6	0.2	0.2	10.1	0.9	0.9	1.9	0.0	0.0	10.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.9	0.9	0.5	2.0	2.1	1.1	0.0	0.0	1.0	0.0	0.0
LnGrp Delay(d),s/veh	25.8	8.6	8.6	27.3	12.7	12.7	16.6	0.0	0.0	27.2	0.0	0.0
LnGrp LOS	C	A	A	C	B	B	B			C		
Approach Vol, veh/h		419			477			112			71	
Approach Delay, s/veh		15.9			13.8			16.6			27.2	
Approach LOS		B			B			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		8.6	5.2	16.2		6.0	8.6	12.8
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	5.0	17.0		16.0	6.0	16.0
Max Q Clear Time (g_c+I1), s		4.2	2.7	3.8		3.5	5.5	5.9
Green Ext Time (p_c), s		0.4	0.0	3.4		0.2	0.0	2.9

Intersection Summary	
HCM 2010 Ctrl Delay	15.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	288	101	114	136	134	110	656	119	77	275	293
Future Volume (veh/h)	96	288	101	114	136	134	110	656	119	77	275	293
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	96	288	101	114	136	134	110	656	119	77	275	293
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	122	421	145	114	274	245	140	731	622	97	687	584
Arrive On Green	0.07	0.16	0.16	0.06	0.16	0.16	0.08	0.40	0.40	0.06	0.37	0.37
Sat Flow, veh/h	1757	2562	880	1757	1752	1568	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	96	195	194	114	136	134	110	656	119	77	275	293
Grp Sat Flow(s),veh/h/ln	1757	1752	1689	1757	1752	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	3.3	6.5	6.7	4.0	4.4	4.9	3.8	20.6	3.1	2.7	6.8	8.9
Cycle Q Clear(g_c), s	3.3	6.5	6.7	4.0	4.4	4.9	3.8	20.6	3.1	2.7	6.8	8.9
Prop In Lane	1.00		0.52	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	122	288	278	114	274	245	140	731	622	97	687	584
V/C Ratio(X)	0.78	0.68	0.70	1.00	0.50	0.55	0.78	0.90	0.19	0.79	0.40	0.50
Avail Cap(c_a), veh/h	191	880	848	114	792	708	250	926	787	128	800	680
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.3	24.3	24.4	28.9	23.8	24.0	27.9	17.5	12.2	28.8	14.3	15.0
Incr Delay (d2), s/veh	4.5	1.0	1.2	84.9	0.5	0.7	3.6	8.4	0.1	15.9	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	3.2	3.2	4.6	2.2	2.1	2.0	12.1	1.3	1.7	3.5	3.8
LnGrp Delay(d),s/veh	32.7	25.3	25.6	113.8	24.4	24.8	31.5	25.9	12.2	44.7	14.4	15.2
LnGrp LOS	C	C	C	F	C	C	C	C	B	D	B	B
Approach Vol, veh/h		485			384			885			645	
Approach Delay, s/veh		26.9			51.0			24.7			18.4	
Approach LOS		C			D			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	14.4	10.4	27.4	9.0	14.9	8.9	28.9
Change Period (Y+Rc), s	* 5.2	4.8	5.5	* 4.4	5.0	* 4.8	5.5	* 4.4
Max Green Setting (Gmax), s	* 6.7	27.9	8.8	* 27	4.0	* 31	4.5	* 31
Max Q Clear Time (g_c+I1), s	5.3	6.9	5.8	10.9	6.0	8.7	4.7	22.6
Green Ext Time (p_c), s	0.0	1.4	0.0	2.3	0.0	1.5	0.0	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	27.7
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	771	6	1	1093	0	4	0	1	0	0	5
Future Volume (veh/h)	1	771	6	1	1093	0	4	0	1	0	0	5
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1900	1845	1900	1900	1845	1900
Adj Flow Rate, veh/h	1	771	6	1	1093	0	4	0	1	0	0	5
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	4	1877	15	4	1846	0	102	0	25	0	0	6
Arrive On Green	0.00	0.53	0.53	0.00	0.53	0.00	0.07	0.00	0.07	0.00	0.00	0.00
Sat Flow, veh/h	1757	3564	28	1757	3597	0	1372	0	343	0	0	1568
Grp Volume(v), veh/h	1	379	398	1	1093	0	5	0	0	0	0	5
Grp Sat Flow(s),veh/h/ln	1757	1752	1840	1757	1752	0	1715	0	0	0	0	1568
Q Serve(g_s), s	0.0	5.3	5.3	0.0	8.7	0.0	0.1	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.0	5.3	5.3	0.0	8.7	0.0	0.1	0.0	0.0	0.0	0.0	0.1
Prop In Lane	1.00		0.02	1.00		0.00	0.80		0.20	0.00		1.00
Lane Grp Cap(c), veh/h	4	923	969	4	1846	0	127	0	0	0	0	6
V/C Ratio(X)	0.23	0.41	0.41	0.23	0.59	0.00	0.04	0.00	0.00	0.00	0.00	0.79
Avail Cap(c_a), veh/h	173	1123	1179	173	2247	0	677	0	0	0	0	696
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	20.2	5.8	5.8	20.2	6.6	0.0	17.4	0.0	0.0	0.0	0.0	20.2
Incr Delay (d2), s/veh	25.1	0.3	0.3	25.1	0.3	0.0	0.1	0.0	0.0	0.0	0.0	106.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.6	2.7	0.0	4.2	0.0	0.1	0.0	0.0	0.0	0.0	0.2
LnGrp Delay(d),s/veh	45.4	6.1	6.1	45.4	6.9	0.0	17.6	0.0	0.0	0.0	0.0	127.1
LnGrp LOS	D	A	A	D	A		B					F
Approach Vol, veh/h		778			1094			5			5	
Approach Delay, s/veh		6.1			6.9			17.6			127.1	
Approach LOS		A			A			B			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		7.0	4.0	25.4		4.2	4.0	25.4
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	4.0	26.0		18.0	4.0	26.0
Max Q Clear Time (g_c+I1), s		2.1	2.0	7.3		2.1	2.0	10.7
Green Ext Time (p_c), s		0.0	0.0	12.3		0.0	0.0	10.7

Intersection Summary	
HCM 2010 Ctrl Delay	7.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	40	32	686	30	296	57	2041	983	480	1138	59
Future Volume (veh/h)	76	40	32	686	30	296	57	2041	983	480	1138	59
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	76	40	32	686	30	296	57	2041	983	480	1138	59
Adj No. of Lanes	1	1	0	2	1	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	82	45	36	653	353	300	73	2283	711	462	2700	140
Arrive On Green	0.05	0.05	0.05	0.19	0.19	0.19	0.04	0.46	0.46	0.14	0.56	0.56
Sat Flow, veh/h	1757	950	760	3408	1845	1568	1740	4988	1553	3375	4856	252
Grp Volume(v), veh/h	76	0	72	686	30	296	57	2041	983	480	779	418
Grp Sat Flow(s),veh/h/ln	1757	0	1711	1704	1845	1568	1740	1663	1553	1688	1663	1783
Q Serve(g_s), s	5.6	0.0	5.4	24.9	1.7	24.5	4.2	48.8	59.5	17.8	17.7	17.7
Cycle Q Clear(g_c), s	5.6	0.0	5.4	24.9	1.7	24.5	4.2	48.8	59.5	17.8	17.7	17.7
Prop In Lane	1.00		0.44	1.00		1.00	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	82	0	80	653	353	300	73	2283	711	462	1848	991
V/C Ratio(X)	0.92	0.00	0.90	1.05	0.08	0.99	0.78	0.89	1.38	1.04	0.42	0.42
Avail Cap(c_a), veh/h	82	0	80	653	353	300	133	2283	711	462	1848	991
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.7	0.0	61.6	52.5	43.2	52.4	61.7	32.4	35.3	56.1	16.7	16.7
Incr Delay (d2), s/veh	72.2	0.0	65.6	49.3	0.0	47.7	6.7	4.9	181.1	52.2	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.0	4.0	16.2	0.9	14.6	2.2	23.3	61.2	11.6	8.1	8.7
LnGrp Delay(d),s/veh	134.0	0.0	127.2	101.9	43.2	100.1	68.4	37.2	216.3	108.3	16.8	16.9
LnGrp LOS	F		F	F	D	F	E	D	F	F	B	B
Approach Vol, veh/h		148			1012			3081			1677	
Approach Delay, s/veh		130.7			99.6			94.9			43.0	
Approach LOS		F			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.5	77.5		11.6	23.3	64.7		30.4
Change Period (Y+Rc), s	* 5.1	* 5.2		5.5	5.5	* 5.2		5.5
Max Green Setting (Gmax), s	* 9.9	* 68		6.1	17.8	* 60		24.9
Max Q Clear Time (g_c+I1), s	6.2	19.7		7.6	19.8	61.5		26.9
Green Ext Time (p_c), s	0.0	20.7		0.0	0.0	0.0		0.0

Intersection Summary			
HCM 2010 Ctrl Delay		81.9	
HCM 2010 LOS		F	

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	215	180	195	110	111	9	283	2552	228	50	917	169
Future Volume (veh/h)	215	180	195	110	111	9	283	2552	228	50	917	169
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	215	180	195	110	111	9	283	2552	228	50	917	169
Adj No. of Lanes	2	2	1	2	2	0	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	275	515	230	166	378	30	345	2835	883	87	2453	764
Arrive On Green	0.08	0.15	0.15	0.05	0.11	0.11	0.10	0.57	0.57	0.03	0.49	0.49
Sat Flow, veh/h	3408	3505	1568	3408	3287	264	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	215	180	195	110	59	61	283	2552	228	50	917	169
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1798	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	6.6	4.9	12.9	3.4	3.3	3.3	8.7	48.0	7.9	1.6	12.1	6.6
Cycle Q Clear(g_c), s	6.6	4.9	12.9	3.4	3.3	3.3	8.7	48.0	7.9	1.6	12.1	6.6
Prop In Lane	1.00		1.00	1.00		0.15	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	275	515	230	166	201	207	345	2835	883	87	2453	764
V/C Ratio(X)	0.78	0.35	0.85	0.66	0.29	0.30	0.82	0.90	0.26	0.57	0.37	0.22
Avail Cap(c_a), veh/h	283	1051	470	276	529	542	554	3023	941	95	2453	764
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.8	40.7	44.1	49.6	43.0	43.0	46.7	20.2	11.6	51.1	16.8	15.4
Incr Delay (d2), s/veh	11.7	0.2	3.3	1.7	0.3	0.3	2.3	3.8	0.1	3.4	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	2.4	5.8	1.6	1.6	1.7	4.2	22.7	3.4	0.8	5.5	2.8
LnGrp Delay(d),s/veh	59.6	40.8	47.4	51.3	43.3	43.3	49.0	24.0	11.6	54.5	16.8	15.4
LnGrp LOS	E	D	D	D	D	D	D	C	B	D	B	B
Approach Vol, veh/h		590			230			3063			1136	
Approach Delay, s/veh		49.8			47.1			25.4			18.3	
Approach LOS		D			D			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.3	57.8	14.1	17.9	8.2	65.9	10.7	21.3
Change Period (Y+Rc), s	5.5	* 5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	17.4	* 50	8.8	* 32	3.0	* 64	8.6	* 32
Max Q Clear Time (g_c+I1), s	10.7	14.1	8.6	5.3	3.6	50.0	5.4	14.9
Green Ext Time (p_c), s	0.1	20.6	0.0	0.7	0.0	10.3	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	27.6
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	296	508	320	8	785	191	575	2774	28	137	968	226
Future Volume (veh/h)	296	508	320	8	785	191	575	2774	28	137	968	226
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	296	508	320	8	785	191	575	2774	28	137	968	0
Adj No. of Lanes	1	1	1	1	1	1	1	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	4	4	4	4	4	4
Cap, veh/h	190	700	595	34	543	461	343	2067	21	81	1260	392
Arrive On Green	0.11	0.39	0.39	0.02	0.30	0.30	0.20	0.41	0.41	0.05	0.25	0.00
Sat Flow, veh/h	1707	1792	1524	1707	1792	1524	1740	5092	51	1740	4988	1553
Grp Volume(v), veh/h	296	508	320	8	785	191	575	1809	993	137	968	0
Grp Sat Flow(s),veh/h/ln	1707	1792	1524	1707	1792	1524	1740	1663	1818	1740	1663	1553
Q Serve(g_s), s	16.7	36.1	24.3	0.7	45.4	15.0	29.6	60.9	60.9	7.0	27.0	0.0
Cycle Q Clear(g_c), s	16.7	36.1	24.3	0.7	45.4	15.0	29.6	60.9	60.9	7.0	27.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	190	700	595	34	543	461	343	1350	738	81	1260	392
V/C Ratio(X)	1.56	0.73	0.54	0.23	1.45	0.41	1.67	1.34	1.35	1.69	0.77	0.00
Avail Cap(c_a), veh/h	190	701	596	39	543	461	343	1350	738	81	1260	392
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.51	0.51	0.51	0.09	0.09	0.09	0.92	0.92	0.00
Uniform Delay (d), s/veh	66.7	38.9	35.3	72.4	52.3	41.7	60.2	44.5	44.6	71.5	52.0	0.0
Incr Delay (d2), s/veh	275.0	3.3	0.5	0.7	206.5	0.1	304.8	153.5	156.4	353.0	4.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.4	18.6	10.3	0.3	53.6	6.3	43.3	56.7	62.6	11.3	12.9	0.0
LnGrp Delay(d),s/veh	341.6	42.1	35.8	73.0	258.8	41.8	365.0	198.0	200.9	424.5	56.1	0.0
LnGrp LOS	F	D	D	E	F	D	F	F	F	F	E	
Approach Vol, veh/h		1124			984			3377			1105	
Approach Delay, s/veh		119.2			215.2			227.3			101.8	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.0	43.0	21.0	51.0	12.0	66.0	7.8	64.2
Change Period (Y+Rc), s	* 5.4	5.1	* 4.3	5.6	5.0	5.1	* 4.8	* 5.6
Max Green Setting (Gmax), s	* 30	37.9	* 17	45.4	7.0	60.9	* 3.4	* 59
Max Q Clear Time (g_c+I1), s	31.6	29.0	18.7	47.4	9.0	62.9	2.7	38.1
Green Ext Time (p_c), s	0.0	7.4	0.0	0.0	0.0	0.0	0.0	3.6

Intersection Summary	
HCM 2010 Ctrl Delay	186.0
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	433	249	86	10	573	68	154	2888	110	7	957	353
Future Volume (veh/h)	433	249	86	10	573	68	154	2888	110	7	957	353
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	433	249	86	10	573	68	154	2888	110	7	957	353
Adj No. of Lanes	2	1	0	2	1	0	1	3	0	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	311	464	160	23	436	52	176	2421	91	9	1419	523
Arrive On Green	0.09	0.35	0.35	0.01	0.27	0.27	0.10	0.49	0.49	0.01	0.39	0.39
Sat Flow, veh/h	3408	1312	453	3408	1619	192	1740	4934	186	1740	3594	1324
Grp Volume(v), veh/h	433	0	335	10	0	641	154	1935	1063	7	885	425
Grp Sat Flow(s),veh/h/ln	1704	0	1765	1704	0	1811	1740	1663	1794	1740	1663	1593
Q Serve(g_s), s	13.5	0.0	22.4	0.4	0.0	39.8	12.9	72.5	72.5	0.6	32.4	32.5
Cycle Q Clear(g_c), s	13.5	0.0	22.4	0.4	0.0	39.8	12.9	72.5	72.5	0.6	32.4	32.5
Prop In Lane	1.00		0.26	1.00		0.11	1.00		0.10	1.00		0.83
Lane Grp Cap(c), veh/h	311	0	625	23	0	488	176	1632	880	9	1313	629
V/C Ratio(X)	1.39	0.00	0.54	0.43	0.00	1.31	0.88	1.19	1.21	0.79	0.67	0.68
Avail Cap(c_a), veh/h	311	0	625	136	0	488	279	1632	880	35	1313	629
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.1	0.0	38.1	73.1	0.0	54.0	65.5	37.6	37.6	73.4	36.9	36.9
Incr Delay (d2), s/veh	194.3	0.0	0.5	4.6	0.0	155.4	10.7	90.2	104.1	42.9	1.1	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.7	0.0	11.0	0.2	0.0	40.8	6.7	53.5	61.2	0.4	15.1	14.7
LnGrp Delay(d),s/veh	261.4	0.0	38.6	77.7	0.0	209.4	76.2	127.8	141.7	116.3	38.0	39.2
LnGrp LOS	F		D	E		F	E	F	F	F	D	D
Approach Vol, veh/h		768			651			3152			1317	
Approach Delay, s/veh		164.2			207.4			130.0			38.8	
Approach LOS		F			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.4	63.3	19.0	45.0	6.2	77.5	6.5	57.5
Change Period (Y+Rc), s	5.5	5.0	5.5	* 5.2	5.5	5.0	5.5	* 5.2
Max Green Setting (Gmax), s	23.7	51.8	13.5	* 40	3.0	72.5	5.9	* 47
Max Q Clear Time (g_c+I1), s	14.9	34.5	15.5	41.8	2.6	74.5	2.4	24.4
Green Ext Time (p_c), s	0.0	14.1	0.0	0.0	0.0	0.0	0.0	2.4

Intersection Summary		
HCM 2010 Ctrl Delay		122.6
HCM 2010 LOS		F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	572	293	184	17	884	460	432	2227	69	103	577	83
Future Volume (veh/h)	572	293	184	17	884	460	432	2227	69	103	577	83
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1792	1792	1900	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	572	293	184	17	884	460	432	2227	69	103	577	83
Adj No. of Lanes	2	2	0	2	2	0	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	6	6	6	4	4	4	4	4	4
Cap, veh/h	439	898	549	34	683	351	475	1925	599	101	1372	427
Arrive On Green	0.13	0.43	0.43	0.01	0.31	0.31	0.14	0.39	0.39	0.03	0.28	0.28
Sat Flow, veh/h	3375	2072	1267	3312	2178	1119	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	572	244	233	17	689	655	432	2227	69	103	577	83
Grp Sat Flow(s),veh/h/ln	1688	1736	1603	1656	1703	1595	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	19.5	13.9	14.4	0.8	47.0	47.0	18.9	57.9	4.3	4.5	14.2	6.1
Cycle Q Clear(g_c), s	19.5	13.9	14.4	0.8	47.0	47.0	18.9	57.9	4.3	4.5	14.2	6.1
Prop In Lane	1.00		0.79	1.00		0.70	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	439	752	695	34	534	500	475	1925	599	101	1372	427
V/C Ratio(X)	1.30	0.32	0.34	0.51	1.29	1.31	0.91	1.16	0.12	1.02	0.42	0.19
Avail Cap(c_a), veh/h	439	752	695	77	534	500	596	1925	599	101	1372	427
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.3	28.0	28.2	73.9	51.5	51.5	63.5	46.0	29.6	72.8	44.6	41.6
Incr Delay (d2), s/veh	152.4	0.1	0.1	4.3	144.3	154.0	13.9	76.9	0.0	94.1	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.4	6.7	6.4	0.4	43.5	42.1	9.7	40.3	1.8	3.4	6.5	2.7
LnGrp Delay(d),s/veh	217.6	28.1	28.3	78.2	195.8	205.5	77.4	122.9	29.6	167.0	44.6	41.7
LnGrp LOS	F	C	C	E	F	F	E	F	C	F	D	D
Approach Vol, veh/h		1049			1361			2728			763	
Approach Delay, s/veh		131.5			199.0			113.4			60.8	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.6	46.4	25.0	52.0	10.0	63.0	7.0	70.0
Change Period (Y+Rc), s	5.5	* 5.1	5.5	* 5	5.5	* 5.1	5.5	* 5
Max Green Setting (Gmax), s	26.5	* 36	19.5	* 47	4.5	* 58	3.5	* 63
Max Q Clear Time (g_c+I1), s	20.9	16.2	21.5	49.0	6.5	59.9	2.8	16.4
Green Ext Time (p_c), s	0.2	10.9	0.0	0.0	0.0	0.0	0.0	5.6

Intersection Summary	
HCM 2010 Ctrl Delay	129.5
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	293	246	174	84	445	636	143	2030	106	261	632	236
Future Volume (veh/h)	293	246	174	84	445	636	143	2030	106	261	632	236
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	293	246	174	84	445	636	143	2030	106	261	632	236
Adj No. of Lanes	2	2	1	1	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	289	1127	504	104	1037	464	188	1974	615	260	2088	650
Arrive On Green	0.08	0.32	0.32	0.06	0.30	0.30	0.06	0.40	0.40	0.08	0.42	0.42
Sat Flow, veh/h	3408	3505	1568	1757	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	293	246	174	84	445	636	143	2030	106	261	632	236
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1757	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	12.3	7.4	12.3	6.9	14.9	43.0	6.1	57.5	6.4	11.2	12.3	15.1
Cycle Q Clear(g_c), s	12.3	7.4	12.3	6.9	14.9	43.0	6.1	57.5	6.4	11.2	12.3	15.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	289	1127	504	104	1037	464	188	1974	615	260	2088	650
V/C Ratio(X)	1.02	0.22	0.35	0.81	0.43	1.37	0.76	1.03	0.17	1.00	0.30	0.36
Avail Cap(c_a), veh/h	289	1127	504	164	1037	464	260	1974	615	260	2088	650
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.5	36.0	37.6	67.6	41.3	51.1	67.7	43.9	28.5	67.0	28.1	29.0
Incr Delay (d2), s/veh	57.0	0.0	0.2	6.8	0.1	180.1	5.0	27.9	0.0	56.6	0.0	0.1
Initial Q Delay(d3),s/veh	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	3.6	5.4	3.5	7.2	41.8	3.0	31.4	2.8	7.2	5.6	6.5
LnGrp Delay(d),s/veh	123.6	36.0	37.8	74.4	41.4	231.2	72.7	71.8	28.5	123.6	28.1	29.1
LnGrp LOS	F	D	D	E	D	F	E	F	C	F	C	C
Approach Vol, veh/h		713			1165			2279			1129	
Approach Delay, s/veh		72.4			147.4			69.9			50.4	
Approach LOS		E			F			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	65.9	17.8	48.4	16.5	62.6	14.1	52.1
Change Period (Y+Rc), s	* 5.1	5.1	5.5	* 5.4	* 5.3	5.1	5.5	* 5.4
Max Green Setting (Gmax), s	* 11	57.7	12.3	* 43	* 11	57.5	13.6	* 41
Max Q Clear Time (g_c+I1), s	8.1	17.1	14.3	45.0	13.2	59.5	8.9	14.3
Green Ext Time (p_c), s	0.0	13.4	0.0	0.0	0.0	0.0	0.0	2.2

Intersection Summary	
HCM 2010 Ctrl Delay	83.1
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	552	3	88	950	4	2	803	148	8	530	187
Future Volume (veh/h)	64	552	3	88	950	4	2	803	148	8	530	187
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1900	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	64	552	3	88	950	4	2	803	148	8	530	187
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	72	958	5	109	1034	4	2	747	138	9	910	774
Arrive On Green	0.04	0.28	0.28	0.06	0.30	0.30	0.00	0.49	0.49	0.00	0.49	0.49
Sat Flow, veh/h	1707	3473	19	1707	3478	15	1757	1516	279	1757	1845	1568
Grp Volume(v), veh/h	64	271	284	88	465	489	2	0	951	8	530	187
Grp Sat Flow(s),veh/h/ln	1707	1703	1789	1707	1703	1790	1757	0	1795	1757	1845	1568
Q Serve(g_s), s	4.8	17.5	17.5	6.5	33.8	33.8	0.1	0.0	63.0	0.6	26.1	8.8
Cycle Q Clear(g_c), s	4.8	17.5	17.5	6.5	33.8	33.8	0.1	0.0	63.0	0.6	26.1	8.8
Prop In Lane	1.00		0.01	1.00		0.01	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	72	470	494	109	506	532	2	0	885	9	910	774
V/C Ratio(X)	0.89	0.58	0.58	0.81	0.92	0.92	0.99	0.00	1.07	0.91	0.58	0.24
Avail Cap(c_a), veh/h	72	470	494	127	517	543	41	0	885	27	910	774
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.9	39.9	39.9	59.1	43.4	43.4	63.8	0.0	32.4	63.6	23.0	18.6
Incr Delay (d2), s/veh	67.2	2.1	2.0	24.0	21.7	21.0	175.7	0.0	52.5	64.6	2.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	8.5	8.9	3.8	18.9	19.8	0.2	0.0	43.9	0.4	13.9	3.9
LnGrp Delay(d),s/veh	128.1	42.0	41.9	83.1	65.2	64.4	239.6	0.0	84.9	128.1	25.7	19.4
LnGrp LOS	F	D	D	F	E	E	F		F	F	C	B
Approach Vol, veh/h		619			1042			953			725	
Approach Delay, s/veh		50.8			66.3			85.2			25.2	
Approach LOS		D			E			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.5	41.7	4.5	69.1	9.8	44.4	4.6	69.0
Change Period (Y+Rc), s	4.4	6.4	4.4	6.0	4.4	6.4	* 4	6.0
Max Green Setting (Gmax), s	9.5	34.7	3.0	61.6	5.4	38.8	* 2	63.0
Max Q Clear Time (g_c+I1), s	8.5	19.5	2.1	28.1	6.8	35.8	2.6	65.0
Green Ext Time (p_c), s	0.0	10.5	0.0	32.0	0.0	2.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	59.9
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

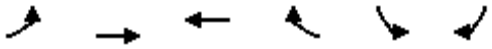
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	348	47	584	25	63	161	644	1462	13	105	1841	868
Future Volume (veh/h)	348	47	584	25	63	161	644	1462	13	105	1841	868
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1900	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	382	0	584	25	63	161	644	1462	13	105	1841	0
Adj No. of Lanes	2	0	1	0	1	1	1	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	626	0	280	22	56	68	537	2912	26	126	1659	517
Arrive On Green	0.18	0.00	0.18	0.04	0.04	0.04	0.31	0.57	0.57	0.07	0.33	0.00
Sat Flow, veh/h	3480	0	1553	517	1302	1568	1740	5099	45	1740	4988	1553
Grp Volume(v), veh/h	382	0	584	88	0	161	644	953	522	105	1841	0
Grp Sat Flow(s),veh/h/ln	1740	0	1553	1819	0	1568	1740	1663	1819	1740	1663	1553
Q Serve(g_s), s	15.2	0.0	27.0	6.5	0.0	6.5	46.3	25.9	25.9	8.9	49.9	0.0
Cycle Q Clear(g_c), s	15.2	0.0	27.0	6.5	0.0	6.5	46.3	25.9	25.9	8.9	49.9	0.0
Prop In Lane	1.00		1.00	0.28		1.00	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	626	0	280	79	0	68	537	1899	1039	126	1659	517
V/C Ratio(X)	0.61	0.00	2.09	1.12	0.00	2.37	1.20	0.50	0.50	0.84	1.11	0.00
Avail Cap(c_a), veh/h	626	0	280	79	0	68	537	1899	1039	194	1659	517
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.6	0.0	61.5	71.8	0.0	71.8	51.9	19.3	19.3	68.7	50.1	0.0
Incr Delay (d2), s/veh	1.3	0.0	502.2	136.5	0.0	659.2	106.6	0.1	0.1	10.2	58.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	0.0	50.6	6.3	0.0	15.3	38.1	11.8	12.9	4.7	31.9	0.0
LnGrp Delay(d),s/veh	57.9	0.0	563.7	208.3	0.0	730.9	158.4	19.4	19.5	78.9	108.6	0.0
LnGrp LOS	E		F	F		F	F	B	B	E	F	
Approach Vol, veh/h		966			249			2119			1946	
Approach Delay, s/veh		363.7			546.2			61.7			107.0	
Approach LOS		F			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	51.0	54.7		12.0	15.2	90.5		32.3
Change Period (Y+Rc), s	* 4.7	4.8		5.5	* 4.4	* 4.8		5.3
Max Green Setting (Gmax), s	* 46	49.9		6.5	* 17	* 80		27.0
Max Q Clear Time (g_c+I1), s	48.3	51.9		8.5	10.9	27.9		29.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	18.2		0.0

Intersection Summary			
HCM 2010 Ctrl Delay		156.5	
HCM 2010 LOS		F	

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	402	769	664	838	142	46
Future Volume (veh/h)	402	769	664	838	142	46
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845
Adj Flow Rate, veh/h	402	769	664	838	142	46
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	453	2646	751	672	189	169
Arrive On Green	0.26	0.76	0.43	0.43	0.11	0.11
Sat Flow, veh/h	1757	3597	1845	1568	1757	1568
Grp Volume(v), veh/h	402	769	664	838	142	46
Grp Sat Flow(s),veh/h/ln	1757	1752	1752	1568	1757	1568
Q Serve(g_s), s	12.8	4.0	20.3	25.0	4.6	1.6
Cycle Q Clear(g_c), s	12.8	4.0	20.3	25.0	4.6	1.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	453	2646	751	672	189	169
V/C Ratio(X)	0.89	0.29	0.88	1.25	0.75	0.27
Avail Cap(c_a), veh/h	482	2705	751	672	211	188
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.8	2.2	15.3	16.7	25.2	23.9
Incr Delay (d2), s/veh	17.3	0.1	12.1	123.1	12.5	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	1.9	12.3	33.6	2.9	1.4
LnGrp Delay(d),s/veh	38.2	2.3	27.4	139.8	37.8	24.8
LnGrp LOS	D	A	C	F	D	C
Approach Vol, veh/h		1171	1502		188	
Approach Delay, s/veh		14.6	90.1		34.6	
Approach LOS		B	F		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		48.0		10.3	19.0	29.0		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		45.0		7.0	16.0	25.0		
Max Q Clear Time (g_c+I1), s		6.0		6.6	14.8	27.0		
Green Ext Time (p_c), s		26.1		0.0	0.2	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	55.6
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	372	218	35	34	279	804	37	2251	47	606	2109	891
Future Volume (veh/h)	372	218	35	34	279	804	37	2251	47	606	2109	891
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	372	218	35	34	279	804	37	2251	47	606	2109	891
Adj No. of Lanes	2	3	0	2	1	2	2	3	0	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	306	1195	185	61	368	1094	65	2098	44	510	2739	853
Arrive On Green	0.09	0.27	0.27	0.02	0.20	0.20	0.02	0.41	0.41	0.15	0.54	0.54
Sat Flow, veh/h	3408	4399	682	3514	1845	3136	3408	5077	106	3408	5036	1568
Grp Volume(v), veh/h	372	165	88	34	279	804	37	1487	811	606	2109	891
Grp Sat Flow(s),veh/h/ln	1704	1679	1724	1757	1845	1568	1704	1679	1826	1704	1679	1568
Q Serve(g_s), s	13.5	5.6	5.9	1.4	21.5	30.0	1.6	62.2	62.2	22.5	49.5	81.9
Cycle Q Clear(g_c), s	13.5	5.6	5.9	1.4	21.5	30.0	1.6	62.2	62.2	22.5	49.5	81.9
Prop In Lane	1.00		0.40	1.00		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	306	912	468	61	368	1094	65	1388	755	510	2739	853
V/C Ratio(X)	1.22	0.18	0.19	0.56	0.76	0.73	0.57	1.07	1.08	1.19	0.77	1.04
Avail Cap(c_a), veh/h	306	912	468	126	368	1094	72	1388	755	510	2739	853
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.5	42.0	42.1	73.4	56.8	42.9	73.2	44.1	44.2	64.0	26.9	34.3
Incr Delay (d2), s/veh	123.6	0.0	0.1	2.9	8.0	2.3	3.7	45.8	54.8	103.5	1.3	43.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.6	2.6	2.8	0.7	11.7	15.0	0.8	37.5	42.7	17.9	23.2	45.4
LnGrp Delay(d),s/veh	192.1	42.0	42.1	76.3	64.8	45.2	76.9	90.0	99.0	167.5	28.2	77.5
LnGrp LOS	F	D	D	E	E	D	E	F	F	F	C	F
Approach Vol, veh/h		625			1117			2335			3606	
Approach Delay, s/veh		131.4			51.0			92.9			63.8	
Approach LOS		F			D			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	87.5	19.0	35.7	28.0	67.8	8.1	46.6
Change Period (Y+Rc), s	5.5	5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	3.2	81.2	13.5	* 30	22.5	* 62	5.4	* 38
Max Q Clear Time (g_c+I1), s	3.6	83.9	15.5	32.0	24.5	64.2	3.4	7.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	76.3
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	64	13	38	46	66	37	2199	63	133	1497	215
Future Volume (veh/h)	105	64	13	38	46	66	37	2199	63	133	1497	215
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	91	84	13	38	46	66	37	2199	63	133	1497	215
Adj No. of Lanes	1	1	0	1	1	1	1	3	0	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	132	117	18	109	115	98	46	2784	80	167	2760	396
Arrive On Green	0.08	0.08	0.08	0.06	0.06	0.06	0.03	0.55	0.55	0.10	0.62	0.62
Sat Flow, veh/h	1757	1561	242	1757	1845	1568	1757	5033	144	1757	4451	638
Grp Volume(v), veh/h	91	0	97	38	46	66	37	1465	797	133	1129	583
Grp Sat Flow(s),veh/h/ln	1757	0	1802	1757	1845	1568	1757	1679	1819	1757	1679	1732
Q Serve(g_s), s	4.8	0.0	5.0	2.0	2.3	3.9	2.0	32.9	33.2	7.1	18.3	18.4
Cycle Q Clear(g_c), s	4.8	0.0	5.0	2.0	2.3	3.9	2.0	32.9	33.2	7.1	18.3	18.4
Prop In Lane	1.00		0.13	1.00		1.00	1.00		0.08	1.00		0.37
Lane Grp Cap(c), veh/h	132	0	135	109	115	98	46	1857	1006	167	2082	1074
V/C Ratio(X)	0.69	0.00	0.72	0.35	0.40	0.68	0.80	0.79	0.79	0.79	0.54	0.54
Avail Cap(c_a), veh/h	519	0	532	500	525	446	164	2204	1194	220	2303	1188
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.9	0.0	43.0	42.8	42.9	43.7	46.1	16.9	16.9	42.2	10.4	10.4
Incr Delay (d2), s/veh	2.4	0.0	2.6	0.7	0.8	3.0	11.3	1.4	2.6	10.3	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	2.6	1.0	1.2	1.8	1.1	15.4	17.3	3.9	8.5	8.8
LnGrp Delay(d),s/veh	45.3	0.0	45.7	43.5	43.8	46.7	57.5	18.2	19.5	52.4	10.4	10.5
LnGrp LOS	D		D	D	D	D	E	B	B	D	B	B
Approach Vol, veh/h		188			150			2299			1845	
Approach Delay, s/veh		45.5			45.0			19.3			13.5	
Approach LOS		D			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.3	63.8		11.4	13.7	57.5		12.7
Change Period (Y+Rc), s	* 4.8	4.8		5.5	* 4.6	4.8		5.5
Max Green Setting (Gmax), s	* 8.9	65.3		27.1	* 12	62.5		28.1
Max Q Clear Time (g_c+I1), s	4.0	20.4		5.9	9.1	35.2		7.0
Green Ext Time (p_c), s	0.0	22.9		0.1	0.0	17.5		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	18.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	748	564	103	1278	848	700	1392	149	175	994	115
Future Volume (veh/h)	47	748	564	103	1278	848	700	1392	149	175	994	115
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	47	748	564	103	1278	848	700	1392	149	175	994	115
Adj No. of Lanes	2	3	0	2	3	1	2	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	79	1226	573	151	1945	606	643	1774	552	225	1052	121
Arrive On Green	0.02	0.37	0.37	0.04	0.39	0.39	0.19	0.35	0.35	0.07	0.23	0.23
Sat Flow, veh/h	3408	3357	1568	3408	5036	1568	3408	5036	1568	3408	4580	529
Grp Volume(v), veh/h	47	748	564	103	1278	848	700	1392	149	175	728	381
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1679	1568	1704	1679	1751
Q Serve(g_s), s	1.8	23.6	46.3	3.9	27.1	50.2	24.5	32.2	8.8	6.6	27.7	27.8
Cycle Q Clear(g_c), s	1.8	23.6	46.3	3.9	27.1	50.2	24.5	32.2	8.8	6.6	27.7	27.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.30
Lane Grp Cap(c), veh/h	79	1226	573	151	1945	606	643	1774	552	225	771	402
V/C Ratio(X)	0.60	0.61	0.98	0.68	0.66	1.40	1.09	0.78	0.27	0.78	0.94	0.95
Avail Cap(c_a), veh/h	79	1226	573	220	1945	606	643	1774	552	254	772	403
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.9	33.7	40.9	61.2	32.8	39.9	52.7	37.7	30.1	59.8	49.2	49.3
Incr Delay (d2), s/veh	8.4	0.6	33.6	2.0	0.7	189.9	62.3	2.2	0.1	10.8	19.7	31.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	11.0	25.4	1.9	12.7	53.6	17.1	15.2	3.8	3.4	15.0	16.9
LnGrp Delay(d),s/veh	71.3	34.3	74.5	63.2	33.4	229.7	115.0	39.9	30.2	70.6	69.0	80.4
LnGrp LOS	E	C	E	E	C	F	F	D	C	E	E	F
Approach Vol, veh/h		1359			2229			2241			1284	
Approach Delay, s/veh		52.3			109.5			62.7			72.6	
Approach LOS		D			F			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.0	35.5	8.5	56.0	14.1	51.4	11.2	53.3
Change Period (Y+Rc), s	5.5	* 5.6	5.5	5.8	5.5	* 5.6	5.5	5.8
Max Green Setting (Gmax), s	24.5	* 30	3.0	50.2	9.7	* 45	8.4	44.8
Max Q Clear Time (g_c+I1), s	26.5	29.8	3.8	52.2	8.6	34.2	5.9	48.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	6.1	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	77.2
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	205	659	48	45	1212	872	243	684	66	485	228	47
Future Volume (veh/h)	205	659	48	45	1212	872	243	684	66	485	228	47
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	205	659	48	45	1212	872	243	684	66	485	228	47
Adj No. of Lanes	1	2	0	2	2	1	1	1	0	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	139	1387	101	79	1234	552	267	538	52	340	521	443
Arrive On Green	0.08	0.42	0.42	0.02	0.35	0.35	0.15	0.32	0.32	0.10	0.28	0.28
Sat Flow, veh/h	1757	3313	241	3408	3505	1568	1757	1657	160	3408	1845	1568
Grp Volume(v), veh/h	205	348	359	45	1212	872	243	0	750	485	228	47
Grp Sat Flow(s),veh/h/ln	1757	1752	1802	1704	1752	1568	1757	0	1816	1704	1845	1568
Q Serve(g_s), s	11.5	21.0	21.0	1.9	49.8	51.2	19.8	0.0	47.2	14.5	14.7	3.2
Cycle Q Clear(g_c), s	11.5	21.0	21.0	1.9	49.8	51.2	19.8	0.0	47.2	14.5	14.7	3.2
Prop In Lane	1.00		0.13	1.00		1.00	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	139	733	754	79	1234	552	267	0	590	340	521	443
V/C Ratio(X)	1.48	0.47	0.48	0.57	0.98	1.58	0.91	0.00	1.27	1.43	0.44	0.11
Avail Cap(c_a), veh/h	139	733	754	117	1234	552	326	0	590	340	521	443
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.0	30.7	30.7	70.3	46.6	47.1	60.7	0.0	49.1	65.5	42.7	38.6
Incr Delay (d2), s/veh	248.5	0.2	0.2	6.4	21.2	269.3	25.1	0.0	135.3	208.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.1	10.2	10.5	1.0	27.7	63.4	11.5	0.0	45.7	16.6	7.5	1.4
LnGrp Delay(d),s/veh	315.5	30.9	30.9	76.7	67.9	316.4	85.8	0.0	184.4	273.9	42.9	38.6
LnGrp LOS	F	C	C	E	E	F	F		F	F	D	D
Approach Vol, veh/h		912			2129			993			760	
Approach Delay, s/veh		94.8			169.9			160.3			190.0	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	56.1	26.1	46.2	7.4	65.7	20.0	52.3
Change Period (Y+Rc), s	5.5	* 4.9	4.0	* 5.1	4.0	* 4.9	5.5	* 5.1
Max Green Setting (Gmax), s	11.5	* 51	27.0	* 36	5.0	* 59	14.5	* 47
Max Q Clear Time (g_c+I1), s	13.5	53.2	21.8	16.7	3.9	23.0	16.5	49.2
Green Ext Time (p_c), s	0.0	0.0	0.3	2.4	0.0	7.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	156.8
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	318	210	196	103	397	181	376	2097	155	224	1972	299
Future Volume (veh/h)	318	210	196	103	397	181	376	2097	155	224	1972	299
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	318	210	196	103	397	181	376	2097	155	224	1972	299
Adj No. of Lanes	2	2	1	2	2	1	2	4	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	352	842	377	152	665	409	411	2928	724	273	2120	660
Arrive On Green	0.10	0.24	0.24	0.04	0.18	0.18	0.12	0.47	0.47	0.08	0.43	0.43
Sat Flow, veh/h	3408	3505	1568	3514	3689	1568	3375	6285	1553	3375	4988	1553
Grp Volume(v), veh/h	318	210	196	103	397	181	376	2097	155	224	1972	299
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1757	1845	1568	1688	1571	1553	1688	1663	1553
Q Serve(g_s), s	12.1	6.3	14.2	3.8	12.9	12.6	14.4	35.0	7.7	8.5	49.1	17.9
Cycle Q Clear(g_c), s	12.1	6.3	14.2	3.8	12.9	12.6	14.4	35.0	7.7	8.5	49.1	17.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	352	842	377	152	665	409	411	2928	724	273	2120	660
V/C Ratio(X)	0.90	0.25	0.52	0.68	0.60	0.44	0.92	0.72	0.21	0.82	0.93	0.45
Avail Cap(c_a), veh/h	352	992	444	231	903	511	411	2928	724	315	2152	670
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.0	40.1	43.1	61.6	49.2	40.4	56.8	28.0	20.7	59.1	35.7	26.7
Incr Delay (d2), s/veh	25.0	0.2	1.6	2.0	2.4	2.1	24.5	0.7	0.1	12.3	8.5	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	3.1	6.3	1.9	6.8	5.7	8.1	15.3	3.3	4.4	24.1	8.0
LnGrp Delay(d),s/veh	83.0	40.4	44.8	63.6	51.6	42.4	81.2	28.7	20.8	71.4	44.2	28.4
LnGrp LOS	F	D	D	E	D	D	F	C	C	E	D	C
Approach Vol, veh/h		724			681			2628			2495	
Approach Delay, s/veh		60.3			51.0			35.8			44.8	
Approach LOS		E			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.4	61.0	19.0	29.3	16.1	66.3	11.2	37.2
Change Period (Y+Rc), s	5.5	* 5.4	5.5	5.8	5.5	* 5.4	5.5	* 5.8
Max Green Setting (Gmax), s	15.9	* 56	13.5	32.0	12.2	* 60	8.6	* 37
Max Q Clear Time (g_c+I1), s	16.4	51.1	14.1	14.9	10.5	37.0	5.8	16.2
Green Ext Time (p_c), s	0.0	4.4	0.0	8.6	0.0	22.9	0.0	9.7

Intersection Summary	
HCM 2010 Ctrl Delay	43.5
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	495	306	572	1276	41	891	2154	192	121	626	334
Future Volume (veh/h)	179	495	306	572	1276	41	891	2154	192	121	626	334
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1827	1827	1827	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	179	495	306	572	1276	41	891	2154	192	121	626	334
Adj No. of Lanes	2	2	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	4	4	4	4	4	4
Cap, veh/h	222	700	313	596	1551	483	910	2148	669	139	1009	314
Arrive On Green	0.07	0.20	0.20	0.18	0.31	0.31	0.27	0.43	0.43	0.04	0.20	0.20
Sat Flow, veh/h	3408	3505	1568	3375	4988	1553	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	179	495	306	572	1276	41	891	2154	192	121	626	334
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1688	1663	1553	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	7.8	19.8	29.1	25.2	35.6	2.8	39.3	64.7	12.1	5.4	17.2	30.4
Cycle Q Clear(g_c), s	7.8	19.8	29.1	25.2	35.6	2.8	39.3	64.7	12.1	5.4	17.2	30.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	222	700	313	596	1551	483	910	2148	669	139	1009	314
V/C Ratio(X)	0.80	0.71	0.98	0.96	0.82	0.08	0.98	1.00	0.29	0.87	0.62	1.06
Avail Cap(c_a), veh/h	259	700	313	596	1551	483	910	2148	669	139	1009	314
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.3	56.0	59.8	61.3	47.9	36.6	54.4	42.7	27.8	71.6	54.6	59.9
Incr Delay (d2), s/veh	12.6	4.1	44.7	27.0	4.6	0.3	24.6	20.0	0.5	39.0	1.7	68.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	10.0	16.5	14.0	17.0	1.2	21.4	33.6	5.2	3.3	8.0	19.0
LnGrp Delay(d),s/veh	81.9	60.1	104.5	88.4	52.6	36.9	79.0	62.8	28.2	110.6	56.3	128.2
LnGrp LOS	F	E	F	F	D	D	E	F	C	F	E	F
Approach Vol, veh/h		980			1889			3237			1081	
Approach Delay, s/veh		77.9			63.1			65.2			84.6	
Approach LOS		E			E			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	46.0	36.2	15.3	52.7	11.7	70.5	32.0	36.0
Change Period (Y+Rc), s	5.5	* 5.8	5.5	* 6	5.5	* 5.8	5.5	6.0
Max Green Setting (Gmax), s	40.5	* 30	11.4	* 45	6.2	* 65	26.5	30.0
Max Q Clear Time (g_c+I1), s	41.3	32.4	9.8	37.6	7.4	66.7	27.2	31.1
Green Ext Time (p_c), s	0.0	0.0	0.0	7.4	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	69.3
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	204	570	216	48	1928	830	435	2189	22	84	683	536
Future Volume (veh/h)	204	570	216	48	1928	830	435	2189	22	84	683	536
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	204	570	216	48	1928	830	435	2189	22	84	683	536
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	181	2018	628	81	1870	582	347	1930	601	84	1541	480
Arrive On Green	0.05	0.40	0.40	0.02	0.37	0.37	0.10	0.39	0.39	0.02	0.31	0.31
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	204	570	216	48	1928	830	435	2189	22	84	683	536
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	7.5	10.8	13.5	2.0	52.4	52.4	14.5	54.6	1.2	3.5	15.5	43.6
Cycle Q Clear(g_c), s	7.5	10.8	13.5	2.0	52.4	52.4	14.5	54.6	1.2	3.5	15.5	43.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	181	2018	628	81	1870	582	347	1930	601	84	1541	480
V/C Ratio(X)	1.13	0.28	0.34	0.59	1.03	1.43	1.25	1.13	0.04	1.00	0.44	1.12
Avail Cap(c_a), veh/h	181	2018	628	130	1870	582	347	1930	601	84	1541	480
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.8	28.6	29.4	68.2	44.4	44.4	63.3	43.3	26.9	68.8	39.0	48.8
Incr Delay (d2), s/veh	104.8	0.0	0.1	2.5	29.2	201.3	135.9	67.5	0.0	99.2	0.1	77.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	5.0	5.9	1.0	29.3	55.2	13.3	37.1	0.5	2.8	7.1	29.0
LnGrp Delay(d),s/veh	171.6	28.6	29.5	70.7	73.6	245.6	199.2	110.7	26.9	168.1	39.1	125.9
LnGrp LOS	F	C	C	E	F	F	F	F	C	F	D	F
Approach Vol, veh/h		990			2806			2646			1303	
Approach Delay, s/veh		58.3			124.4			124.6			83.1	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	49.6	13.0	58.5	9.0	60.6	8.9	62.6
Change Period (Y+Rc), s	5.5	6.0	5.5	* 6.1	5.5	* 6	5.5	* 6.1
Max Green Setting (Gmax), s	14.5	43.0	7.5	* 52	3.5	* 55	5.4	* 54
Max Q Clear Time (g_c+I1), s	16.5	45.6	9.5	54.4	5.5	56.6	4.0	15.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.4

Intersection Summary	
HCM 2010 Ctrl Delay	109.1
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	447	616	117	69	1277	916	671	2214	98	185	609	268
Future Volume (veh/h)	447	616	117	69	1277	916	671	2214	98	185	609	268
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1759	1759	1759	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	447	616	117	69	1277	916	671	2214	98	185	609	268
Adj No. of Lanes	2	3	0	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	8	8	8	4	4	4	4	4	4
Cap, veh/h	304	1717	321	107	1664	518	710	1835	571	133	982	306
Arrive On Green	0.09	0.40	0.40	0.03	0.35	0.35	0.21	0.37	0.37	0.04	0.20	0.20
Sat Flow, veh/h	3408	4263	798	3250	4803	1495	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	447	483	250	69	1277	916	671	2214	98	185	609	268
Grp Sat Flow(s),veh/h/ln	1704	1679	1704	1625	1601	1495	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	12.5	14.1	14.4	2.9	33.1	48.5	27.4	51.5	6.0	5.5	15.6	23.5
Cycle Q Clear(g_c), s	12.5	14.1	14.4	2.9	33.1	48.5	27.4	51.5	6.0	5.5	15.6	23.5
Prop In Lane	1.00		0.47	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	304	1352	686	107	1664	518	710	1835	571	133	982	306
V/C Ratio(X)	1.47	0.36	0.36	0.65	0.77	1.77	0.95	1.21	0.17	1.40	0.62	0.88
Avail Cap(c_a), veh/h	304	1352	686	144	1664	518	711	1835	571	133	982	306
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.7	29.2	29.3	66.9	40.7	45.7	54.5	44.3	29.9	67.3	51.4	54.6
Incr Delay (d2), s/veh	228.1	0.1	0.1	2.4	2.0	353.5	21.1	98.4	0.1	217.1	0.9	22.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.5	6.5	6.8	1.4	15.0	70.8	14.9	40.3	2.6	6.6	7.3	12.0
LnGrp Delay(d),s/veh	291.9	29.2	29.4	69.3	42.7	399.3	75.6	142.7	29.9	284.3	52.3	77.5
LnGrp LOS	F	C	C	E	D	F	E	F	C	F	D	E
Approach Vol, veh/h		1180			2262			2983			1062	
Approach Delay, s/veh		128.8			187.9			123.9			99.1	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	34.9	33.1	18.0	54.0	11.0	57.0	10.1	61.9
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	29.5	27.5	12.5	48.5	5.5	51.5	6.2	54.8
Max Q Clear Time (g_c+I1), s	29.4	25.5	14.5	50.5	7.5	53.5	4.9	16.4
Green Ext Time (p_c), s	0.0	1.8	0.0	0.0	0.0	0.0	0.0	8.6

Intersection Summary	
HCM 2010 Ctrl Delay	140.5
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	109	17	315	650	639	126	1463	215	131	665	6
Future Volume (veh/h)	62	109	17	315	650	639	126	1463	215	131	665	6
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1759	1900	1900	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	62	109	17	315	650	639	126	1463	215	131	665	6
Adj No. of Lanes	0	1	0	0	1	1	1	2	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	8	8	8	3	3	3	4	4	4	4	4	4
Cap, veh/h	67	119	18	220	453	581	148	1169	523	115	1014	9
Arrive On Green	0.12	0.12	0.12	0.37	0.37	0.37	0.09	0.34	0.34	0.03	0.29	0.29
Sat Flow, veh/h	562	988	154	592	1223	1568	1740	3471	1553	3375	3525	32
Grp Volume(v), veh/h	188	0	0	965	0	639	126	1463	215	131	327	344
Grp Sat Flow(s),veh/h/ln	1704	0	0	1815	0	1568	1740	1736	1553	1688	1736	1821
Q Serve(g_s), s	16.4	0.0	0.0	55.6	0.0	55.6	10.7	50.5	16.0	5.1	24.8	24.9
Cycle Q Clear(g_c), s	16.4	0.0	0.0	55.6	0.0	55.6	10.7	50.5	16.0	5.1	24.8	24.9
Prop In Lane	0.33		0.09	0.33		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	204	0	0	673	0	581	148	1169	523	115	499	524
V/C Ratio(X)	0.92	0.00	0.00	1.43	0.00	1.10	0.85	1.25	0.41	1.14	0.66	0.66
Avail Cap(c_a), veh/h	204	0	0	673	0	581	206	1169	523	115	499	524
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.3	0.0	0.0	47.2	0.0	47.2	67.7	49.7	38.3	72.4	46.9	46.9
Incr Delay (d2), s/veh	41.1	0.0	0.0	203.9	0.0	67.5	20.6	120.6	0.5	127.1	3.1	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.1	0.0	0.0	66.0	0.0	35.0	6.0	43.8	6.9	4.4	12.3	12.9
LnGrp Delay(d),s/veh	106.4	0.0	0.0	251.1	0.0	114.7	88.3	170.3	38.8	199.5	50.0	49.9
LnGrp LOS	F			F		F	F	F	D	F	D	D
Approach Vol, veh/h		188			1604			1804			802	
Approach Delay, s/veh		106.4			196.8			148.9			74.4	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	17.4	48.1		61.0	10.0	55.5		23.5
Change Period (Y+Rc), s	* 4.6	5.0		* 5.4	* 4.9	5.0		5.5
Max Green Setting (Gmax), s	* 18	38.1		* 56	* 5.1	50.5		18.0
Max Q Clear Time (g_c+I1), s	12.7	26.9		57.6	7.1	52.5		18.4
Green Ext Time (p_c), s	0.1	9.5		0.0	0.0	0.0		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		151.0
HCM 2010 LOS		F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	514	3	562	878	357	4	1182	242	132	814	90
Future Volume (veh/h)	185	514	3	562	878	357	4	1182	242	132	814	90
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	185	514	3	562	878	357	4	1182	242	132	814	90
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	4	4	4	4	4	4
Cap, veh/h	247	728	326	596	1087	562	11	1237	553	169	1400	742
Arrive On Green	0.07	0.21	0.21	0.18	0.32	0.32	0.00	0.36	0.36	0.05	0.40	0.40
Sat Flow, veh/h	3312	3406	1524	3312	3406	1524	3375	3471	1553	3375	3471	1553
Grp Volume(v), veh/h	185	514	3	562	878	357	4	1182	242	132	814	90
Grp Sat Flow(s),veh/h/ln	1656	1703	1524	1656	1703	1524	1688	1736	1553	1688	1736	1553
Q Serve(g_s), s	5.5	14.0	0.2	16.8	23.7	19.3	0.1	33.2	11.9	3.9	18.3	3.2
Cycle Q Clear(g_c), s	5.5	14.0	0.2	16.8	23.7	19.3	0.1	33.2	11.9	3.9	18.3	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	247	728	326	596	1087	562	11	1237	553	169	1400	742
V/C Ratio(X)	0.75	0.71	0.01	0.94	0.81	0.63	0.38	0.96	0.44	0.78	0.58	0.12
Avail Cap(c_a), veh/h	265	885	396	596	1226	624	101	1249	559	169	1400	742
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.4	36.4	31.0	40.5	31.2	26.0	49.8	31.4	24.5	47.0	23.3	14.5
Incr Delay (d2), s/veh	9.0	1.3	0.0	23.4	3.2	1.2	7.9	15.7	0.2	19.2	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	6.7	0.1	9.6	11.6	8.3	0.1	18.6	5.1	2.2	8.8	1.4
LnGrp Delay(d),s/veh	54.4	37.8	31.0	63.9	34.4	27.2	57.7	47.2	24.7	66.2	23.7	14.5
LnGrp LOS	D	D	C	E	C	C	E	D	C	E	C	B
Approach Vol, veh/h		702			1797			1428			1036	
Approach Delay, s/veh		42.1			42.2			43.4			28.3	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	27.4	4.3	46.3	11.5	37.9	9.0	41.7
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	18.0	26.0	3.0	38.0	8.0	36.0	5.0	36.0
Max Q Clear Time (g_c+I1), s	18.8	16.0	2.1	20.3	7.5	25.7	5.9	35.2
Green Ext Time (p_c), s	0.0	5.4	0.0	10.6	0.0	5.5	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	39.6
HCM 2010 LOS	D

Notes

User approved changes to right turn type.

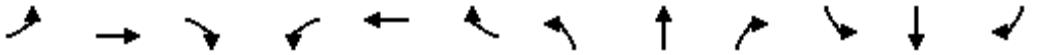
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	382	15	19	1027	566	818
Future Volume (veh/h)	382	15	19	1027	566	818
Number	7	14	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1900	1827	1827	1827	1900
Adj Flow Rate, veh/h	382	15	19	1027	566	818
Adj No. of Lanes	0	0	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	4	4	4	4
Cap, veh/h	431	17	24	1886	740	662
Arrive On Green	0.27	0.27	0.01	0.54	0.43	0.43
Sat Flow, veh/h	1572	62	1740	3563	1827	1553
Grp Volume(v), veh/h	398	0	19	1027	566	818
Grp Sat Flow(s),veh/h/ln	1638	0	1740	1736	1736	1553
Q Serve(g_s), s	12.4	0.0	0.6	10.2	14.8	22.7
Cycle Q Clear(g_c), s	12.4	0.0	0.6	10.2	14.8	22.7
Prop In Lane	0.96	0.04	1.00			1.00
Lane Grp Cap(c), veh/h	449	0	24	1886	740	662
V/C Ratio(X)	0.89	0.00	0.79	0.54	0.76	1.24
Avail Cap(c_a), veh/h	492	0	199	2262	740	662
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.5	0.0	26.2	7.9	13.0	15.3
Incr Delay (d2), s/veh	16.5	0.0	18.9	0.1	4.3	118.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	0.0	0.4	4.9	7.8	31.4
LnGrp Delay(d),s/veh	35.0	0.0	45.1	8.0	17.3	134.0
LnGrp LOS	C		D	A	B	F
Approach Vol, veh/h	398			1046	1384	
Approach Delay, s/veh	35.0			8.6	86.3	
Approach LOS	C			A	F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	6.2	28.4		18.6		34.6		
Change Period (Y+Rc), s	5.5	* 5.7		4.0		* 5.7		
Max Green Setting (Gmax), s	6.1	* 23		16.0		* 35		
Max Q Clear Time (g_c+I1), s	2.6	24.7		14.4		12.2		
Green Ext Time (p_c), s	0.0	0.0		0.2		8.6		

Intersection Summary	
HCM 2010 Ctrl Delay	50.3
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	183	24	37	4	27	3	17	1185	32	32	1663	106
Future Volume (veh/h)	183	24	37	4	27	3	17	1185	32	32	1663	106
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1583	1845	1845	1845	1845	1810	1845	1845	1845
Adj Flow Rate, veh/h	183	24	37	4	27	3	17	1185	32	32	1663	106
Adj No. of Lanes	2	1	1	1	1	1	2	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	20	3	3	3	3	5	3	3	3
Cap, veh/h	269	233	198	6	95	80	56	2066	907	48	2104	941
Arrive On Green	0.08	0.13	0.13	0.00	0.05	0.05	0.02	0.59	0.59	0.03	0.60	0.60
Sat Flow, veh/h	3408	1845	1568	1508	1845	1568	3408	3505	1538	1757	3505	1568
Grp Volume(v), veh/h	183	24	37	4	27	3	17	1185	32	32	1663	106
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1508	1845	1568	1704	1752	1538	1757	1752	1568
Q Serve(g_s), s	3.3	0.7	1.3	0.2	0.9	0.1	0.3	13.3	0.6	1.1	22.8	1.8
Cycle Q Clear(g_c), s	3.3	0.7	1.3	0.2	0.9	0.1	0.3	13.3	0.6	1.1	22.8	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	269	233	198	6	95	80	56	2066	907	48	2104	941
V/C Ratio(X)	0.68	0.10	0.19	0.62	0.29	0.04	0.31	0.57	0.04	0.67	0.79	0.11
Avail Cap(c_a), veh/h	269	496	421	95	467	397	216	2105	924	139	2161	967
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.4	24.5	24.7	31.4	28.9	28.5	30.8	8.1	5.4	30.5	9.6	5.4
Incr Delay (d2), s/veh	6.7	0.2	0.5	69.3	1.6	0.2	3.0	0.4	0.0	15.0	2.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.4	0.6	0.2	0.5	0.1	0.2	6.4	0.2	0.8	11.4	0.8
LnGrp Delay(d),s/veh	35.1	24.7	25.2	100.7	30.5	28.7	33.8	8.4	5.5	45.5	11.6	5.5
LnGrp LOS	D	C	C	F	C	C	C	A	A	D	B	A
Approach Vol, veh/h		244			34			1234			1801	
Approach Delay, s/veh		32.6			38.6			8.7			11.9	
Approach LOS		C			D			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.7	41.3	4.3	12.0	5.0	42.0	9.0	7.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	38.0	4.0	17.0	4.0	39.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	3.1	15.3	2.2	3.3	2.3	24.8	5.3	2.9
Green Ext Time (p_c), s	0.0	20.4	0.0	0.2	0.0	13.2	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	12.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	516	344	5	70	676	85	2	718	46	110	1129	1041
Future Volume (veh/h)	516	344	5	70	676	85	2	718	46	110	1129	1041
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1810	1810	1810	1810	1810	1810
Adj Flow Rate, veh/h	516	344	5	70	676	85	2	718	46	110	1129	1041
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	5	5	5	5	5	5
Cap, veh/h	526	1123	503	110	695	311	5	1461	654	159	1654	740
Arrive On Green	0.16	0.33	0.33	0.03	0.20	0.20	0.00	0.42	0.42	0.05	0.48	0.48
Sat Flow, veh/h	3312	3406	1524	3312	3406	1524	3343	3438	1538	3343	3438	1538
Grp Volume(v), veh/h	516	344	5	70	676	85	2	718	46	110	1129	1041
Grp Sat Flow(s),veh/h/ln	1656	1703	1524	1656	1703	1524	1672	1719	1538	1672	1719	1538
Q Serve(g_s), s	21.3	10.3	0.3	2.9	27.0	6.5	0.1	20.8	2.4	4.4	34.8	66.0
Cycle Q Clear(g_c), s	21.3	10.3	0.3	2.9	27.0	6.5	0.1	20.8	2.4	4.4	34.8	66.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	526	1123	503	110	695	311	5	1461	654	159	1654	740
V/C Ratio(X)	0.98	0.31	0.01	0.64	0.97	0.27	0.37	0.49	0.07	0.69	0.68	1.41
Avail Cap(c_a), veh/h	526	1123	503	164	695	311	73	1468	657	219	1654	740
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.5	34.3	30.9	65.5	54.2	46.0	68.4	28.7	23.4	64.4	27.5	35.6
Incr Delay (d2), s/veh	34.1	0.3	0.0	2.3	27.6	1.0	15.2	0.3	0.0	5.4	1.2	191.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	4.9	0.1	1.3	15.4	2.8	0.0	9.9	1.0	2.2	16.7	67.3
LnGrp Delay(d),s/veh	91.6	34.6	30.9	67.8	81.8	47.0	83.6	28.9	23.4	69.8	28.7	226.9
LnGrp LOS	F	C	C	E	F	D	F	C	C	E	C	F
Approach Vol, veh/h		865			831			766			2280	
Approach Delay, s/veh		68.6			77.1			28.7			121.2	
Approach LOS		E			E			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.4	34.0	4.8	72.0	9.1	51.3	12.5	64.3
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	6.0	6.0
Max Green Setting (Gmax), s	21.8	28.0	3.0	66.0	6.8	43.0	9.0	58.6
Max Q Clear Time (g_c+I1), s	23.3	29.0	2.1	68.0	4.9	12.3	6.4	22.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	15.6	0.1	27.4

Intersection Summary	
HCM 2010 Ctrl Delay	88.9
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	675	92	350	505	138	75	1095	374	63	730	137
Future Volume (veh/h)	185	675	92	350	505	138	75	1095	374	63	730	137
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	185	675	92	350	505	138	75	1095	374	63	730	137
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	225	662	90	375	1047	469	96	1144	512	80	1113	498
Arrive On Green	0.13	0.21	0.21	0.21	0.30	0.30	0.05	0.33	0.33	0.05	0.32	0.32
Sat Flow, veh/h	1757	3100	422	1757	3505	1568	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	185	381	386	350	505	138	75	1095	374	63	730	137
Grp Sat Flow(s),veh/h/ln	1757	1752	1770	1757	1752	1568	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	8.2	17.0	17.0	15.6	9.4	5.4	3.4	24.4	16.8	2.8	14.3	5.2
Cycle Q Clear(g_c), s	8.2	17.0	17.0	15.6	9.4	5.4	3.4	24.4	16.8	2.8	14.3	5.2
Prop In Lane	1.00		0.24	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	225	374	378	375	1047	469	96	1144	512	80	1113	498
V/C Ratio(X)	0.82	1.02	1.02	0.93	0.48	0.29	0.78	0.96	0.73	0.79	0.66	0.28
Avail Cap(c_a), veh/h	331	374	378	375	1047	469	132	1144	512	88	1113	498
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.8	31.3	31.3	30.8	22.9	21.5	37.2	26.3	23.7	37.6	23.4	20.3
Incr Delay (d2), s/veh	10.1	51.4	51.7	30.0	0.3	0.3	18.3	17.2	5.3	33.8	1.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	13.5	13.6	10.7	4.6	2.4	2.1	14.4	8.0	2.1	7.1	2.3
LnGrp Delay(d),s/veh	43.9	82.8	83.0	60.8	23.2	21.8	55.4	43.5	29.0	71.5	24.8	20.6
LnGrp LOS	D	F	F	E	C	C	E	D	C	E	C	C
Approach Vol, veh/h		952			993			1544			930	
Approach Delay, s/veh		75.3			36.3			40.6			27.4	
Approach LOS		E			D			D			C	

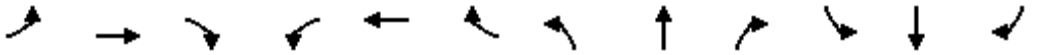
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	30.0	21.0	21.0	8.3	29.3	14.2	27.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	26.0	17.0	17.0	6.0	24.0	15.0	19.0
Max Q Clear Time (g_c+I1), s	4.8	26.4	17.6	19.0	5.4	16.3	10.2	11.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	6.6	0.2	4.8

Intersection Summary	
HCM 2010 Ctrl Delay	44.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	511	234	30	689	110	172	1724	167	137	456	25
Future Volume (veh/h)	75	511	234	30	689	110	172	1724	167	137	456	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	75	511	234	30	689	110	172	1724	167	137	456	25
Adj No. of Lanes	1	2	1	1	2	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	81	841	376	38	652	104	199	1725	165	134	1678	92
Arrive On Green	0.05	0.24	0.24	0.02	0.22	0.22	0.11	0.54	0.54	0.08	0.50	0.50
Sat Flow, veh/h	1757	3505	1568	1757	3029	483	1740	3203	306	1740	3347	183
Grp Volume(v), veh/h	75	511	234	30	398	401	172	923	968	137	236	245
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1759	1740	1736	1773	1740	1736	1795
Q Serve(g_s), s	5.5	16.9	17.3	2.2	28.0	28.0	12.6	68.1	70.0	10.0	10.2	10.3
Cycle Q Clear(g_c), s	5.5	16.9	17.3	2.2	28.0	28.0	12.6	68.1	70.0	10.0	10.2	10.3
Prop In Lane	1.00		1.00	1.00		0.27	1.00		0.17	1.00		0.10
Lane Grp Cap(c), veh/h	81	841	376	38	377	379	199	935	955	134	870	900
V/C Ratio(X)	0.92	0.61	0.62	0.80	1.06	1.06	0.87	0.99	1.01	1.02	0.27	0.27
Avail Cap(c_a), veh/h	81	841	376	81	377	379	281	935	955	134	870	900
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.8	43.9	44.1	63.3	51.0	51.0	56.6	29.6	30.0	60.0	18.7	18.7
Incr Delay (d2), s/veh	75.0	1.3	3.1	30.3	61.7	62.1	17.8	26.3	32.7	84.2	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	8.3	7.9	1.4	20.0	20.1	7.0	39.1	42.6	7.9	4.9	5.1
LnGrp Delay(d),s/veh	136.8	45.2	47.3	93.6	112.7	113.1	74.4	55.9	62.7	144.5	18.9	18.9
LnGrp LOS	F	D	D	F	F	F	E	E	F	F	B	B
Approach Vol, veh/h		820			829			2063			618	
Approach Delay, s/veh		54.2			112.2			60.6			46.7	
Approach LOS		D			F			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	74.0	6.8	35.2	18.8	69.2	10.0	32.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	70.0	6.0	28.0	21.0	59.0	6.0	28.0
Max Q Clear Time (g_c+I1), s	12.0	72.0	4.2	19.3	14.6	12.3	7.5	30.0
Green Ext Time (p_c), s	0.0	0.0	0.0	5.6	0.2	31.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	67.3
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	331	955	174	231	1335	134	171	1645	66	104	386	132
Future Volume (veh/h)	331	955	174	231	1335	134	171	1645	66	104	386	132
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1827	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	331	955	174	231	1335	134	171	1645	66	104	386	132
Adj No. of Lanes	1	3	0	1	3	1	1	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	273	1061	193	249	1176	366	195	1531	61	75	1321	591
Arrive On Green	0.16	0.25	0.25	0.14	0.24	0.24	0.11	0.45	0.45	0.04	0.38	0.38
Sat Flow, veh/h	1740	4245	771	1740	4988	1553	1740	3403	136	1740	3471	1553
Grp Volume(v), veh/h	331	747	382	231	1335	134	171	836	875	104	386	132
Grp Sat Flow(s),veh/h/ln	1740	1663	1691	1740	1663	1553	1740	1736	1803	1740	1736	1553
Q Serve(g_s), s	22.0	30.4	30.6	18.4	33.0	10.1	13.5	63.0	63.0	6.0	10.9	8.1
Cycle Q Clear(g_c), s	22.0	30.4	30.6	18.4	33.0	10.1	13.5	63.0	63.0	6.0	10.9	8.1
Prop In Lane	1.00		0.46	1.00		1.00	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	273	831	423	249	1176	366	195	781	811	75	1321	591
V/C Ratio(X)	1.21	0.90	0.90	0.93	1.14	0.37	0.87	1.07	1.08	1.39	0.29	0.22
Avail Cap(c_a), veh/h	273	831	423	249	1176	366	261	781	811	75	1321	591
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.0	50.8	50.8	59.3	53.5	44.8	61.2	38.5	38.5	67.0	30.2	29.4
Incr Delay (d2), s/veh	123.8	12.7	22.2	38.4	71.9	0.6	21.4	52.7	54.9	240.6	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.0	15.5	16.9	11.5	23.0	4.4	7.7	41.6	43.7	7.9	5.2	3.5
LnGrp Delay(d),s/veh	182.8	63.5	73.0	97.7	125.4	45.4	82.6	91.2	93.4	307.6	30.3	29.5
LnGrp LOS	F	E	E	F	F	D	F	F	F	F	C	C
Approach Vol, veh/h		1460			1700			1882			622	
Approach Delay, s/veh		93.0			115.3			91.5			76.5	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	67.0	24.0	39.0	19.7	57.3	26.0	37.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	63.0	20.0	35.0	21.0	48.0	22.0	33.0
Max Q Clear Time (g_c+I1), s	8.0	65.0	20.4	32.6	15.5	12.9	24.0	35.0
Green Ext Time (p_c), s	0.0	0.0	0.0	2.3	0.2	23.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	97.4
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	805	168	42	1625	403	125	1007	296	33	258	227
Future Volume (veh/h)	85	805	168	42	1625	403	125	1007	296	33	258	227
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1827	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	85	805	168	42	1625	403	125	1007	296	33	258	227
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	3	3	3	3	3	3
Cap, veh/h	99	1373	287	52	1574	704	155	993	444	44	771	345
Arrive On Green	0.06	0.48	0.48	0.03	0.45	0.45	0.09	0.28	0.28	0.03	0.22	0.22
Sat Flow, veh/h	1740	2860	597	1740	3471	1553	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	85	488	485	42	1625	403	125	1007	296	33	258	227
Grp Sat Flow(s),veh/h/ln	1740	1736	1722	1740	1736	1553	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	4.3	18.0	18.0	2.1	40.0	16.9	6.2	25.0	14.7	1.6	5.5	11.6
Cycle Q Clear(g_c), s	4.3	18.0	18.0	2.1	40.0	16.9	6.2	25.0	14.7	1.6	5.5	11.6
Prop In Lane	1.00		0.35	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	99	833	826	52	1574	704	155	993	444	44	771	345
V/C Ratio(X)	0.86	0.59	0.59	0.80	1.03	0.57	0.80	1.01	0.67	0.75	0.33	0.66
Avail Cap(c_a), veh/h	99	833	826	118	1574	704	179	993	444	80	795	355
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.3	16.6	16.6	42.5	24.1	17.8	39.5	31.6	27.9	42.7	29.0	31.4
Incr Delay (d2), s/veh	49.6	1.1	1.1	23.9	31.5	1.1	20.4	32.0	3.8	21.8	0.3	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	8.8	8.7	1.4	25.9	7.4	3.9	16.4	6.8	1.1	2.7	5.4
LnGrp Delay(d),s/veh	90.9	17.7	17.7	66.4	55.6	18.9	59.8	63.7	31.7	64.5	29.2	35.6
LnGrp LOS	F	B	B	E	F	B	E	F	C	E	C	D
Approach Vol, veh/h		1058			2070			1428			518	
Approach Delay, s/veh		23.6			48.7			56.7			34.3	
Approach LOS		C			D			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	29.0	6.7	46.3	11.8	23.4	9.0	44.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	25.0	6.0	39.0	9.0	20.0	5.0	40.0
Max Q Clear Time (g_c+I1), s	3.6	27.0	4.1	20.0	8.2	13.6	6.3	42.0
Green Ext Time (p_c), s	0.0	0.0	0.0	16.9	0.0	4.7	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	44.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	438	33	85	696	264	55	1464	62	92	776	22
Future Volume (veh/h)	63	438	33	85	696	264	55	1464	62	92	776	22
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1827	1827	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	63	438	33	85	696	264	55	1464	62	92	776	22
Adj No. of Lanes	2	3	1	2	3	1	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	134	1035	322	153	1063	331	125	1624	69	158	1695	758
Arrive On Green	0.04	0.21	0.21	0.05	0.21	0.21	0.04	0.48	0.48	0.05	0.49	0.49
Sat Flow, veh/h	3375	4988	1553	3375	4988	1553	3375	3394	143	3375	3471	1553
Grp Volume(v), veh/h	63	438	33	85	696	264	55	747	779	92	776	22
Grp Sat Flow(s),veh/h/ln	1688	1663	1553	1688	1663	1553	1688	1736	1802	1688	1736	1553
Q Serve(g_s), s	1.3	5.5	1.2	1.8	9.2	11.6	1.2	28.4	28.6	1.9	10.6	0.5
Cycle Q Clear(g_c), s	1.3	5.5	1.2	1.8	9.2	11.6	1.2	28.4	28.6	1.9	10.6	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	134	1035	322	153	1063	331	125	831	862	158	1695	758
V/C Ratio(X)	0.47	0.42	0.10	0.56	0.65	0.80	0.44	0.90	0.90	0.58	0.46	0.03
Avail Cap(c_a), veh/h	187	1106	344	187	1106	344	187	842	874	187	1695	758
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.9	24.8	23.1	33.7	25.9	26.9	34.0	17.2	17.3	33.7	12.2	9.6
Incr Delay (d2), s/veh	2.5	0.3	0.1	3.1	1.3	12.0	2.4	12.5	12.6	3.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	2.5	0.5	0.9	4.3	6.1	0.6	16.4	17.1	1.0	5.1	0.2
LnGrp Delay(d),s/veh	36.4	25.1	23.3	36.8	27.3	38.9	36.4	29.7	29.8	37.1	12.4	9.6
LnGrp LOS	D	C	C	D	C	D	D	C	C	D	B	A
Approach Vol, veh/h		534			1045			1581			890	
Approach Delay, s/veh		26.3			31.0			30.0			14.8	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.4	38.5	7.3	19.0	6.7	39.2	6.9	19.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	35.0	4.0	16.0	4.0	35.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	3.9	30.6	3.8	7.5	3.2	12.6	3.3	13.6
Green Ext Time (p_c), s	0.0	3.9	0.0	5.3	0.0	17.2	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	26.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	348	64	7	464	23	13	148	43	8	25	28
Future Volume (veh/h)	142	348	64	7	464	23	13	148	43	8	25	28
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1827	1827	1827	1845	1845	1845
Adj Flow Rate, veh/h	142	348	64	7	464	23	13	148	43	8	25	28
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	3	3	3
Cap, veh/h	182	1108	202	13	945	47	24	283	240	15	276	235
Arrive On Green	0.10	0.38	0.38	0.01	0.28	0.28	0.01	0.15	0.15	0.01	0.15	0.15
Sat Flow, veh/h	1740	2934	534	1740	3367	167	1740	1827	1553	1757	1845	1568
Grp Volume(v), veh/h	142	204	208	7	239	248	13	148	43	8	25	28
Grp Sat Flow(s),veh/h/ln	1740	1736	1733	1740	1736	1798	1740	1827	1553	1757	1845	1568
Q Serve(g_s), s	2.8	2.9	3.0	0.1	4.1	4.1	0.3	2.6	0.9	0.2	0.4	0.5
Cycle Q Clear(g_c), s	2.8	2.9	3.0	0.1	4.1	4.1	0.3	2.6	0.9	0.2	0.4	0.5
Prop In Lane	1.00		0.31	1.00		0.09	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	182	655	654	13	487	504	24	283	240	15	276	235
V/C Ratio(X)	0.78	0.31	0.32	0.54	0.49	0.49	0.55	0.52	0.18	0.53	0.09	0.12
Avail Cap(c_a), veh/h	393	980	978	196	784	812	196	825	701	198	833	708
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.5	7.8	7.8	17.5	10.6	10.6	17.4	13.8	13.0	17.5	13.0	13.0
Incr Delay (d2), s/veh	7.1	0.3	0.3	30.0	0.8	0.7	18.5	1.5	0.4	26.2	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	1.4	1.4	0.2	2.0	2.1	0.2	1.4	0.4	0.2	0.2	0.2
LnGrp Delay(d),s/veh	22.6	8.0	8.1	47.5	11.4	11.4	35.9	15.3	13.4	43.7	13.1	13.3
LnGrp LOS	C	A	A	D	B	B	D	B	B	D	B	B
Approach Vol, veh/h		554			494			204			61	
Approach Delay, s/veh		11.8			11.9			16.2			17.2	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.3	9.5	4.3	17.4	4.5	9.3	7.7	13.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	4.0	20.0	4.0	16.0	8.0	16.0
Max Q Clear Time (g_c+I1), s	2.2	4.6	2.1	5.0	2.3	2.5	4.8	6.1
Green Ext Time (p_c), s	0.0	0.8	0.0	4.9	0.0	0.9	0.1	3.9

Intersection Summary	
HCM 2010 Ctrl Delay	12.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1	90	110	3	1	258	1861	37	0	1720	26
Future Volume (veh/h)	0	1	90	110	3	1	258	1861	37	0	1720	26
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1759	1900	1845	1845	1900	1792	1792	1792	1792	1792	1900
Adj Flow Rate, veh/h	0	1	90	110	3	1	258	1861	37	0	1720	26
Adj No. of Lanes	0	1	0	1	1	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	8	8	8	3	3	3	6	6	6	6	6	6
Cap, veh/h	0	1	115	138	104	35	282	2137	956	148	1884	28
Arrive On Green	0.00	0.08	0.08	0.08	0.08	0.08	0.17	0.63	0.63	0.00	0.55	0.55
Sat Flow, veh/h	0	16	1481	1757	1325	442	1707	3406	1524	1707	3434	52
Grp Volume(v), veh/h	0	0	91	110	0	4	258	1861	37	0	851	895
Grp Sat Flow(s),veh/h/ln	0	0	1498	1757	0	1767	1707	1703	1524	1707	1703	1783
Q Serve(g_s), s	0.0	0.0	7.4	7.6	0.0	0.3	18.3	55.3	1.1	0.0	55.6	56.0
Cycle Q Clear(g_c), s	0.0	0.0	7.4	7.6	0.0	0.3	18.3	55.3	1.1	0.0	55.6	56.0
Prop In Lane	0.00		0.99	1.00		0.25	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	0	0	116	138	0	139	282	2137	956	148	934	978
V/C Ratio(X)	0.00	0.00	0.78	0.79	0.00	0.03	0.91	0.87	0.04	0.00	0.91	0.91
Avail Cap(c_a), veh/h	0	0	194	228	0	229	291	2432	1088	148	981	1027
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	55.8	55.8	0.0	52.4	50.6	18.9	8.8	0.0	25.1	25.2
Incr Delay (d2), s/veh	0.0	0.0	10.9	9.8	0.0	0.1	31.0	3.4	0.0	0.0	12.1	12.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	3.4	4.1	0.0	0.1	11.1	26.9	0.5	0.0	29.1	30.6
LnGrp Delay(d),s/veh	0.0	0.0	66.8	65.6	0.0	52.5	81.6	22.3	8.8	0.0	37.2	37.2
LnGrp LOS			E	E		D	F	C	A		D	D
Approach Vol, veh/h		91			114			2156			1746	
Approach Delay, s/veh		66.8			65.1			29.1			37.2	
Approach LOS		E			E			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.7	81.3		13.5	24.4	71.6		13.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	88.0		16.0	21.0	71.0		16.0
Max Q Clear Time (g_c+I1), s	0.0	57.3		9.4	20.3	58.0		9.6
Green Ext Time (p_c), s	0.0	20.0		0.2	0.1	9.6		0.1

Intersection Summary		
HCM 2010 Ctrl Delay		34.4
HCM 2010 LOS		C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	430	27	21	1784	1660	416
Future Volume (veh/h)	430	27	21	1784	1660	416
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	430	27	21	1784	1660	416
Adj No. of Lanes	1	1	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	429	383	31	2364	1727	415
Arrive On Green	0.24	0.24	0.02	0.67	0.62	0.62
Sat Flow, veh/h	1757	1568	1757	3597	2896	674
Grp Volume(v), veh/h	430	27	21	1784	1011	1065
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1752	1752	1726
Q Serve(g_s), s	24.0	1.3	1.2	33.2	51.5	60.5
Cycle Q Clear(g_c), s	24.0	1.3	1.2	33.2	51.5	60.5
Prop In Lane	1.00	1.00	1.00			0.39
Lane Grp Cap(c), veh/h	429	383	31	2364	1079	1063
V/C Ratio(X)	1.00	0.07	0.67	0.75	0.94	1.00
Avail Cap(c_a), veh/h	429	383	72	2425	1079	1063
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.1	28.6	48.0	10.6	17.1	18.9
Incr Delay (d2), s/veh	44.0	0.1	22.3	1.4	14.7	28.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.8	1.3	0.8	16.3	29.1	36.6
LnGrp Delay(d),s/veh	81.1	28.6	70.3	12.0	31.9	46.9
LnGrp LOS	F	C	E	B	C	F
Approach Vol, veh/h	457			1805	2076	
Approach Delay, s/veh	78.0			12.6	39.6	
Approach LOS	E			B	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		70.3		28.0	5.7	64.5		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		68.0		24.0	4.0	60.0		
Max Q Clear Time (g_c+I1), s		35.2		26.0	3.2	62.5		
Green Ext Time (p_c), s		31.1		0.0	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	32.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	1	42	201	0	569	16	1590	115	212	1461	0
Future Volume (veh/h)	21	1	42	201	0	569	16	1590	115	212	1461	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	21	1	42	201	0	569	16	1590	115	212	1461	0
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	28	5	197	226	0	377	23	1643	118	231	2149	0
Arrive On Green	0.02	0.13	0.13	0.13	0.00	0.24	0.01	0.50	0.50	0.13	0.61	0.00
Sat Flow, veh/h	1757	37	1537	1757	0	1568	1757	3317	238	1757	3597	0
Grp Volume(v), veh/h	21	0	43	201	0	569	16	835	870	212	1461	0
Grp Sat Flow(s),veh/h/ln	1757	0	1573	1757	0	1568	1757	1752	1803	1757	1752	0
Q Serve(g_s), s	1.6	0.0	3.4	15.4	0.0	33.0	1.2	63.0	64.6	16.3	37.9	0.0
Cycle Q Clear(g_c), s	1.6	0.0	3.4	15.4	0.0	33.0	1.2	63.0	64.6	16.3	37.9	0.0
Prop In Lane	1.00		0.98	1.00		1.00	1.00		0.13	1.00		0.00
Lane Grp Cap(c), veh/h	28	0	202	226	0	377	23	868	893	231	2149	0
V/C Ratio(X)	0.74	0.00	0.21	0.89	0.00	1.51	0.68	0.96	0.97	0.92	0.68	0.00
Avail Cap(c_a), veh/h	51	0	202	269	0	377	77	882	907	231	2149	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	67.2	0.0	53.6	58.8	0.0	52.1	67.4	33.4	33.8	58.8	17.6	0.0
Incr Delay (d2), s/veh	31.5	0.0	0.5	25.7	0.0	241.9	29.8	21.4	23.6	37.9	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	1.5	9.1	0.0	39.6	0.8	35.5	38.0	10.4	18.5	0.0
LnGrp Delay(d),s/veh	98.7	0.0	54.1	84.5	0.0	294.0	97.1	54.7	57.4	96.8	18.5	0.0
LnGrp LOS	F		D	F		F	F	D	E	F	B	
Approach Vol, veh/h		64			770			1721			1673	
Approach Delay, s/veh		68.7			239.3			56.4			28.4	
Approach LOS		E			F			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	71.9	21.6	21.6	5.8	88.1	6.2	37.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	18.0	69.0	21.0	16.0	6.0	81.0	4.0	33.0
Max Q Clear Time (g_c+I1), s	18.3	66.6	17.4	5.4	3.2	39.9	3.6	35.0
Green Ext Time (p_c), s	0.0	1.3	0.2	3.3	0.0	35.8	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	78.8
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	325	6	4	1	5	7	3	1213	1	0	1342	349
Future Volume (veh/h)	325	6	4	1	5	7	3	1213	1	0	1342	349
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1900	1845	1900	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	325	6	4	1	5	7	3	1213	1	0	1342	0
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	380	7	345	2	8	12	6	2095	2	3	1817	813
Arrive On Green	0.22	0.22	0.22	0.01	0.01	0.01	0.00	0.58	0.58	0.00	0.52	0.00
Sat Flow, veh/h	1726	32	1568	129	646	904	1757	3594	3	1757	3505	1568
Grp Volume(v), veh/h	331	0	4	13	0	0	3	592	622	0	1342	0
Grp Sat Flow(s),veh/h/ln	1758	0	1568	1679	0	0	1757	1752	1844	1757	1752	1568
Q Serve(g_s), s	11.8	0.0	0.1	0.5	0.0	0.0	0.1	13.9	13.9	0.0	19.5	0.0
Cycle Q Clear(g_c), s	11.8	0.0	0.1	0.5	0.0	0.0	0.1	13.9	13.9	0.0	19.5	0.0
Prop In Lane	0.98		1.00	0.08		0.54	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	387	0	345	22	0	0	6	1022	1075	3	1817	813
V/C Ratio(X)	0.85	0.00	0.01	0.60	0.00	0.00	0.53	0.58	0.58	0.00	0.74	0.00
Avail Cap(c_a), veh/h	458	0	408	412	0	0	108	1022	1075	108	1987	889
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	24.4	0.0	19.9	32.0	0.0	0.0	32.5	8.6	8.6	0.0	12.3	0.0
Incr Delay (d2), s/veh	12.9	0.0	0.0	24.0	0.0	0.0	59.3	0.8	0.8	0.0	1.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	0.0	0.1	0.4	0.0	0.0	0.1	6.8	7.1	0.0	9.7	0.0
LnGrp Delay(d),s/veh	37.4	0.0	19.9	56.0	0.0	0.0	91.8	9.4	9.3	0.0	13.6	0.0
LnGrp LOS	D		B	E			F	A	A		B	
Approach Vol, veh/h		335			13			1217			1342	
Approach Delay, s/veh		37.2			56.0			9.6			13.6	
Approach LOS		D			E			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	42.1		18.4	4.2	37.8		4.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	37.0		17.0	4.0	37.0		16.0
Max Q Clear Time (g_c+I1), s	0.0	15.9		13.8	2.1	21.5		2.5
Green Ext Time (p_c), s	0.0	17.4		0.6	0.0	12.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	14.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	181	214	137	119	585	2	391	987	53	1	1696	248
Future Volume (veh/h)	181	214	137	119	585	2	391	987	53	1	1696	248
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	181	214	137	119	585	2	391	987	53	1	1696	248
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	189	630	282	183	623	279	379	2060	922	4	1675	749
Arrive On Green	0.06	0.18	0.18	0.05	0.18	0.18	0.11	0.59	0.59	0.00	0.48	0.48
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	181	214	137	119	585	2	391	987	53	1	1696	248
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	4.8	4.8	7.1	3.1	14.8	0.1	10.0	14.5	1.3	0.0	43.0	8.8
Cycle Q Clear(g_c), s	4.8	4.8	7.1	3.1	14.8	0.1	10.0	14.5	1.3	0.0	43.0	8.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	189	630	282	183	623	279	379	2060	922	4	1675	749
V/C Ratio(X)	0.96	0.34	0.49	0.65	0.94	0.01	1.03	0.48	0.06	0.26	1.01	0.33
Avail Cap(c_a), veh/h	189	630	282	189	623	279	379	2060	922	151	1675	749
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.4	32.2	33.2	41.8	36.5	30.5	40.0	10.6	7.9	44.9	23.5	14.6
Incr Delay (d2), s/veh	52.6	0.3	1.3	7.4	22.2	0.0	54.9	0.2	0.0	33.5	25.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	2.3	3.1	1.6	9.1	0.0	7.6	7.0	0.6	0.0	26.6	3.8
LnGrp Delay(d),s/veh	95.0	32.6	34.5	49.1	58.7	30.5	94.9	10.8	7.9	78.4	48.7	14.8
LnGrp LOS	F	C	C	D	E	C	F	B	A	E	F	B
Approach Vol, veh/h		532			706			1431			1945	
Approach Delay, s/veh		54.3			57.0			33.7			44.4	
Approach LOS		D			E			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.1	56.9	8.8	20.2	14.0	47.0	9.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	49.0	5.0	16.0	10.0	43.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	2.0	16.5	5.1	9.1	12.0	45.0	6.8	16.8
Green Ext Time (p_c), s	0.0	27.5	0.0	3.2	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	44.1
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	1161	56	13	1897	47	399	191	20	57	71	284
Future Volume (veh/h)	93	1161	56	13	1897	47	399	191	20	57	71	284
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	93	1161	56	13	1897	47	399	191	20	57	71	284
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	95	1820	88	20	1721	42	365	533	453	73	227	193
Arrive On Green	0.05	0.53	0.53	0.01	0.49	0.49	0.21	0.29	0.29	0.04	0.12	0.12
Sat Flow, veh/h	1757	3404	164	1757	3496	86	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	93	597	620	13	947	997	399	191	20	57	71	284
Grp Sat Flow(s),veh/h/ln	1757	1752	1816	1757	1752	1829	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	6.9	31.3	31.3	1.0	64.0	64.0	27.0	10.7	1.2	4.2	4.6	16.0
Cycle Q Clear(g_c), s	6.9	31.3	31.3	1.0	64.0	64.0	27.0	10.7	1.2	4.2	4.6	16.0
Prop In Lane	1.00		0.09	1.00		0.05	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	95	937	971	20	863	901	365	533	453	73	227	193
V/C Ratio(X)	0.98	0.64	0.64	0.64	1.10	1.11	1.09	0.36	0.04	0.78	0.31	1.47
Avail Cap(c_a), veh/h	95	937	971	54	863	901	365	533	453	122	227	193
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.4	21.4	21.4	64.0	33.0	33.0	51.5	36.6	33.3	61.7	52.0	57.0
Incr Delay (d2), s/veh	86.8	1.4	1.4	29.2	60.9	63.7	74.6	0.4	0.0	16.2	0.8	238.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	15.5	16.0	0.6	45.5	48.2	20.6	5.5	0.5	2.4	2.4	19.7
LnGrp Delay(d),s/veh	148.2	22.8	22.8	93.1	93.9	96.7	126.1	37.0	33.3	77.9	52.8	295.2
LnGrp LOS	F	C	C	F	F	F	F	D	C	E	D	F
Approach Vol, veh/h		1310			1957			610			412	
Approach Delay, s/veh		31.7			95.3			95.2			223.3	
Approach LOS		C			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	41.6	5.5	73.5	31.0	20.0	11.0	68.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	9.0	34.0	4.0	67.0	27.0	16.0	7.0	64.0
Max Q Clear Time (g_c+I1), s	6.2	12.7	3.0	33.3	29.0	18.0	8.9	66.0
Green Ext Time (p_c), s	0.0	2.5	0.0	30.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	88.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	477	617	530	10	1311	426	714	1833	5	274	906	1420
Future Volume (veh/h)	477	617	530	10	1311	426	714	1833	5	274	906	1420
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	477	617	530	10	1311	426	714	1833	5	274	906	1420
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	273	1066	477	31	818	366	409	2445	761	322	2317	721
Arrive On Green	0.08	0.30	0.30	0.01	0.23	0.23	0.12	0.49	0.49	0.09	0.46	0.46
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	477	617	530	10	1311	426	714	1833	5	274	906	1420
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	12.0	22.3	45.6	0.4	35.0	35.0	18.0	44.2	0.2	11.9	17.8	69.0
Cycle Q Clear(g_c), s	12.0	22.3	45.6	0.4	35.0	35.0	18.0	44.2	0.2	11.9	17.8	69.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	273	1066	477	31	818	366	409	2445	761	322	2317	721
V/C Ratio(X)	1.75	0.58	1.11	0.32	1.60	1.16	1.75	0.75	0.01	0.85	0.39	1.97
Avail Cap(c_a), veh/h	273	1066	477	91	818	366	409	2445	761	386	2317	721
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.0	44.1	52.2	73.9	57.5	57.5	66.0	31.2	19.9	66.9	26.7	40.5
Incr Delay (d2), s/veh	352.0	0.8	75.1	5.9	277.1	99.8	345.6	1.3	0.0	14.4	0.1	441.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.0	10.9	29.7	0.2	48.4	25.3	28.1	20.7	0.1	6.2	8.2	118.2
LnGrp Delay(d),s/veh	421.0	44.8	127.3	79.7	334.6	157.3	411.6	32.5	19.9	81.2	26.8	481.5
LnGrp LOS	F	D	F	E	F	F	F	C	B	F	C	F
Approach Vol, veh/h		1624			1747			2552			2600	
Approach Delay, s/veh		182.2			289.9			138.6			280.8	
Approach LOS		F			F			F			F	

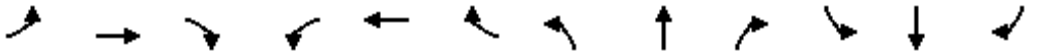
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.2	76.8	5.4	49.6	22.0	73.0	16.0	39.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	17.0	70.0	4.0	43.0	18.0	69.0	12.0	35.0
Max Q Clear Time (g_c+I1), s	13.9	46.2	2.4	47.6	20.0	71.0	14.0	37.0
Green Ext Time (p_c), s	0.3	23.2	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	221.3
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	544	304	172	1226	865	524	1226	234	375	387	0
Future Volume (veh/h)	0	544	304	172	1226	865	524	1226	234	375	387	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	0	544	304	172	1226	865	524	1226	234	375	387	0
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	4	1233	384	249	1842	574	634	1296	580	410	1065	477
Arrive On Green	0.00	0.24	0.24	0.07	0.37	0.37	0.19	0.37	0.37	0.12	0.30	0.00
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	0	544	304	172	1226	865	524	1226	234	375	387	0
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	0.0	7.6	15.1	4.1	17.0	30.4	12.3	28.2	9.2	9.1	7.2	0.0
Cycle Q Clear(g_c), s	0.0	7.6	15.1	4.1	17.0	30.4	12.3	28.2	9.2	9.1	7.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	4	1233	384	249	1842	574	634	1296	580	410	1065	477
V/C Ratio(X)	0.00	0.44	0.79	0.69	0.67	1.51	0.83	0.95	0.40	0.92	0.36	0.00
Avail Cap(c_a), veh/h	164	1513	471	328	1842	574	860	1306	584	410	1065	477
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	26.6	29.4	37.7	22.1	26.4	32.6	25.4	19.4	36.2	22.7	0.0
Incr Delay (d2), s/veh	0.0	0.2	7.4	4.0	0.9	237.5	4.9	14.0	0.5	25.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.6	7.3	2.1	8.0	50.9	6.2	16.1	4.1	5.7	3.5	0.0
LnGrp Delay(d),s/veh	0.0	26.9	36.8	41.7	23.0	263.9	37.5	39.4	19.9	61.2	22.9	0.0
LnGrp LOS		C	D	D	C	F	D	D	B	E	C	
Approach Vol, veh/h		848			2263			1984			762	
Approach Delay, s/veh		30.4			116.5			36.6			41.7	
Approach LOS		C			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	34.8	10.1	24.4	19.5	29.3	0.0	34.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	31.0	8.0	25.0	21.0	20.0	4.0	29.0
Max Q Clear Time (g_c+I1), s	11.1	30.2	6.1	17.1	14.3	9.2	0.0	32.4
Green Ext Time (p_c), s	0.0	0.6	0.1	3.3	1.2	8.0	0.0	0.0

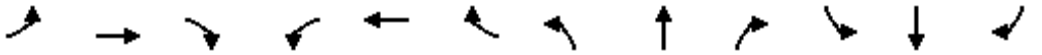
Intersection Summary	
HCM 2010 Ctrl Delay	67.2
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	58	20	101	339	1067	89	914	93	378	467	37
Future Volume (veh/h)	18	58	20	101	339	1067	89	914	93	378	467	37
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	18	58	20	101	339	1067	89	914	93	378	467	37
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	48	1723	771	144	1822	815	131	876	392	368	1119	501
Arrive On Green	0.01	0.49	0.49	0.04	0.52	0.52	0.04	0.25	0.25	0.11	0.32	0.32
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	18	58	20	101	339	1067	89	914	93	378	467	37
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	0.8	1.3	1.0	4.3	7.6	77.0	3.8	37.0	7.0	16.0	15.5	2.4
Cycle Q Clear(g_c), s	0.8	1.3	1.0	4.3	7.6	77.0	3.8	37.0	7.0	16.0	15.5	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	48	1723	771	144	1822	815	131	876	392	368	1119	501
V/C Ratio(X)	0.37	0.03	0.03	0.70	0.19	1.31	0.68	1.04	0.24	1.03	0.42	0.07
Avail Cap(c_a), veh/h	92	1728	773	184	1822	815	184	876	392	368	1119	501
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.4	19.4	19.4	70.0	18.9	35.5	70.3	55.5	44.3	66.0	39.6	35.1
Incr Delay (d2), s/veh	4.7	0.0	0.0	8.0	0.0	147.8	6.0	42.4	0.3	53.9	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.6	0.4	2.2	3.7	66.5	1.9	23.0	3.1	10.3	7.6	1.1
LnGrp Delay(d),s/veh	77.1	19.5	19.4	78.0	18.9	183.3	76.3	98.0	44.6	119.9	39.8	35.2
LnGrp LOS	E	B	B	E	B	F	E	F	D	F	D	D
Approach Vol, veh/h		96			1507			1096			882	
Approach Delay, s/veh		30.2			139.3			91.7			74.0	
Approach LOS		C			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	41.0	10.3	76.8	9.7	51.3	6.1	81.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	37.0	8.0	73.0	8.0	45.0	4.0	77.0
Max Q Clear Time (g_c+I1), s	18.0	39.0	6.3	3.3	5.8	17.5	2.8	79.0
Green Ext Time (p_c), s	0.0	0.0	0.0	11.5	0.0	12.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	105.7
HCM 2010 LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	141	81	65	418	199	464	456	32	95	322	98
Future Volume (veh/h)	68	141	81	65	418	199	464	456	32	95	322	98
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	68	141	81	65	418	199	464	456	32	95	322	98
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	171	786	352	167	781	349	587	1127	504	207	737	330
Arrive On Green	0.05	0.22	0.22	0.05	0.22	0.22	0.17	0.32	0.32	0.06	0.21	0.21
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	68	141	81	65	418	199	464	456	32	95	322	98
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	0.9	1.5	2.0	0.9	4.9	5.2	6.1	4.7	0.7	1.3	3.7	2.4
Cycle Q Clear(g_c), s	0.9	1.5	2.0	0.9	4.9	5.2	6.1	4.7	0.7	1.3	3.7	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	171	786	352	167	781	349	587	1127	504	207	737	330
V/C Ratio(X)	0.40	0.18	0.23	0.39	0.54	0.57	0.79	0.40	0.06	0.46	0.44	0.30
Avail Cap(c_a), veh/h	294	1207	540	294	1207	540	587	1434	641	367	1207	540
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.4	14.6	14.7	21.4	15.9	16.1	18.4	12.3	10.9	21.1	16.0	15.5
Incr Delay (d2), s/veh	1.5	0.1	0.3	1.5	0.6	1.5	7.2	0.2	0.1	1.6	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.7	0.9	0.4	2.4	2.4	3.4	2.3	0.3	0.6	1.8	1.1
LnGrp Delay(d),s/veh	22.9	14.7	15.1	22.9	16.5	17.5	25.6	12.5	11.0	22.6	16.4	16.0
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		290			682			952			515	
Approach Delay, s/veh		16.7			17.4			18.9			17.4	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	18.9	6.3	14.4	12.0	13.8	6.3	14.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	19.0	4.0	16.0	8.0	16.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	3.3	6.7	2.9	4.0	8.1	5.7	2.9	7.2
Green Ext Time (p_c), s	0.0	4.5	0.0	3.7	0.0	4.0	0.0	3.1

Intersection Summary	
HCM 2010 Ctrl Delay	17.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	771	125	31	1209	237	551	248	59	109	55	60
Future Volume (veh/h)	52	771	125	31	1209	237	551	248	59	109	55	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	52	771	125	31	1209	237	551	248	59	109	55	60
Adj No. of Lanes	1	2	1	1	2	1	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	66	1338	599	43	1292	578	583	612	520	139	145	124
Arrive On Green	0.04	0.38	0.38	0.02	0.37	0.37	0.33	0.33	0.33	0.08	0.08	0.08
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	52	771	125	31	1209	237	551	248	59	109	55	60
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	2.6	15.2	4.7	1.5	29.0	9.8	26.6	9.1	2.3	5.3	2.5	3.2
Cycle Q Clear(g_c), s	2.6	15.2	4.7	1.5	29.0	9.8	26.6	9.1	2.3	5.3	2.5	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	66	1338	599	43	1292	578	583	612	520	139	145	124
V/C Ratio(X)	0.79	0.58	0.21	0.73	0.94	0.41	0.94	0.41	0.11	0.79	0.38	0.49
Avail Cap(c_a), veh/h	81	1338	599	121	1325	593	604	740	629	242	359	305
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.7	21.4	18.1	42.3	26.6	20.5	28.4	22.5	20.2	39.5	38.2	38.5
Incr Delay (d2), s/veh	33.8	0.6	0.2	21.0	12.3	0.5	23.5	0.4	0.1	9.4	1.6	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	7.4	2.0	1.0	16.1	4.3	16.7	4.7	1.0	2.9	1.3	1.5
LnGrp Delay(d),s/veh	75.4	22.0	18.3	63.3	38.9	21.0	51.9	22.9	20.3	48.9	39.8	41.4
LnGrp LOS	E	C	B	E	D	C	D	C	C	D	D	D
Approach Vol, veh/h		948			1477			858			224	
Approach Delay, s/veh		24.4			36.5			41.3			44.7	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	33.0	6.1	37.3	33.0	10.9	7.3	36.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	12.0	35.0	6.0	31.0	30.0	17.0	4.0	33.0
Max Q Clear Time (g_c+I1), s	7.3	11.1	3.5	17.2	28.6	5.2	4.6	31.0
Green Ext Time (p_c), s	0.1	2.2	0.0	11.1	0.3	1.7	0.0	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	34.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	218	208	33	461	215	218	206	90	44	81	43
Future Volume (veh/h)	25	218	208	33	461	215	218	206	90	44	81	43
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	25	218	208	33	461	215	218	206	90	44	81	43
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	39	813	691	49	531	248	264	298	130	60	146	77
Arrive On Green	0.02	0.44	0.44	0.03	0.45	0.45	0.15	0.24	0.24	0.03	0.13	0.13
Sat Flow, veh/h	1757	1845	1568	1757	1191	556	1757	1218	532	1757	1135	603
Grp Volume(v), veh/h	25	218	208	33	0	676	218	0	296	44	0	124
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1747	1757	0	1751	1757	0	1738
Q Serve(g_s), s	0.9	4.7	5.4	1.2	0.0	22.1	7.6	0.0	9.7	1.6	0.0	4.2
Cycle Q Clear(g_c), s	0.9	4.7	5.4	1.2	0.0	22.1	7.6	0.0	9.7	1.6	0.0	4.2
Prop In Lane	1.00		1.00	1.00		0.32	1.00		0.30	1.00		0.35
Lane Grp Cap(c), veh/h	39	813	691	49	0	779	264	0	428	60	0	223
V/C Ratio(X)	0.63	0.27	0.30	0.68	0.00	0.87	0.83	0.00	0.69	0.74	0.00	0.56
Avail Cap(c_a), veh/h	111	904	769	139	0	884	306	0	637	139	0	467
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.6	11.2	11.4	30.5	0.0	15.8	26.1	0.0	21.7	30.3	0.0	25.9
Incr Delay (d2), s/veh	15.5	0.2	0.2	15.0	0.0	8.4	15.0	0.0	2.0	15.9	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.5	2.4	0.8	0.0	12.3	4.8	0.0	4.9	1.0	0.0	2.2
LnGrp Delay(d),s/veh	46.2	11.4	11.6	45.4	0.0	24.2	41.1	0.0	23.7	46.2	0.0	28.0
LnGrp LOS	D	B	B	D		C	D		C	D		C
Approach Vol, veh/h		451			709			514			168	
Approach Delay, s/veh		13.4			25.2			31.1			32.8	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	19.5	5.8	31.9	13.5	12.1	5.4	32.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	23.0	5.0	31.0	11.0	17.0	4.0	32.0
Max Q Clear Time (g_c+I1), s	3.6	11.7	3.2	7.4	9.6	6.2	2.9	24.1
Green Ext Time (p_c), s	0.0	1.9	0.0	7.5	0.1	1.9	0.0	4.1

Intersection Summary	
HCM 2010 Ctrl Delay	24.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	381	68	244	64	96	102	677	1630	155	268	1588	273
Future Volume (veh/h)	381	68	244	64	96	102	677	1630	155	268	1588	273
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	381	68	244	64	96	102	677	1630	155	268	1588	273
Adj No. of Lanes	1	1	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	348	466	396	102	295	132	629	1811	810	312	1485	664
Arrive On Green	0.20	0.25	0.25	0.03	0.08	0.08	0.18	0.52	0.52	0.09	0.42	0.42
Sat Flow, veh/h	1757	1845	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	381	68	244	64	96	102	677	1630	155	268	1588	273
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	29.0	4.2	20.2	2.7	3.8	9.3	27.0	61.5	7.8	11.3	62.0	17.8
Cycle Q Clear(g_c), s	29.0	4.2	20.2	2.7	3.8	9.3	27.0	61.5	7.8	11.3	62.0	17.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	348	466	396	102	295	132	629	1811	810	312	1485	664
V/C Ratio(X)	1.09	0.15	0.62	0.63	0.33	0.77	1.08	0.90	0.19	0.86	1.07	0.41
Avail Cap(c_a), veh/h	348	492	418	140	383	171	629	1811	810	326	1485	664
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.7	42.5	48.4	70.2	63.1	65.6	59.7	31.9	19.0	65.5	42.2	29.4
Incr Delay (d2), s/veh	75.9	0.1	2.5	6.2	0.6	14.8	58.2	6.6	0.1	19.3	44.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.4	2.2	9.0	1.4	1.9	4.6	17.8	31.3	3.4	6.2	39.0	7.8
LnGrp Delay(d),s/veh	134.5	42.6	50.9	76.3	63.7	80.5	117.8	38.5	19.1	84.8	86.5	29.8
LnGrp LOS	F	D	D	E	E	F	F	D	B	F	F	C
Approach Vol, veh/h		693			262			2462			2129	
Approach Delay, s/veh		96.1			73.3			59.1			79.0	
Approach LOS		F			E			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.4	79.6	8.4	40.9	31.0	66.0	33.0	16.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	14.0	75.0	6.0	39.0	27.0	62.0	29.0	16.0
Max Q Clear Time (g_c+I1), s	13.3	63.5	4.7	22.2	29.0	64.0	31.0	11.3
Green Ext Time (p_c), s	0.1	11.2	0.0	2.0	0.0	0.0	0.0	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	72.0
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	73	0	0	502	789	0	0	0	295	0	0
Future Volume (veh/h)	0	73	0	0	502	789	0	0	0	295	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	0	73	0	0	502	789	0	0	0	295	0	0
Adj No. of Lanes	2	2	1	1	2	1	1	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	12	2002	896	6	2002	896	6	6	5	541	293	249
Arrive On Green	0.00	0.57	0.00	0.00	0.57	0.57	0.00	0.00	0.00	0.16	0.00	0.00
Sat Flow, veh/h	3408	3505	1568	1757	3505	1568	1757	1845	1568	3408	1845	1568
Grp Volume(v), veh/h	0	73	0	0	502	789	0	0	0	295	0	0
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1757	1752	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	0.0	0.3	0.0	0.0	2.1	12.9	0.0	0.0	0.0	2.4	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.3	0.0	0.0	2.1	12.9	0.0	0.0	0.0	2.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	12	2002	896	6	2002	896	6	6	5	541	293	249
V/C Ratio(X)	0.00	0.04	0.00	0.00	0.25	0.88	0.00	0.00	0.00	0.55	0.00	0.00
Avail Cap(c_a), veh/h	460	2130	953	237	2130	953	237	996	847	1841	1744	1482
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	2.8	0.0	0.0	3.2	5.5	0.0	0.0	0.0	11.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.1	9.2	0.0	0.0	0.0	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	0.0	1.0	7.5	0.0	0.0	0.0	1.2	0.0	0.0
LnGrp Delay(d),s/veh	0.0	2.8	0.0	0.0	3.2	14.7	0.0	0.0	0.0	12.3	0.0	0.0
LnGrp LOS		A			A	B				B		
Approach Vol, veh/h		73			1291			0			295	
Approach Delay, s/veh		2.8			10.3			0.0			12.3	
Approach LOS		A			B						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	0.0	0.0	20.9	0.0	8.7	0.0	20.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	16.0	4.0	18.0	4.0	28.0	4.0	18.0
Max Q Clear Time (g_c+I1), s	4.4	0.0	0.0	2.3	0.0	0.0	0.0	14.9
Green Ext Time (p_c), s	0.8	0.0	0.0	6.8	0.0	0.0	0.0	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	10.3
HCM 2010 LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	403	4	0	554	331	0
Future Volume (veh/h)	403	4	0	554	331	0
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	403	4	0	554	331	0
Adj No. of Lanes	1	1	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	940	799	6	940	662	305
Arrive On Green	0.51	0.51	0.00	0.51	0.19	0.00
Sat Flow, veh/h	1845	1568	1757	1845	3408	1568
Grp Volume(v), veh/h	403	4	0	554	331	0
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1704	1568
Q Serve(g_s), s	3.7	0.0	0.0	5.7	2.3	0.0
Cycle Q Clear(g_c), s	3.7	0.0	0.0	5.7	2.3	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	940	799	6	940	662	305
V/C Ratio(X)	0.43	0.01	0.00	0.59	0.50	0.00
Avail Cap(c_a), veh/h	1228	1044	260	1774	2017	928
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	4.2	3.3	0.0	4.6	9.7	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.6	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	0.0	2.9	1.2	0.0
LnGrp Delay(d),s/veh	4.5	3.3	0.0	5.2	10.3	0.0
LnGrp LOS	A	A		A	B	
Approach Vol, veh/h	407			554	331	
Approach Delay, s/veh	4.5			5.2	10.3	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		9.3	0.0	17.8				17.8
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		16.0	4.0	18.0				26.0
Max Q Clear Time (g_c+I1), s		4.3	0.0	5.7				7.7
Green Ext Time (p_c), s		0.9	0.0	5.0				6.1

Intersection Summary	
HCM 2010 Ctrl Delay	6.3
HCM 2010 LOS	A

Intersection	
Intersection Delay, s/veh	209.4
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	137	190	11	70	119	13	315	536	134	4	142	11
Future Vol, veh/h	137	190	11	70	119	13	315	536	134	4	142	11
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	137	190	11	70	119	13	315	536	134	4	142	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	25.9	18.1	342.5	15.2
HCM LOS	D	C	F	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	32%	41%	35%	3%
Vol Thru, %	54%	56%	59%	90%
Vol Right, %	14%	3%	6%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	985	338	202	157
LT Vol	315	137	70	4
Through Vol	536	190	119	142
RT Vol	134	11	13	11
Lane Flow Rate	985	338	202	157
Geometry Grp	1	1	1	1
Degree of Util (X)	1.708	0.649	0.408	0.313
Departure Headway (Hd)	6.243	8.518	9.023	8.447
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	581	429	402	429
Service Time	4.307	6.518	7.023	6.447
HCM Lane V/C Ratio	1.695	0.788	0.502	0.366
HCM Control Delay	342.5	25.9	18.1	15.2
HCM Lane LOS	F	D	C	C
HCM 95th-tile Q	56.9	4.5	1.9	1.3

Intersection	
Intersection Delay, s/veh	239.3
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	92	305	7	160	561	129	1	416	190	0	121	26
Future Vol, veh/h	92	305	7	160	561	129	1	416	190	0	121	26
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	6	6	6	8	8	8	3	3	3	3	3	3
Mvmt Flow	92	305	7	160	561	129	1	416	190	0	121	26
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	61.6	409.3	171.7	23.2
HCM LOS	F	F	F	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	23%	19%	0%
Vol Thru, %	69%	75%	66%	82%
Vol Right, %	31%	2%	15%	18%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	607	404	850	147
LT Vol	1	92	160	0
Through Vol	416	305	561	121
RT Vol	190	7	129	26
Lane Flow Rate	607	404	850	147
Geometry Grp	1	1	1	1
Degree of Util (X)	1.279	0.905	1.843	0.377
Departure Headway (Hd)	9.359	10.676	8.725	12.714
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	395	343	425	285
Service Time	7.359	8.676	6.725	10.714
HCM Lane V/C Ratio	1.537	1.178	2	0.516
HCM Control Delay	171.7	61.6	409.3	23.2
HCM Lane LOS	F	F	F	C
HCM 95th-tile Q	21.9	8.9	49.3	1.7

Intersection	
Int Delay, s/veh	1.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	47	31	650	44	56	251
Future Vol, veh/h	47	31	650	44	56	251
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	70	0	-	-	85	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	4	4	3	3	3	3
Mvmt Flow	47	31	650	44	56	251

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	910	347	0	0	694	0
Stage 1	672	-	-	-	-	-
Stage 2	238	-	-	-	-	-
Critical Hdwy	6.88	6.98	-	-	4.16	-
Critical Hdwy Stg 1	5.88	-	-	-	-	-
Critical Hdwy Stg 2	5.88	-	-	-	-	-
Follow-up Hdwy	3.54	3.34	-	-	2.23	-
Pot Cap-1 Maneuver	270	643	-	-	891	-
Stage 1	464	-	-	-	-	-
Stage 2	773	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	253	643	-	-	891	-
Mov Cap-2 Maneuver	364	-	-	-	-	-
Stage 1	464	-	-	-	-	-
Stage 2	724	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.2	0	1.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	364	643	891	-
HCM Lane V/C Ratio	-	-	0.129	0.048	0.063	-
HCM Control Delay (s)	-	-	16.4	10.9	9.3	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.2	0.2	-

Intersection	
Int Delay, s/veh	171.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	165	148	1845	289	343	504
Future Vol, veh/h	165	148	1845	289	343	504
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	4	4	4	4
Mvmt Flow	165	148	1845	289	343	504

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2878	1067	0	0	2134	0
Stage 1	1990	-	-	-	-	-
Stage 2	888	-	-	-	-	-
Critical Hdwy	5.76	7.16	-	-	5.38	-
Critical Hdwy Stg 1	6.66	-	-	-	-	-
Critical Hdwy Stg 2	6.06	-	-	-	-	-
Follow-up Hdwy	3.83	3.93	-	-	3.14	-
Pot Cap-1 Maneuver	~ 30	186	-	-	~ 104	-
Stage 1	~ 57	-	-	-	-	-
Stage 2	326	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	0	186	-	-	~ 104	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	~ 57	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 373.6	0	$ 527.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	186	~ 104	-
HCM Lane V/C Ratio	-	-	1.683	3.298	-
HCM Control Delay (s)	-	-	$ 373.6	$ 1121.2	122.9
HCM Lane LOS	-	-	F	F	F
HCM 95th %tile Q(veh)	-	-	21.4	33.7	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	27	967	1891	34	10	93
Future Vol, veh/h	27	967	1891	34	10	93
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	190	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	6	6	6	6	3	3
Mvmt Flow	27	967	1891	34	10	93

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1925	0	-	0	2446	963
Stage 1	-	-	-	-	1908	-
Stage 2	-	-	-	-	538	-
Critical Hdwy	4.22	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.26	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	287	-	-	-	25	254
Stage 1	-	-	-	-	101	-
Stage 2	-	-	-	-	547	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	287	-	-	-	23	254
Mov Cap-2 Maneuver	-	-	-	-	23	-
Stage 1	-	-	-	-	101	-
Stage 2	-	-	-	-	496	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	97.5
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	287	-	-	-	129
HCM Lane V/C Ratio	0.094	-	-	-	0.798
HCM Control Delay (s)	18.8	-	-	-	97.5
HCM Lane LOS	C	-	-	-	F
HCM 95th %tile Q(veh)	0.3	-	-	-	4.8

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	1	0	3	1	6	0	1140	1	1	897	1
Future Vol, veh/h	3	1	0	3	1	6	0	1140	1	1	897	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	3	1	0	3	1	6	0	1140	1	1	897	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2044	2041	898	2041	2041	1141	898	0	0	1141	0	0
Stage 1	900	900	-	1141	1141	-	-	-	-	-	-	-
Stage 2	1144	1141	-	900	900	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	41	56	337	41	56	243	752	-	-	609	-	-
Stage 1	332	356	-	243	274	-	-	-	-	-	-	-
Stage 2	242	274	-	332	356	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	39	56	337	40	56	243	752	-	-	609	-	-
Mov Cap-2 Maneuver	39	56	-	40	56	-	-	-	-	-	-	-
Stage 1	332	355	-	243	274	-	-	-	-	-	-	-
Stage 2	235	274	-	330	355	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	99.5	52.9	0	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	752	-	-	42	85	609	-	-
HCM Lane V/C Ratio	-	-	-	0.095	0.118	0.002	-	-
HCM Control Delay (s)	0	-	-	99.5	52.9	10.9	0	-
HCM Lane LOS	A	-	-	F	F	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.4	0	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	969	0	99	1463	3	1	0	203	2	0	5
Future Vol, veh/h	11	969	0	99	1463	3	1	0	203	2	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	80	-	90	200	-	-	-	-	240	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	6	6	6	6	6	6	3	3	3	3	3	3
Mvmt Flow	11	969	0	99	1463	3	1	0	203	2	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1466	0	0	969	0	0	1921	2655	485	2170	2654	733
Stage 1	-	-	-	-	-	-	991	991	-	1663	1663	-
Stage 2	-	-	-	-	-	-	930	1664	-	507	991	-
Critical Hdwy	4.22	-	-	4.22	-	-	7.56	6.56	6.96	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Follow-up Hdwy	2.26	-	-	2.26	-	-	3.53	4.03	3.33	3.53	4.03	3.33
Pot Cap-1 Maneuver	437	-	-	683	-	-	40	22	525	26	22	361
Stage 1	-	-	-	-	-	-	262	320	-	100	151	-
Stage 2	-	-	-	-	-	-	286	151	-	514	320	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	437	-	-	683	-	-	34	18	525	14	18	361
Mov Cap-2 Maneuver	-	-	-	-	-	-	34	18	-	14	18	-
Stage 1	-	-	-	-	-	-	255	312	-	97	129	-
Stage 2	-	-	-	-	-	-	241	129	-	307	312	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.7	16.6	99.2
HCM LOS			C	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	34	525	437	-	-	683	-	-	45
HCM Lane V/C Ratio	0.029	0.387	0.025	-	-	0.145	-	-	0.156
HCM Control Delay (s)	114.1	16.1	13.5	-	-	11.2	-	-	99.2
HCM Lane LOS	F	C	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	0.1	1.8	0.1	-	-	0.5	-	-	0.5

Intersection	
Int Delay, s/veh	6.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	201	1	0	2	3	92
Future Vol, veh/h	201	1	0	2	3	92
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	201	1	0	2	3	92

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	51	49	95	0	-	0
Stage 1	49	-	-	-	-	-
Stage 2	2	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	955	1017	1493	-	-	-
Stage 1	971	-	-	-	-	-
Stage 2	1019	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	955	1017	1493	-	-	-
Mov Cap-2 Maneuver	955	-	-	-	-	-
Stage 1	971	-	-	-	-	-
Stage 2	1019	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.8	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1493	-	955	-	-
HCM Lane V/C Ratio	-	-	0.212	-	-
HCM Control Delay (s)	0	-	9.8	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.8	-	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	101	14	23	893	242	79
Future Vol, veh/h	101	14	23	893	242	79
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	101	14	23	893	242	79

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	775	161	321	0	-	0
Stage 1	282	-	-	-	-	-
Stage 2	493	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	-	-
Pot Cap-1 Maneuver	332	852	1228	-	-	-
Stage 1	738	-	-	-	-	-
Stage 2	576	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	326	852	1228	-	-	-
Mov Cap-2 Maneuver	326	-	-	-	-	-
Stage 1	738	-	-	-	-	-
Stage 2	565	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.1	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1228	-	352	-	-
HCM Lane V/C Ratio	0.019	-	0.327	-	-
HCM Control Delay (s)	8	-	20.1	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1.4	-	-

Intersection	
Int Delay, s/veh	9.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1235	39	210	1093	24	337
Future Vol, veh/h	1235	39	210	1093	24	337
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	0	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1235	39	210	1093	24	337

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1274	0	2222	637
Stage 1	-	-	-	-	1255	-
Stage 2	-	-	-	-	967	-
Critical Hdwy	-	-	4.16	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	2.23	-	3.53	3.33
Pot Cap-1 Maneuver	-	-	536	-	36	418
Stage 1	-	-	-	-	230	-
Stage 2	-	-	-	-	327	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	536	-	~ 22	418
Mov Cap-2 Maneuver	-	-	-	-	~ 22	-
Stage 1	-	-	-	-	230	-
Stage 2	-	-	-	-	199	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.6	69.6
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	22	418	-	-	536	-
HCM Lane V/C Ratio	1.091	0.806	-	-	0.392	-
HCM Control Delay (s)	$ 473.3	40.9	-	-	16	-
HCM Lane LOS	F	E	-	-	C	-
HCM 95th %tile Q(veh)	3.1	7.3	-	-	1.8	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	415	0	0	159
Future Vol, veh/h	0	0	415	0	0	159
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	0	415	0	0	159

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	574	415	0	0	415	0
Stage 1	415	-	-	-	-	-
Stage 2	159	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	479	635	-	-	1139	-
Stage 1	664	-	-	-	-	-
Stage 2	867	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	479	635	-	-	1139	-
Mov Cap-2 Maneuver	479	-	-	-	-	-
Stage 1	664	-	-	-	-	-
Stage 2	867	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1139	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	113.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	389	7	173	465	141	489
Future Vol, veh/h	389	7	173	465	141	489
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Free
Storage Length	0	-	-	-	-	90
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	389	7	173	465	141	489

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	952	141	141	0	-	0
Stage 1	141	-	-	-	-	-
Stage 2	811	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	~ 287	904	1436	-	-	0
Stage 1	883	-	-	-	-	0
Stage 2	435	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	~ 241	904	1436	-	-	-
Mov Cap-2 Maneuver	~ 241	-	-	-	-	-
Stage 1	883	-	-	-	-	-
Stage 2	~ 365	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 334.3	2.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	1436	-	244	-
HCM Lane V/C Ratio	0.12	-	1.623	-
HCM Control Delay (s)	7.9	0	$ 334.3	-
HCM Lane LOS	A	A	F	-
HCM 95th %tile Q(veh)	0.4	-	25	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	62.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	121	654	263	74	127	132
Future Vol, veh/h	121	654	263	74	127	132
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	150	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	121	654	263	74	127	132

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	649	263	0	0	263	0
Stage 1	263	-	-	-	-	-
Stage 2	386	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	433	773	-	-	1295	-
Stage 1	779	-	-	-	-	-
Stage 2	685	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	391	773	-	-	1295	-
Mov Cap-2 Maneuver	391	-	-	-	-	-
Stage 1	779	-	-	-	-	-
Stage 2	618	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	108.5	0	4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	671	1295	-
HCM Lane V/C Ratio	-	-	1.155	0.098	-
HCM Control Delay (s)	-	-	108.5	8.1	-
HCM Lane LOS	-	-	F	A	-
HCM 95th %tile Q(veh)	-	-	24.7	0.3	-

Intersection	
Int Delay, s/veh	184.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	81	403	0	0	831	7	33	257	1	0	93	15
Future Vol, veh/h	81	403	0	0	831	7	33	257	1	0	93	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	8	8	8	10	10	10	8	8	8	8	8	8
Mvmt Flow	81	403	0	0	831	7	33	257	1	0	93	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	838	0	0	403	0	0	1454	1403	403	1529	1400	835
Stage 1	-	-	-	-	-	-	565	565	-	835	835	-
Stage 2	-	-	-	-	-	-	889	838	-	694	565	-
Critical Hdwy	4.18	-	-	4.2	-	-	7.18	6.58	6.28	7.18	6.58	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Follow-up Hdwy	2.272	-	-	2.29	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	771	-	-	1114	-	-	105	~ 136	635	93	136	359
Stage 1	-	-	-	-	-	-	499	498	-	354	375	-
Stage 2	-	-	-	-	-	-	330	373	-	424	498	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	771	-	-	1114	-	-	~ 32	~ 118	635	-	118	359
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 32	~ 118	-	-	118	-
Stage 1	-	-	-	-	-	-	432	431	-	306	375	-
Stage 2	-	-	-	-	-	-	238	373	-	148	431	-

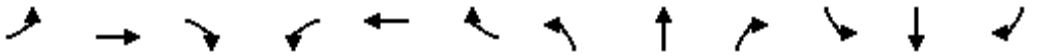
Approach	EB	WB	NB	SB
HCM Control Delay, s	1.7	0	$ 1088.1	
HCM LOS			F	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	91	771	-	-	1114	-	-	-
HCM Lane V/C Ratio	3.198	0.105	-	-	-	-	-	-
HCM Control Delay (s)	$ 1088.1	10.2	0	-	0	-	-	-
HCM Lane LOS	F	B	A	-	A	-	-	-
HCM 95th %tile Q(veh)	28.8	0.4	-	-	0	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Cumulative No Project

PM

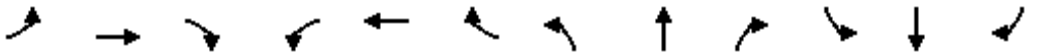


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	447	0	551	449	293	994	7	1910	555	0	2830	505
Future Volume (vph)	447	0	551	449	293	994	7	1910	555	0	2830	505
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00		0.88	0.86	0.81	0.91		0.91	1.00		0.86	1.00
Frt	1.00		0.85	1.00	0.91	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00	1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)	1752		2760	2985	2688	1413		4987	1553		6285	1553
Flt Permitted	0.95		1.00	0.95	1.00	1.00		0.83	1.00		1.00	1.00
Satd. Flow (perm)	1752		2760	2985	2688	1413		4129	1553		6285	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	447	0	551	449	293	994	7	1910	555	0	2830	505
RTOR Reduction (vph)	0	0	54	0	14	37	0	0	0	0	0	121
Lane Group Flow (vph)	447	0	497	404	821	460	0	1917	555	0	2830	384
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot		Perm	Split	NA	Perm	Perm	NA	Free		NA	Perm
Protected Phases	4			8	8			2			6	
Permitted Phases			4			8	2		Free			6
Actuated Green, G (s)	22.0		22.0	28.0	28.0	28.0		48.0	110.0		48.0	48.0
Effective Green, g (s)	22.0		22.0	28.0	28.0	28.0		48.0	110.0		48.0	48.0
Actuated g/C Ratio	0.20		0.20	0.25	0.25	0.25		0.44	1.00		0.44	0.44
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0		4.0			4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	350		552	759	684	359		1801	1553		2742	677
v/s Ratio Prot	c0.26			0.14	0.31						0.45	
v/s Ratio Perm			0.18			c0.33		c0.46	0.36			0.25
v/c Ratio	1.28		0.90	0.53	1.41dr	1.28		1.06	0.36		1.03	0.57
Uniform Delay, d1	44.0		42.9	35.4	41.0	41.0		31.0	0.0		31.0	23.2
Progression Factor	1.00		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	145.1		17.4	0.7	103.7	146.0		40.7	0.6		26.1	1.1
Delay (s)	189.1		60.3	36.1	144.7	187.0		71.7	0.6		57.1	24.3
Level of Service	F		E	D	F	F		E	A		E	C
Approach Delay (s)		118.0			131.6			55.8			52.2	
Approach LOS		F			F			E			D	

Intersection Summary			
HCM 2000 Control Delay	77.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	112.8%	ICU Level of Service	H
Analysis Period (min)	15		

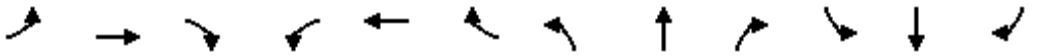
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group



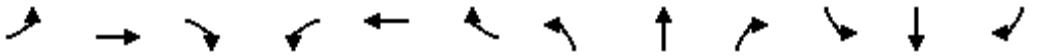
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	796	0	1165	0	0	0	0	1677	633	0	1875	1318
Future Volume (vph)	796	0	1165	0	0	0	0	1677	633	0	1875	1318
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	4.0		4.0	4.0
Lane Util. Factor	0.97		0.88					0.91	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3367		2733					4988	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3367		2733					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	796	0	1165	0	0	0	0	1677	633	0	1875	1318
RTOR Reduction (vph)	0	0	11	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	796	0	1154	0	0	0	0	1677	633	0	1875	1318
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	24.0		24.0					23.0	55.0		23.0	55.0
Effective Green, g (s)	24.0		24.0					23.0	55.0		23.0	55.0
Actuated g/C Ratio	0.44		0.44					0.42	1.00		0.42	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	1469		1192					2085	1553		2085	1553
v/s Ratio Prot								0.34			0.38	
v/s Ratio Perm	0.24		0.42						0.41			c0.85
v/c Ratio	0.54		0.97					0.80	0.41		0.90	0.85
Uniform Delay, d1	11.4		15.1					14.0	0.0		14.9	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.4		18.6					2.4	0.8		5.6	6.0
Delay (s)	11.9		33.7					16.4	0.8		20.6	6.0
Level of Service	B		C					B	A		C	A
Approach Delay (s)		24.9			0.0			12.1			14.5	
Approach LOS		C			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



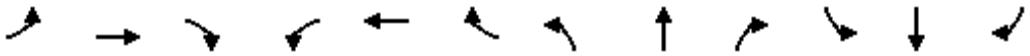
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	264	618	251	148	868	864	419	1181	36	1168	1837	150
Future Volume (vph)	264	618	251	148	868	864	419	1181	36	1168	1837	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		0.97	0.95	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	3321		3367	3471	2733	3367	4988	1553	3367	4988	1553
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	3321		3367	3471	2733	3367	4988	1553	3367	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	264	618	251	148	868	864	419	1181	36	1168	1837	150
RTOR Reduction (vph)	0	36	0	0	0	662	0	0	28	0	0	69
Lane Group Flow (vph)	264	833	0	148	868	202	419	1181	8	1168	1837	81
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	9.0	31.0		6.0	28.0	28.0	17.5	28.0	28.0	39.0	49.5	49.5
Effective Green, g (s)	9.0	31.0		6.0	28.0	28.0	17.5	28.0	28.0	39.0	49.5	49.5
Actuated g/C Ratio	0.08	0.26		0.05	0.23	0.23	0.15	0.23	0.23	0.32	0.41	0.41
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	252	857		168	809	637	491	1163	362	1094	2057	640
v/s Ratio Prot	0.08	c0.25		0.04	c0.25		0.12	c0.24		c0.35	0.37	
v/s Ratio Perm						0.07			0.01			0.05
v/c Ratio	1.05	0.97		0.88	1.07	0.32	0.85	1.02	0.02	1.07	0.89	0.13
Uniform Delay, d1	55.5	44.1		56.6	46.0	38.1	50.0	46.0	35.5	40.5	32.8	21.8
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	69.7	23.9		37.6	53.1	0.3	13.5	30.3	0.0	47.2	5.4	0.1
Delay (s)	125.2	67.9		94.3	99.1	38.4	63.5	76.3	35.5	87.7	38.2	21.9
Level of Service	F	E		F	F	D	E	E	D	F	D	C
Approach Delay (s)		81.3			70.8			72.1			55.7	
Approach LOS		F			E			E			E	

Intersection Summary			
HCM 2000 Control Delay	66.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	101.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	325	1374	12	585	19	1008	4	3	14	14	83
Future Volume (vph)	47	325	1374	12	585	19	1008	4	3	14	14	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.98	1.00
Satd. Flow (prot)	1736	3471	1553	1736	3471	1553	1618	1622	1524		1800	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.98	1.00
Satd. Flow (perm)	1736	3471	1553	1736	3471	1553	1618	1622	1524		1800	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	47	325	1374	12	585	19	1008	4	3	14	14	83
RTOR Reduction (vph)	0	0	287	0	0	15	0	0	2	0	0	77
Lane Group Flow (vph)	47	325	1087	12	585	4	504	508	1	0	28	6
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4	2	3	8		2	2		6	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	3.8	20.2	51.0	0.7	17.1	17.1	30.8	30.8	30.8		5.3	5.3
Effective Green, g (s)	3.8	20.2	51.0	0.7	17.1	17.1	30.8	30.8	30.8		5.3	5.3
Actuated g/C Ratio	0.05	0.28	0.70	0.01	0.23	0.23	0.42	0.42	0.42		0.07	0.07
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	90	960	1170	16	813	363	682	684	643		130	113
v/s Ratio Prot	c0.03	0.09	c0.39	0.01	0.17		0.31	0.31			c0.02	
v/s Ratio Perm			0.31			0.00			0.00			0.00
v/c Ratio	0.52	0.34	0.93	0.75	0.72	0.01	0.74	0.74	0.00		0.22	0.05
Uniform Delay, d1	33.7	21.1	9.5	36.1	25.7	21.5	17.7	17.8	12.2		31.9	31.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	5.4	0.2	12.6	106.0	3.1	0.0	4.2	4.4	0.0		0.8	0.2
Delay (s)	39.1	21.3	22.1	142.1	28.8	21.5	21.9	22.1	12.2		32.7	31.7
Level of Service	D	C	C	F	C	C	C	C	B		C	C
Approach Delay (s)		22.4			30.8			22.0			32.0	
Approach LOS		C			C			C			C	

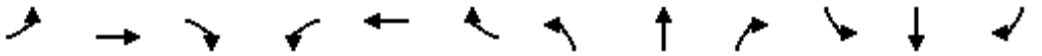
Intersection Summary			
HCM 2000 Control Delay	24.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	73.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	101.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	346	58	339	429	105	149	220	217	133	224	37
Future Volume (vph)	38	346	58	339	429	105	149	220	217	133	224	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		0.95	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85		0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1752	3505	1568	1752	3401		1665	1747	1568		3398	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.98	
Satd. Flow (perm)	1752	3505	1568	1752	3401		1665	1747	1568		3398	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	38	346	58	339	429	105	149	220	217	133	224	37
RTOR Reduction (vph)	0	0	45	0	24	0	0	0	174	0	10	0
Lane Group Flow (vph)	38	346	13	339	510	0	134	235	43	0	384	0
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4						2			
Actuated Green, G (s)	1.8	14.7	14.7	11.2	24.1		13.4	13.4	13.4		12.5	
Effective Green, g (s)	1.8	14.7	14.7	11.2	24.1		13.4	13.4	13.4		12.5	
Actuated g/C Ratio	0.03	0.22	0.22	0.17	0.36		0.20	0.20	0.20		0.18	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	46	759	339	289	1208		329	345	309		626	
v/s Ratio Prot	0.02	0.10		c0.19	c0.15		0.08	c0.13			c0.11	
v/s Ratio Perm			0.01						0.03			
v/c Ratio	0.83	0.46	0.04	1.17	0.42		0.41	0.68	0.14		0.61	
Uniform Delay, d1	32.8	23.1	21.0	28.3	16.6		23.7	25.2	22.4		25.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	69.9	0.4	0.0	108.2	0.2		0.8	5.5	0.2		1.8	
Delay (s)	102.7	23.5	21.0	136.5	16.8		24.6	30.7	22.6		27.2	
Level of Service	F	C	C	F	B		C	C	C		C	
Approach Delay (s)		30.0			63.3			26.3			27.2	
Approach LOS		C			E			C			C	

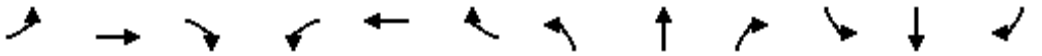
Intersection Summary			
HCM 2000 Control Delay	41.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	67.8	Sum of lost time (s)	20.0
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



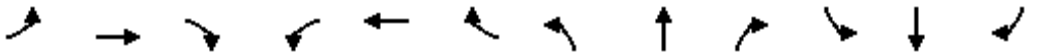
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	860	785	328	958	40	448	160	496	36	80	31
Future Volume (vph)	34	860	785	328	958	40	448	160	496	36	80	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	3.9	3.9	5.5	4.0	4.0	4.3	4.3		5.1	5.1	5.1
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.89		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1568	3400	3505	1568	3367	3077		1752	3505	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	3505	1568	3400	3505	1568	3367	3077		1752	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	34	860	785	328	958	40	448	160	496	36	80	31
RTOR Reduction (vph)	0	0	413	0	0	21	0	391	0	0	0	29
Lane Group Flow (vph)	34	860	372	328	958	19	448	265	0	36	80	2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	3%	3%	3%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		8	8		4	4	
Permitted Phases			6			2						4
Actuated Green, G (s)	3.0	30.3	30.3	11.3	38.5	38.5	17.5	17.5		4.4	4.4	4.4
Effective Green, g (s)	3.0	30.3	30.3	11.3	38.5	38.5	17.5	17.5		4.4	4.4	4.4
Actuated g/C Ratio	0.04	0.37	0.37	0.14	0.47	0.47	0.21	0.21		0.05	0.05	0.05
Clearance Time (s)	5.5	3.9	3.9	5.5	4.0	4.0	4.3	4.3		5.1	5.1	5.1
Vehicle Extension (s)	1.0	4.9	4.9	1.0	4.1	4.1	2.0	2.0		1.0	1.0	1.0
Lane Grp Cap (vph)	63	1290	577	466	1639	733	715	654		93	187	83
v/s Ratio Prot	0.02	c0.25		c0.10	0.27		c0.13	0.09		0.02	c0.02	
v/s Ratio Perm			0.24			0.01						0.00
v/c Ratio	0.54	0.67	0.64	0.70	0.58	0.03	0.63	0.41		0.39	0.43	0.02
Uniform Delay, d1	39.0	21.8	21.5	33.9	16.0	11.8	29.4	27.9		37.6	37.7	36.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.4	1.7	3.3	3.9	0.7	0.0	1.2	0.2		1.0	0.6	0.0
Delay (s)	43.4	23.5	24.8	37.8	16.7	11.8	30.7	28.1		38.6	38.3	36.9
Level of Service	D	C	C	D	B	B	C	C		D	D	D
Approach Delay (s)		24.5			21.8			29.1			38.1	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	25.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	82.3	Sum of lost time (s)	22.9
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



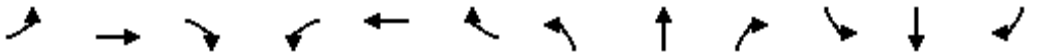
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	1263	0	367	0	1031	888	0	1085	850
Future Volume (vph)	0	0	0	1263	0	367	0	1031	888	0	1085	850
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.6		4.6		3.5	4.0		5.1	4.0
Lane Util. Factor				0.97		0.88		0.91	1.00		0.91	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3367		2733		4988	1553		4988	1553
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3367		2733		4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	1263	0	367	0	1031	888	0	1085	850
RTOR Reduction (vph)	0	0	0	0	0	52	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	1263	0	315	0	1031	888	0	1085	850
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type				Prot		Perm		NA	Free		NA	Free
Protected Phases				4				6			2	
Permitted Phases						4			Free			Free
Actuated Green, G (s)				19.9		19.9		14.4	42.4		12.8	42.4
Effective Green, g (s)				19.9		19.9		14.4	42.4		12.8	42.4
Actuated g/C Ratio				0.47		0.47		0.34	1.00		0.30	1.00
Clearance Time (s)				4.6		4.6		3.5			5.1	
Vehicle Extension (s)				1.0		1.0		1.0			1.0	
Lane Grp Cap (vph)				1580		1282		1694	1553		1505	1553
v/s Ratio Prot				c0.38				0.21			0.22	
v/s Ratio Perm						0.12			c0.57			0.55
v/c Ratio				0.80		0.25		0.61	0.57		0.72	0.55
Uniform Delay, d1				9.6		6.7		11.7	0.0		13.2	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				2.7		0.0		0.4	1.5		1.5	1.4
Delay (s)				12.3		6.8		12.1	1.5		14.7	1.4
Level of Service				B		A		B	A		B	A
Approach Delay (s)		0.0			11.0			7.2			8.8	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	42.4	Sum of lost time (s)	9.7
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	713	0	950	0	0	0	0	1205	934	0	1919	426
Future Volume (vph)	713	0	950	0	0	0	0	1205	934	0	1919	426
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4		6.4					5.1	4.0		4.6	4.0
Lane Util. Factor	0.97		0.88					0.91	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3367		2733					4988	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3367		2733					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	713	0	950	0	0	0	0	1205	934	0	1919	426
RTOR Reduction (vph)	0	0	22	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	713	0	928	0	0	0	0	1205	934	0	1919	426
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	22.7		22.7					27.0	61.2		27.5	61.2
Effective Green, g (s)	22.7		22.7					27.0	61.2		27.5	61.2
Actuated g/C Ratio	0.37		0.37					0.44	1.00		0.45	1.00
Clearance Time (s)	6.4		6.4					5.1			4.6	
Vehicle Extension (s)	1.0		1.0					1.0			1.0	
Lane Grp Cap (vph)	1248		1013					2200	1553		2241	1553
v/s Ratio Prot								0.24			c0.38	
v/s Ratio Perm	0.21		c0.34						0.60			0.27
v/c Ratio	0.57		0.92					0.55	0.60		0.86	0.27
Uniform Delay, d1	15.4		18.3					12.6	0.0		15.1	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.4		12.3					0.2	1.7		3.3	0.4
Delay (s)	15.8		30.6					12.8	1.7		18.4	0.4
Level of Service	B		C					B	A		B	A
Approach Delay (s)		24.2			0.0			7.9			15.1	
Approach LOS		C			A			A			B	

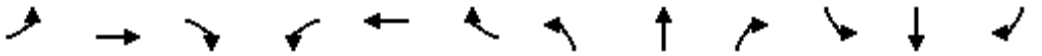
Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	61.2	Sum of lost time (s)	11.5
Intersection Capacity Utilization	79.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	168	3	103	0	1	1	21	22	1	1	61	330
Future Volume (vph)	168	3	103	0	1	1	21	22	1	1	61	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00		1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85		0.93		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	0.95	1.00		1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1665	1672	1568		1706		1752	3482		1752	3505	1568
Flt Permitted	0.95	0.95	1.00		1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1665	1672	1568		1706		1752	3482		1752	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	168	3	103	0	1	1	21	22	1	1	61	330
RTOR Reduction (vph)	0	0	85	0	1	0	0	1	0	0	0	216
Lane Group Flow (vph)	86	85	18	0	1	0	21	22	0	1	61	114
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	6.4	6.4	6.4		0.7		0.5	12.5		0.5	12.5	12.5
Effective Green, g (s)	6.4	6.4	6.4		0.7		0.5	12.5		0.5	12.5	12.5
Actuated g/C Ratio	0.18	0.18	0.18		0.02		0.01	0.35		0.01	0.35	0.35
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	295	296	277		33		24	1205		24	1213	542
v/s Ratio Prot	c0.05	0.05			c0.00		c0.01	0.01		0.00	0.02	
v/s Ratio Perm			0.01									c0.07
v/c Ratio	0.29	0.29	0.07		0.03		0.88	0.02		0.04	0.05	0.21
Uniform Delay, d1	12.9	12.9	12.4		17.4		17.8	7.8		17.6	7.9	8.3
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.6	0.5	0.1		0.4		127.4	0.0		0.7	0.0	0.2
Delay (s)	13.4	13.4	12.5		17.7		145.1	7.8		18.3	7.9	8.5
Level of Service	B	B	B		B		F	A		B	A	A
Approach Delay (s)		13.1			17.7			73.3			8.4	
Approach LOS		B			B			E			A	

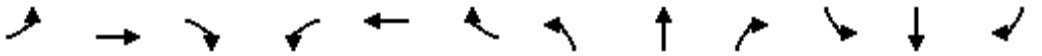
Intersection Summary			
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	36.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	37.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



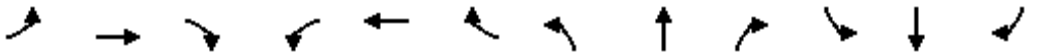
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	432	0	356	0	1210	1381	0	1146	586
Future Volume (vph)	0	0	0	432	0	356	0	1210	1381	0	1146	586
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.9	4.9			4.8	4.0		4.8	4.0
Lane Util. Factor				0.95	0.95			0.91	1.00		0.91	1.00
Frt				1.00	0.87			1.00	0.85		1.00	0.85
Flt Protected				0.95	0.99			1.00	1.00		1.00	1.00
Satd. Flow (prot)				1649	1495			4988	1553		4988	1553
Flt Permitted				0.95	0.99			1.00	1.00		1.00	1.00
Satd. Flow (perm)				1649	1495			4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	432	0	356	0	1210	1381	0	1146	586
RTOR Reduction (vph)	0	0	0	0	33	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	389	366	0	0	1210	1381	0	1146	586
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type				Perm	NA			NA	Free		NA	Free
Protected Phases					8			2			6	
Permitted Phases				8					Free			Free
Actuated Green, G (s)				11.1	11.1			12.8	33.6		12.8	33.6
Effective Green, g (s)				11.1	11.1			12.8	33.6		12.8	33.6
Actuated g/C Ratio				0.33	0.33			0.38	1.00		0.38	1.00
Clearance Time (s)				4.9	4.9			4.8			4.8	
Vehicle Extension (s)				1.0	1.0			1.0			1.0	
Lane Grp Cap (vph)				544	493			1900	1553		1900	1553
v/s Ratio Prot								0.24			0.23	
v/s Ratio Perm				0.24	0.24				c0.89			0.38
v/c Ratio				0.72	0.74			0.64	0.89		0.60	0.38
Uniform Delay, d1				9.9	10.0			8.5	0.0		8.4	0.0
Progression Factor				1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2				3.7	5.2			0.5	8.0		0.4	0.7
Delay (s)				13.6	15.2			9.0	8.0		8.7	0.7
Level of Service				B	B			A	A		A	A
Approach Delay (s)		0.0			14.4			8.5			6.0	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	33.6	Sum of lost time (s)	9.7
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



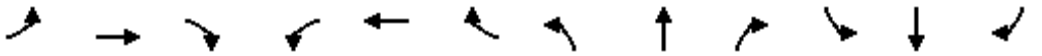
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	393	0	1009	0	0	0	0	2339	936	0	1220	360
Future Volume (vph)	393	0	1009	0	0	0	0	2339	936	0	1220	360
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	5.1					4.9	4.0		4.8	4.0
Lane Util. Factor	0.95	0.91	0.95					0.91	1.00		0.91	1.00
Frt	1.00	0.86	0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	1649	1426	1475					4988	1553		4988	1553
Flt Permitted	0.95	1.00	1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	1649	1426	1475					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	393	0	1009	0	0	0	0	2339	936	0	1220	360
RTOR Reduction (vph)	0	29	29	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	354	494	496	0	0	0	0	2339	936	0	1220	360
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA	Perm					NA	Free		NA	Free
Protected Phases		4						2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	28.2	28.2	28.2					39.9	78.1		40.0	78.1
Effective Green, g (s)	28.2	28.2	28.2					39.9	78.1		40.0	78.1
Actuated g/C Ratio	0.36	0.36	0.36					0.51	1.00		0.51	1.00
Clearance Time (s)	5.1	5.1	5.1					4.9			4.8	
Vehicle Extension (s)	1.0	1.0	1.0					1.0			1.0	
Lane Grp Cap (vph)	595	514	532					2548	1553		2554	1553
v/s Ratio Prot								c0.47			0.24	
v/s Ratio Perm	0.21	0.35	0.34						0.60			0.23
v/c Ratio	0.59	0.96	0.93					0.92	0.60		0.48	0.23
Uniform Delay, d1	20.3	24.4	24.0					17.6	0.0		12.3	0.0
Progression Factor	1.00	1.00	1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	1.1	29.8	23.2					5.7	1.7		0.1	0.3
Delay (s)	21.4	54.3	47.3					23.3	1.7		12.4	0.3
Level of Service	C	D	D					C	A		B	A
Approach Delay (s)		43.3			0.0			17.2			9.6	
Approach LOS		D			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	21.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	78.1	Sum of lost time (s)	10.0
Intersection Capacity Utilization	74.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	826	0	407	0	1469	2122	0	1283	656
Future Volume (vph)	0	0	0	826	0	407	0	1469	2122	0	1283	656
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.8		6.8		4.6	4.0		4.6	4.0
Lane Util. Factor				0.97		1.00		0.91	1.00		0.91	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3400		1568		5036	1568		5036	1568
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3400		1568		5036	1568		5036	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	826	0	407	0	1469	2122	0	1283	656
RTOR Reduction (vph)	0	0	0	0	0	27	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	826	0	380	0	1469	2122	0	1283	656
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				Perm		Perm		NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases				8		8			Free			Free
Actuated Green, G (s)				12.6		12.6		15.8	39.8		15.8	39.8
Effective Green, g (s)				12.6		12.6		15.8	39.8		15.8	39.8
Actuated g/C Ratio				0.32		0.32		0.40	1.00		0.40	1.00
Clearance Time (s)				6.8		6.8		4.6			4.6	
Vehicle Extension (s)				1.0		1.0		1.0			1.0	
Lane Grp Cap (vph)				1076		496		1999	1568		1999	1568
v/s Ratio Prot								0.29			0.25	
v/s Ratio Perm				0.24		0.24			c1.35			0.42
v/c Ratio				0.77		0.77		0.73	1.35		0.64	0.42
Uniform Delay, d1				12.3		12.3		10.2	19.9		9.7	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				3.0		6.3		1.2	163.3		0.5	0.8
Delay (s)				15.3		18.6		11.5	183.2		10.2	0.8
Level of Service				B		B		B	F		B	A
Approach Delay (s)		0.0			16.4			112.9			7.1	
Approach LOS		A			B			F			A	

Intersection Summary			
HCM 2000 Control Delay	65.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.90		
Actuated Cycle Length (s)	39.8	Sum of lost time (s)	11.4
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	375	20	1197	0	0	641	0	3364	8	50	1868	190
Future Volume (vph)	375	20	1197	0	0	641	0	3364	8	50	1868	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0		4.0			4.0	4.0
Lane Util. Factor	0.91	0.86	0.91			0.88		0.86			0.91	1.00
Frt	1.00	0.86	0.85			0.85		1.00			1.00	0.85
Flt Protected	0.95	1.00	1.00			1.00		1.00			1.00	1.00
Satd. Flow (prot)	1595	2731	1427			2733		6343			5029	1568
Flt Permitted	0.95	1.00	1.00			1.00		1.00			0.68	1.00
Satd. Flow (perm)	1595	2731	1427			2733		6343			3410	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	375	20	1197	0	0	641	0	3364	8	50	1868	190
RTOR Reduction (vph)	0	13	29	0	0	134	0	0	0	0	0	60
Lane Group Flow (vph)	337	644	569	0	0	507	0	3372	0	0	1918	130
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Turn Type	Split	NA	Perm			Prot		NA		Perm	NA	custom
Protected Phases	4	4				1		2			6	
Permitted Phases			4							6		2
Actuated Green, G (s)	40.0	40.0	40.0			19.0		59.0			82.0	59.0
Effective Green, g (s)	40.0	40.0	40.0			19.0		59.0			82.0	59.0
Actuated g/C Ratio	0.31	0.31	0.31			0.15		0.45			0.63	0.45
Clearance Time (s)	4.0	4.0	4.0			4.0		4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	490	840	439			399		2878			2150	711
v/s Ratio Prot	0.21	0.24				c0.19		c0.53				
v/s Ratio Perm			c0.40								0.56	0.08
v/c Ratio	0.69	1.33dr	1.30			1.27		1.17			0.89	0.18
Uniform Delay, d1	39.5	40.8	45.0			55.5		35.5			20.3	21.1
Progression Factor	1.00	1.00	1.00			1.00		1.00			1.00	1.00
Incremental Delay, d2	4.0	4.2	149.2			140.1		81.3			5.2	0.1
Delay (s)	43.5	45.0	194.2			195.6		116.8			25.4	21.3
Level of Service	D	D	F			F		F			C	C
Approach Delay (s)		100.7			195.6			116.8			25.0	
Approach LOS		F			F			F			C	

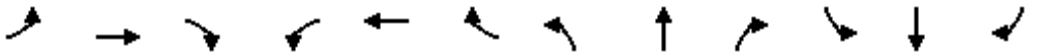
Intersection Summary			
HCM 2000 Control Delay	95.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	97.5%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

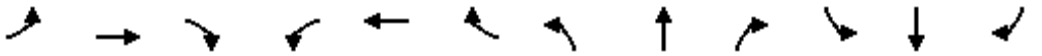
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	118	873	0	16	708	3	1	119	0	1	348	84
Future Volume (vph)	118	873	0	16	708	3	1	119	0	1	348	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	1.00			1.00			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1703	1792		1703	1791			1759			1713	
Flt Permitted	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (perm)	1703	1792		1703	1791			1755			1713	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	118	873	0	16	708	3	1	119	0	1	348	84
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	10	0
Lane Group Flow (vph)	118	873	0	16	711	0	0	120	0	0	423	0
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	8%	8%	8%	8%	8%	8%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	8.7	46.4		1.4	39.1			23.2			23.2	
Effective Green, g (s)	8.7	46.4		1.4	39.1			23.2			23.2	
Actuated g/C Ratio	0.10	0.56		0.02	0.47			0.28			0.28	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	178	1001		28	843			490			478	
v/s Ratio Prot	c0.07	c0.49		0.01	0.40							
v/s Ratio Perm								0.07			0.25	
v/c Ratio	0.66	0.87		0.57	0.84			0.24			0.88	
Uniform Delay, d1	35.7	15.7		40.5	19.3			23.1			28.6	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	8.9	8.5		25.2	7.7			0.3			17.5	
Delay (s)	44.7	24.2		65.7	27.0			23.4			46.1	
Level of Service	D	C		E	C			C			D	
Approach Delay (s)		26.7			27.8			23.4			46.1	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	30.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	83.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	36	0	733	0	3233	737	0	2062	1021
Future Volume (vph)	0	0	0	36	0	733	0	3233	737	0	2062	1021
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.5		3.5		4.8	4.0		5.1	4.0
Lane Util. Factor				0.97		0.88		0.91	1.00		0.91	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3303		2682		4988	1553		4988	1553
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3303		2682		4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	36	0	733	0	3233	737	0	2062	1021
RTOR Reduction (vph)	0	0	0	0	0	16	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	36	0	717	0	3233	737	0	2062	1021
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	4%	4%	4%	4%	4%	4%
Turn Type				Perm		Perm		NA	Free		NA	Free
Protected Phases								6			2	
Permitted Phases				8		8			Free			Free
Actuated Green, G (s)				28.5		28.5		73.2	110.0		72.9	110.0
Effective Green, g (s)				28.5		28.5		73.2	110.0		72.9	110.0
Actuated g/C Ratio				0.26		0.26		0.67	1.00		0.66	1.00
Clearance Time (s)				3.5		3.5		4.8			5.1	
Vehicle Extension (s)				1.0		1.0		1.0			1.0	
Lane Grp Cap (vph)				855		694		3319	1553		3305	1553
v/s Ratio Prot								c0.65			0.41	
v/s Ratio Perm				0.01		c0.27			0.47			0.66
v/c Ratio				0.04		1.03		0.97	0.47		0.62	0.66
Uniform Delay, d1				30.5		40.8		17.5	0.0		10.7	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				0.0		43.2		10.3	1.0		0.3	2.2
Delay (s)				30.5		83.9		27.8	1.0		10.9	2.2
Level of Service				C		F		C	A		B	A
Approach Delay (s)		0.0			81.4			22.8			8.0	
Approach LOS		A			F			C			A	

Intersection Summary			
HCM 2000 Control Delay	22.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.6
Intersection Capacity Utilization	95.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



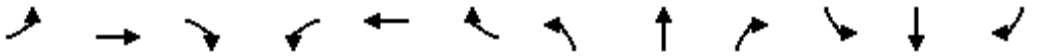
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1468	0	554	0	0	0	0	2502	216	0	1603	494
Future Volume (vph)	1468	0	554	0	0	0	0	2502	216	0	1603	494
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		3.5					4.8	4.0		5.1	4.0
Lane Util. Factor	0.94		0.88					0.86	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	4894		2733					6285	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	4894		2733					6285	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1468	0	554	0	0	0	0	2502	216	0	1603	494
RTOR Reduction (vph)	0	0	27	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	1468	0	527	0	0	0	0	2502	216	0	1603	494
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								6			2	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	18.5		18.5					25.4	52.2		25.1	52.2
Effective Green, g (s)	18.5		18.5					25.4	52.2		25.1	52.2
Actuated g/C Ratio	0.35		0.35					0.49	1.00		0.48	1.00
Clearance Time (s)	3.5		3.5					4.8			5.1	
Vehicle Extension (s)	1.0		1.0					1.0			1.0	
Lane Grp Cap (vph)	1734		968					3058	1553		2398	1553
v/s Ratio Prot								c0.40			0.32	
v/s Ratio Perm	c0.30		0.19						0.14			0.32
v/c Ratio	0.85		0.54					0.82	0.14		0.67	0.32
Uniform Delay, d1	15.5		13.5					11.4	0.0		10.4	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	3.9		0.3					1.7	0.2		0.6	0.5
Delay (s)	19.4		13.8					13.1	0.2		10.9	0.5
Level of Service	B		B					B	A		B	A
Approach Delay (s)		17.9			0.0			12.1			8.5	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	12.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	52.2	Sum of lost time (s)	8.6
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



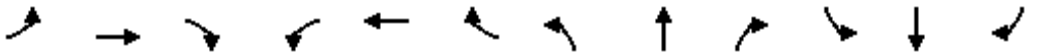
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	100	181	761	152	359	1811
Future Volume (vph)	100	181	761	152	359	1811
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.0	5.0	5.5	5.0
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3400	1568	4988	1553	3367	3471
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3400	1568	4988	1553	3367	3471
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	181	761	152	359	1811
RTOR Reduction (vph)	0	167	0	97	0	0
Lane Group Flow (vph)	100	14	761	55	359	1811
Heavy Vehicles (%)	3%	3%	4%	4%	4%	4%
Turn Type	Prot	Prot	NA	Perm	Prot	NA
Protected Phases	4	4	6		5	2
Permitted Phases				6		
Actuated Green, G (s)	3.4	3.4	15.7	15.7	8.4	29.6
Effective Green, g (s)	3.4	3.4	15.7	15.7	8.4	29.6
Actuated g/C Ratio	0.08	0.08	0.36	0.36	0.19	0.68
Clearance Time (s)	5.5	5.5	5.0	5.0	5.5	5.0
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lane Grp Cap (vph)	265	122	1800	560	650	2361
v/s Ratio Prot	c0.03	0.01	0.15		0.11	c0.52
v/s Ratio Perm				0.04		
v/c Ratio	0.38	0.12	0.42	0.10	0.55	0.77
Uniform Delay, d1	19.0	18.7	10.5	9.2	15.9	4.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.2	0.1	0.0	0.6	1.4
Delay (s)	19.4	18.8	10.5	9.2	16.4	6.0
Level of Service	B	B	B	A	B	A
Approach Delay (s)	19.0		10.3			7.8
Approach LOS	B		B			A

Intersection Summary			
HCM 2000 Control Delay	9.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	43.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



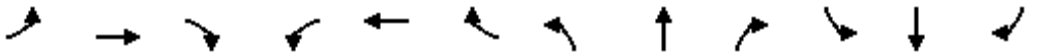
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	502	1065	9	2	925	6	7	15	2	5	21	864
Future Volume (vph)	502	1065	9	2	925	6	7	15	2	5	21	864
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.9	6.9	5.5	6.0			6.1			6.2	5.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00			0.99			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (prot)	1703	3406	1524	1719	3435			1798			1810	1553
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (perm)	1703	3406	1524	1719	3435			1798			1810	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	502	1065	9	2	925	6	7	15	2	5	21	864
RTOR Reduction (vph)	0	0	2	0	0	0	0	2	0	0	0	217
Lane Group Flow (vph)	502	1065	7	2	931	0	0	22	0	0	26	647
Heavy Vehicles (%)	6%	6%	6%	5%	5%	5%	3%	3%	3%	4%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	Over
Protected Phases	1	6		5	2		8	8		4	4	1
Permitted Phases			6									
Actuated Green, G (s)	59.8	100.3	100.3	0.5	41.9			1.7			3.5	59.8
Effective Green, g (s)	59.8	100.3	100.3	0.5	41.9			1.7			3.5	59.8
Actuated g/C Ratio	0.46	0.77	0.77	0.00	0.32			0.01			0.03	0.46
Clearance Time (s)	5.5	6.9	6.9	5.5	6.0			6.1			6.2	5.5
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0			1.0			1.0	1.0
Lane Grp Cap (vph)	779	2613	1169	6	1101			23			48	710
v/s Ratio Prot	0.29	0.31		0.00	c0.27			c0.01			c0.01	c0.42
v/s Ratio Perm			0.00									
v/c Ratio	0.64	0.41	0.01	0.33	0.85			0.96			0.54	0.91
Uniform Delay, d1	27.3	5.1	3.6	64.9	41.4			64.5			62.8	33.0
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	1.4	0.0	0.0	11.6	5.9			165.9			6.5	15.7
Delay (s)	28.6	5.2	3.6	76.5	47.3			230.4			69.3	48.7
Level of Service	C	A	A	E	D			F			E	D
Approach Delay (s)		12.6			47.3			230.4			49.3	
Approach LOS		B			D			F			D	

Intersection Summary			
HCM 2000 Control Delay	33.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	130.7	Sum of lost time (s)	24.7
Intersection Capacity Utilization	97.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	413	39	187	760	255	3666	0	0	4216	79
Future Volume (vph)	0	0	413	39	187	760	255	3666	0	0	4216	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.6		6.2	6.2	4.6	5.0			5.3	5.3
Lane Util. Factor			1.00		1.00	0.88	0.97	0.91			0.86	1.00
Frt			0.86		1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected			1.00		0.99	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)			1596		1777	2682	3303	4893			6166	1524
Flt Permitted			1.00		0.99	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)			1596		1777	2682	3303	4893			6166	1524
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	413	39	187	760	255	3666	0	0	4216	79
RTOR Reduction (vph)	0	0	192	0	0	40	0	0	0	0	0	25
Lane Group Flow (vph)	0	0	221	0	226	720	255	3666	0	0	4216	54
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type			Over	Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases			1	4	4		1	6			2	
Permitted Phases						4						2
Actuated Green, G (s)			20.0		29.8	29.8	20.0	109.0			84.1	84.1
Effective Green, g (s)			20.0		29.8	29.8	20.0	109.0			84.1	84.1
Actuated g/C Ratio			0.13		0.20	0.20	0.13	0.73			0.56	0.56
Clearance Time (s)			4.6		6.2	6.2	4.6	5.0			5.3	5.3
Vehicle Extension (s)			3.0		3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)			212		353	532	440	3555			3457	854
v/s Ratio Prot			0.14		0.13		0.08	c0.75			c0.68	
v/s Ratio Perm						c0.27						0.04
v/c Ratio			1.04		0.64	1.35	0.58	1.03			1.22	0.06
Uniform Delay, d1			65.0		55.2	60.1	61.1	20.5			33.0	15.0
Progression Factor			1.00		1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2			72.8		3.9	171.0	1.9	23.9			101.6	0.0
Delay (s)			137.8		59.1	231.1	62.9	44.4			134.6	15.0
Level of Service			F		E	F	E	D			F	B
Approach Delay (s)		137.8			191.7			45.6			132.4	
Approach LOS		F			F			D			F	

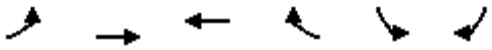
Intersection Summary			
HCM 2000 Control Delay	103.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.1
Intersection Capacity Utilization	112.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2622	0	160	0	0	0	0	1700	267	0	332	2016
Future Volume (vph)	2622	0	160	0	0	0	0	1700	267	0	332	2016
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0			4.0	4.0
Lane Util. Factor	0.94		0.88					0.91			0.91	1.00
Frt	1.00		0.85					0.98			1.00	0.85
Flt Protected	0.95		1.00					1.00			1.00	1.00
Satd. Flow (prot)	4942		2760					4933			5036	1568
Flt Permitted	0.95		1.00					1.00			1.00	1.00
Satd. Flow (perm)	4942		2760					4933			5036	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2622	0	160	0	0	0	0	1700	267	0	332	2016
RTOR Reduction (vph)	0	0	68	0	0	0	0	21	0	0	0	0
Lane Group Flow (vph)	2622	0	92	0	0	0	0	1946	0	0	332	2016
Turn Type	Prot		Perm					NA			NA	Free
Protected Phases	4							2			6	
Permitted Phases			4									Free
Actuated Green, G (s)	53.0		53.0					39.0			39.0	100.0
Effective Green, g (s)	53.0		53.0					39.0			39.0	100.0
Actuated g/C Ratio	0.53		0.53					0.39			0.39	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	2619		1462					1923			1964	1568
v/s Ratio Prot	0.53							0.39			0.07	
v/s Ratio Perm			0.03									c1.29
v/c Ratio	1.00		0.06					1.01			0.17	1.29
Uniform Delay, d1	23.5		11.4					30.5			19.9	50.0
Progression Factor	1.00		1.00					1.00			1.00	1.00
Incremental Delay, d2	17.9		0.0					23.5			0.0	133.5
Delay (s)	41.4		11.4					54.0			20.0	183.5
Level of Service	D		B					D			B	F
Approach Delay (s)		39.6			0.0			54.0			160.4	
Approach LOS		D			A			D			F	

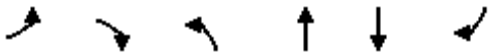
Intersection Summary			
HCM 2000 Control Delay	83.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	805	1291	1314	45	56	1076
Future Volume (vph)	805	1291	1314	45	56	1076
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	0.88
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3242	3343	3343	1495	3400	2760
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3242	3343	3343	1495	3400	2760
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	805	1291	1314	45	56	1076
RTOR Reduction (vph)	0	0	0	10	0	712
Lane Group Flow (vph)	805	1291	1314	35	56	364
Heavy Vehicles (%)	8%	8%	8%	8%	3%	3%
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	35.3	94.2	54.9	54.9	20.3	20.3
Effective Green, g (s)	35.3	94.2	54.9	54.9	20.3	20.3
Actuated g/C Ratio	0.29	0.77	0.45	0.45	0.17	0.17
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	934	2570	1498	670	563	457
v/s Ratio Prot	c0.25	0.39	c0.39		0.02	
v/s Ratio Perm				0.02		c0.13
v/c Ratio	0.86	0.50	0.88	0.05	0.10	0.80
Uniform Delay, d1	41.3	5.3	30.7	19.1	43.3	49.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.2	0.2	6.1	0.0	0.1	9.4
Delay (s)	49.5	5.5	36.9	19.1	43.4	58.5
Level of Service	D	A	D	B	D	E
Approach Delay (s)		22.4	36.3		57.7	
Approach LOS		C	D		E	

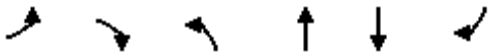
Intersection Summary			
HCM 2000 Control Delay	35.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	122.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	823	136	14	1295	1792	581
Future Volume (vph)	823	136	14	1295	1792	581
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3400	1568	1752	3505	3505	1568
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3400	1568	1752	3505	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	823	136	14	1295	1792	581
RTOR Reduction (vph)	0	129	0	0	0	194
Lane Group Flow (vph)	823	7	14	1295	1792	387
Turn Type	Prot	Over	Prot	NA	NA	Over
Protected Phases	4	5	5	2	6	4
Permitted Phases						
Actuated Green, G (s)	21.0	4.0	4.0	51.0	43.0	21.0
Effective Green, g (s)	21.0	4.0	4.0	51.0	43.0	21.0
Actuated g/C Ratio	0.26	0.05	0.05	0.64	0.54	0.26
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	892	78	87	2234	1883	411
v/s Ratio Prot	0.24	0.00	0.01	c0.37	c0.51	c0.25
v/s Ratio Perm						
v/c Ratio	0.92	0.09	0.16	0.58	0.95	0.94
Uniform Delay, d1	28.7	36.3	36.4	8.3	17.5	28.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	14.7	0.5	0.9	0.4	11.4	29.9
Delay (s)	43.5	36.7	37.3	8.7	28.9	58.8
Level of Service	D	D	D	A	C	E
Approach Delay (s)	42.5			9.0	36.2	
Approach LOS	D			A	D	

Intersection Summary			
HCM 2000 Control Delay	29.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.7%	ICU Level of Service	D
Analysis Period (min)	15		

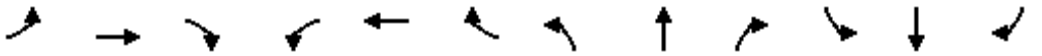
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	157	908	881	1157	1583	298
Future Volume (vph)	157	908	881	1157	1583	298
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.97	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1752	1568	3400	3505	3505	1568
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1752	1568	3400	3505	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	157	908	881	1157	1583	298
RTOR Reduction (vph)	0	387	0	0	0	166
Lane Group Flow (vph)	157	521	881	1157	1583	132
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	24.0	24.0	28.5	66.5	34.0	34.0
Effective Green, g (s)	24.0	24.0	28.5	66.5	34.0	34.0
Actuated g/C Ratio	0.24	0.24	0.29	0.68	0.35	0.35
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	426	382	983	2366	1209	541
v/s Ratio Prot	0.09		c0.26	0.33	c0.45	
v/s Ratio Perm		c0.33				0.08
v/c Ratio	0.37	1.36	0.90	0.49	1.31	0.24
Uniform Delay, d1	31.0	37.2	33.6	7.8	32.2	23.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	179.5	10.6	0.2	145.2	0.2
Delay (s)	31.5	216.8	44.2	7.9	177.5	23.3
Level of Service	C	F	D	A	F	C
Approach Delay (s)	189.5			23.6	153.1	
Approach LOS	F			C	F	

Intersection Summary			
HCM 2000 Control Delay	107.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	98.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	106.6%	ICU Level of Service	G
Analysis Period (min)	15		

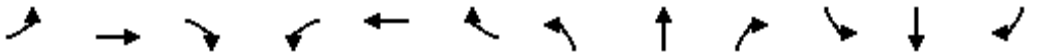
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	923	0	779	0	0	0	0	3108	616	0	1888	1108
Future Volume (vph)	923	0	779	0	0	0	0	3108	616	0	1888	1108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	4.0		4.0	4.0
Lane Util. Factor	0.97		0.88					0.86	1.00		0.86	0.86
Frt	1.00		0.85					1.00	0.85		0.97	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3400		2760					6346	1568		4626	1348
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3400		2760					6346	1568		4626	1348
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	923	0	779	0	0	0	0	3108	616	0	1888	1108
RTOR Reduction (vph)	0	0	14	0	0	0	0	0	0	0	60	0
Lane Group Flow (vph)	923	0	765	0	0	0	0	3108	616	0	2260	676
Turn Type	Prot		Perm					NA	Free		NA	Free
Protected Phases	4							2			6	
Permitted Phases			4						Free			Free
Actuated Green, G (s)	17.0		17.0					30.0	55.0		30.0	55.0
Effective Green, g (s)	17.0		17.0					30.0	55.0		30.0	55.0
Actuated g/C Ratio	0.31		0.31					0.55	1.00		0.55	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	1050		853					3461	1568		2523	1348
v/s Ratio Prot	0.27							c0.49			0.49	
v/s Ratio Perm			c0.28						0.39			0.50
v/c Ratio	0.88		0.90					0.90	0.39		0.90	0.50
Uniform Delay, d1	18.0		18.2					11.1	0.0		11.1	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	8.5		12.0					3.5	0.7		4.6	1.3
Delay (s)	26.6		30.2					14.6	0.7		15.7	1.3
Level of Service	C		C					B	A		B	A
Approach Delay (s)		28.2			0.0			12.3			12.5	
Approach LOS		C			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	382	0	1180	0	2709	1326	0	4058	468
Future Volume (vph)	0	0	0	382	0	1180	0	2709	1326	0	4058	468
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0		4.0		4.0	4.0		4.0	4.0
Lane Util. Factor				0.97		0.76		0.86	0.86		0.81	0.81
Frt				1.00		0.85		0.98	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3400		3575		4663	1348		5966	1270
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3400		3575		4663	1348		5966	1270
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	382	0	1180	0	2709	1326	0	4058	468
RTOR Reduction (vph)	0	0	0	0	0	6	0	16	0	0	1	0
Lane Group Flow (vph)	0	0	0	382	0	1174	0	3117	902	0	4104	421
Turn Type				Prot		Perm		NA	Free		NA	Free
Protected Phases				8				2			6	
Permitted Phases						8			Free			Free
Actuated Green, G (s)				36.0		36.0		76.0	120.0		76.0	120.0
Effective Green, g (s)				36.0		36.0		76.0	120.0		76.0	120.0
Actuated g/C Ratio				0.30		0.30		0.63	1.00		0.63	1.00
Clearance Time (s)				4.0		4.0		4.0			4.0	
Vehicle Extension (s)				3.0		3.0		3.0			3.0	
Lane Grp Cap (vph)				1020		1072		2953	1348		3778	1270
v/s Ratio Prot				0.11				0.67			c0.69	
v/s Ratio Perm						c0.33			0.67			0.33
v/c Ratio				0.37		1.09		1.06	0.67		1.09	0.33
Uniform Delay, d1				33.1		42.0		22.0	0.0		22.0	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				0.2		57.2		33.6	2.7		44.1	0.7
Delay (s)				33.4		99.2		55.6	2.7		66.1	0.7
Level of Service				C		F		E	A		E	A
Approach Delay (s)		0.0			83.1			43.8			60.0	
Approach LOS		A			F			D			E	

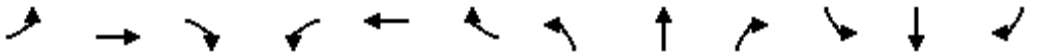
Intersection Summary			
HCM 2000 Control Delay	57.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	96.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	880	150	285	1159	346	304
Future Volume (vph)	880	150	285	1159	346	304
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3154	1411	1577	3154	3060	1411
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3154	1411	1577	3154	3060	1411
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	880	150	285	1159	346	304
RTOR Reduction (vph)	0	71	0	0	0	241
Lane Group Flow (vph)	880	79	285	1159	346	63
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	20.7	20.7	14.2	38.9	12.2	12.2
Effective Green, g (s)	20.7	20.7	14.2	38.9	12.2	12.2
Actuated g/C Ratio	0.35	0.35	0.24	0.66	0.21	0.21
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1104	494	378	2075	631	291
v/s Ratio Prot	c0.28		c0.18	0.37	c0.11	
v/s Ratio Perm		0.06				0.04
v/c Ratio	0.80	0.16	0.75	0.56	0.55	0.22
Uniform Delay, d1	17.3	13.2	20.8	5.5	21.0	19.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.1	0.2	8.3	0.3	1.0	0.4
Delay (s)	21.4	13.4	29.1	5.8	22.0	19.8
Level of Service	C	B	C	A	C	B
Approach Delay (s)	20.2			10.4	21.0	
Approach LOS	C			B	C	

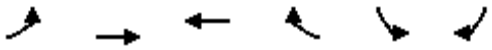
Intersection Summary			
HCM 2000 Control Delay	15.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	59.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	309	406	1	0	437	40	0	0	0	43	0	247
Future Volume (vph)	309	406	1	0	437	40	0	0	0	43	0	247
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0					4.0	4.0	4.0
Lane Util. Factor	1.00	0.95			0.95					0.95	0.95	1.00
Frt	1.00	1.00			0.99					1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00					0.95	0.95	1.00
Satd. Flow (prot)	1736	3470			3427					1665	1665	1568
Flt Permitted	0.95	1.00			1.00					0.95	0.95	1.00
Satd. Flow (perm)	1736	3470			3427					1665	1665	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	309	406	1	0	437	40	0	0	0	43	0	247
RTOR Reduction (vph)	0	0	0	0	8	0	0	0	0	0	0	215
Lane Group Flow (vph)	309	407	0	0	469	0	0	0	0	21	22	32
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA					Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases												6
Actuated Green, G (s)	15.1	32.3			13.2					7.4	7.4	7.4
Effective Green, g (s)	15.1	32.3			13.2					7.4	7.4	7.4
Actuated g/C Ratio	0.26	0.56			0.23					0.13	0.13	0.13
Clearance Time (s)	4.0	4.0			4.0					4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0					3.0	3.0	3.0
Lane Grp Cap (vph)	457	1956			789					215	215	202
v/s Ratio Prot	c0.18	0.12			c0.14					0.01	0.01	
v/s Ratio Perm												c0.02
v/c Ratio	0.68	0.21			0.59					0.10	0.10	0.16
Uniform Delay, d1	18.9	6.2			19.7					22.0	22.0	22.2
Progression Factor	1.00	1.00			1.00					1.00	1.00	1.00
Incremental Delay, d2	3.9	0.1			1.2					0.2	0.2	0.4
Delay (s)	22.8	6.2			20.9					22.2	22.2	22.5
Level of Service	C	A			C					C	C	C
Approach Delay (s)		13.4			20.9			0.0			22.5	
Approach LOS		B			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	17.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	57.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	43.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	590	478	1169	1688	0
Future Volume (vph)	2	590	478	1169	1688	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	
Frt	1.00	1.00	1.00	0.85	1.00	
Flt Protected	0.95	1.00	1.00	1.00	0.95	
Satd. Flow (prot)	1752	3505	3505	1568	3400	
Flt Permitted	0.95	1.00	1.00	1.00	0.95	
Satd. Flow (perm)	1752	3505	3505	1568	3400	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2	590	478	1169	1688	0
RTOR Reduction (vph)	0	0	0	137	0	0
Lane Group Flow (vph)	2	590	478	1032	1688	0
Turn Type	Prot	NA	NA	custom	Prot	
Protected Phases	4	5	5	2	6	
Permitted Phases						
Actuated Green, G (s)	1.0	16.2	16.2	61.8	41.6	
Effective Green, g (s)	1.0	16.2	16.2	61.8	41.6	
Actuated g/C Ratio	0.01	0.23	0.23	0.87	0.59	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	24	801	801	1368	1997	
v/s Ratio Prot	c0.00	0.17	0.14	c0.66	c0.50	
v/s Ratio Perm						
v/c Ratio	0.08	0.74	0.60	0.75	0.85	
Uniform Delay, d1	34.4	25.3	24.4	1.7	12.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.5	3.6	1.2	2.4	3.5	
Delay (s)	35.9	28.9	25.6	4.1	15.5	
Level of Service	D	C	C	A	B	
Approach Delay (s)		28.9	10.3		15.5	
Approach LOS		C	B		B	

Intersection Summary			
HCM 2000 Control Delay	15.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	70.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1642	116	0	1343	129	0
Future Volume (vph)	1642	116	0	1343	129	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	0.95			0.95	1.00	
Frt	0.99			1.00	1.00	
Flt Protected	1.00			1.00	0.95	
Satd. Flow (prot)	3470			3505	1752	
Flt Permitted	1.00			1.00	0.95	
Satd. Flow (perm)	3470			3505	1752	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1642	116	0	1343	129	0
RTOR Reduction (vph)	5	0	0	0	0	0
Lane Group Flow (vph)	1753	0	0	1343	129	0
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases						2
Actuated Green, G (s)	37.5			37.5	9.5	
Effective Green, g (s)	37.5			37.5	9.5	
Actuated g/C Ratio	0.68			0.68	0.17	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	2365			2389	302	
v/s Ratio Prot	c0.51			0.38	c0.07	
v/s Ratio Perm						
v/c Ratio	0.74			0.56	0.43	
Uniform Delay, d1	5.6			4.5	20.3	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.3			0.3	1.0	
Delay (s)	6.9			4.8	21.3	
Level of Service	A			A	C	
Approach Delay (s)	6.9			4.8	21.3	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		

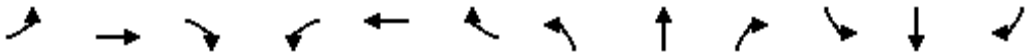
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	2384	0	1285	0
Future Volume (vph)	0	0	2384	0	1285	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	4.0	4.0	
Lane Util. Factor			0.95	0.95	0.97	
Frt			1.00	1.00	1.00	
Flt Protected			0.95	0.95	0.95	
Satd. Flow (prot)			1665	1665	3400	
Flt Permitted			0.95	0.95	0.95	
Satd. Flow (perm)			1665	1665	3400	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	2384	0	1285	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	1192	1192	1285	0
Turn Type			Split	NA	Prot	
Protected Phases			4	4	2	
Permitted Phases						
Actuated Green, G (s)			91.0	91.0	51.0	
Effective Green, g (s)			91.0	91.0	51.0	
Actuated g/C Ratio			0.61	0.61	0.34	
Clearance Time (s)			4.0	4.0	4.0	
Vehicle Extension (s)			3.0	3.0	3.0	
Lane Grp Cap (vph)			1010	1010	1156	
v/s Ratio Prot			c0.72	0.72	c0.38	
v/s Ratio Perm						
v/c Ratio			1.18	1.18	1.11	
Uniform Delay, d1			29.5	29.5	49.5	
Progression Factor			1.00	1.00	1.00	
Incremental Delay, d2			91.4	91.4	62.6	
Delay (s)			120.9	120.9	112.1	
Level of Service			F	F	F	
Approach Delay (s)	0.0			120.9	112.1	
Approach LOS	A			F	F	

Intersection Summary			
HCM 2000 Control Delay	117.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	192.2%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	829	0	0	0	0	1285	1837	0	2384	0
Future Volume (vph)	0	0	829	0	0	0	0	1285	1837	0	2384	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0					4.0	4.0		4.0	
Lane Util. Factor		0.95	0.95					0.91	0.91		0.95	
Frt		0.85	0.85					0.94	0.85		1.00	
Flt Protected		1.00	1.00					1.00	1.00		1.00	
Satd. Flow (prot)		1490	1490					3155	1427		3505	
Flt Permitted		1.00	1.00					1.00	1.00		1.00	
Satd. Flow (perm)		1490	1490					3155	1427		3505	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	829	0	0	0	0	1285	1837	0	2384	0
RTOR Reduction (vph)	0	39	0	0	0	0	0	72	292	0	0	0
Lane Group Flow (vph)	0	376	414	0	0	0	0	2076	682	0	2384	0
Turn Type		NA	Free					NA	Perm	Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases			Free						2			
Actuated Green, G (s)		25.0	110.0					77.0	77.0		77.0	
Effective Green, g (s)		25.0	110.0					77.0	77.0		77.0	
Actuated g/C Ratio		0.23	1.00					0.70	0.70		0.70	
Clearance Time (s)		4.0						4.0	4.0		4.0	
Vehicle Extension (s)		3.0						3.0	3.0		3.0	
Lane Grp Cap (vph)		338	1490					2208	998		2453	
v/s Ratio Prot		c0.25						0.66			c0.68	
v/s Ratio Perm			0.28						0.48			
v/c Ratio		1.11	0.28					0.94	0.68		0.97	
Uniform Delay, d1		42.5	0.0					14.5	9.5		15.5	
Progression Factor		1.00	1.00					1.00	1.00		1.00	
Incremental Delay, d2		83.2	0.5					8.8	1.9		12.3	
Delay (s)		125.7	0.5					23.2	11.4		27.7	
Level of Service		F	A					C	B		C	
Approach Delay (s)		63.1			0.0			19.6			27.7	
Approach LOS		E			A			B			C	

Intersection Summary			
HCM 2000 Control Delay	28.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	148.5%	ICU Level of Service	H
Analysis Period (min)	15		

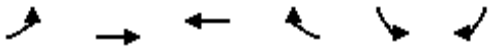
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	274	144	2826	152	49	3300
Future Volume (vph)	274	144	2826	152	49	3300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.91
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3400	1568	5036	1568	3400	5036
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3400	1568	5036	1568	3400	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	274	144	2826	152	49	3300
RTOR Reduction (vph)	0	46	0	37	0	0
Lane Group Flow (vph)	274	98	2826	115	49	3300
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Actuated Green, G (s)	14.1	14.1	90.2	90.2	3.2	97.4
Effective Green, g (s)	14.1	14.1	90.2	90.2	3.2	97.4
Actuated g/C Ratio	0.12	0.12	0.75	0.75	0.03	0.82
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	401	185	3801	1183	91	4104
v/s Ratio Prot	c0.08		0.56		0.01	c0.66
v/s Ratio Perm		0.06		0.07		
v/c Ratio	0.68	0.53	0.74	0.10	0.54	0.80
Uniform Delay, d1	50.6	49.6	8.2	3.9	57.4	5.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.8	2.9	0.8	0.0	6.0	1.2
Delay (s)	55.3	52.5	9.0	3.9	63.4	7.1
Level of Service	E	D	A	A	E	A
Approach Delay (s)	54.3		8.7			8.0
Approach LOS	D		A			A

Intersection Summary			
HCM 2000 Control Delay	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	119.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	626	1472	1190	156	137	454
Future Volume (vph)	626	1472	1190	156	137	454
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1752	3505	3505	1568	1752	1568
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1752	3505	3505	1568	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	626	1472	1190	156	137	454
RTOR Reduction (vph)	0	0	0	88	0	392
Lane Group Flow (vph)	626	1472	1190	68	137	62
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	32.0	66.1	30.1	30.1	11.7	11.7
Effective Green, g (s)	32.0	66.1	30.1	30.1	11.7	11.7
Actuated g/C Ratio	0.37	0.77	0.35	0.35	0.14	0.14
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	653	2700	1229	550	238	213
v/s Ratio Prot	c0.36	0.42	c0.34		c0.08	
v/s Ratio Perm				0.04		0.04
v/c Ratio	0.96	0.55	0.97	0.12	0.58	0.29
Uniform Delay, d1	26.3	3.9	27.4	18.9	34.7	33.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	25.1	0.2	18.3	0.1	3.3	0.8
Delay (s)	51.3	4.1	45.7	19.0	38.1	34.1
Level of Service	D	A	D	B	D	C
Approach Delay (s)		18.2	42.6		35.0	
Approach LOS		B	D		D	

Intersection Summary			
HCM 2000 Control Delay	28.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	85.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.2%	ICU Level of Service	E
Analysis Period (min)	15		

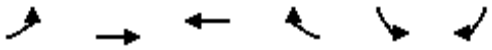
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1197	128	83	693	104	166
Future Volume (vph)	1197	128	83	693	104	166
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	0.97	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3505	1568	3400	3505	1752	1568
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3505	1568	3400	3505	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1197	128	83	693	104	166
RTOR Reduction (vph)	0	66	0	0	0	135
Lane Group Flow (vph)	1197	62	83	693	104	31
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	20.7	20.7	2.0	26.7	8.1	8.1
Effective Green, g (s)	20.7	20.7	2.0	26.7	8.1	8.1
Actuated g/C Ratio	0.48	0.48	0.05	0.62	0.19	0.19
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1695	758	158	2186	331	296
v/s Ratio Prot	c0.34		0.02	c0.20	c0.06	
v/s Ratio Perm		0.04				0.02
v/c Ratio	0.71	0.08	0.53	0.32	0.31	0.11
Uniform Delay, d1	8.7	5.9	19.9	3.8	15.0	14.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	0.0	3.1	0.1	0.5	0.2
Delay (s)	10.0	6.0	23.1	3.9	15.5	14.5
Level of Service	B	A	C	A	B	B
Approach Delay (s)	9.6			5.9	14.9	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	9.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	42.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	199	109	78	31	37	114
Future Volume (vph)	199	109	78	31	37	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	
Frt		1.00	0.96		0.90	
Flt Protected		0.97	1.00		0.99	
Satd. Flow (prot)		1787	1774		1637	
Flt Permitted		0.74	1.00		0.99	
Satd. Flow (perm)		1365	1774		1637	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	199	109	78	31	37	114
RTOR Reduction (vph)	0	0	19	0	77	0
Lane Group Flow (vph)	0	308	90	0	74	0
Turn Type	Perm	NA	NA		Prot	
Protected Phases		4	8		6	
Permitted Phases	4					
Actuated Green, G (s)		11.3	11.3		9.2	
Effective Green, g (s)		11.3	11.3		9.2	
Actuated g/C Ratio		0.40	0.40		0.32	
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		541	703		528	
v/s Ratio Prot			0.05		c0.05	
v/s Ratio Perm		c0.23				
v/c Ratio		0.57	0.13		0.14	
Uniform Delay, d1		6.7	5.5		6.8	
Progression Factor		1.00	1.00		1.00	
Incremental Delay, d2		1.4	0.1		0.1	
Delay (s)		8.1	5.6		7.0	
Level of Service		A	A		A	
Approach Delay (s)		8.1	5.6		7.0	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	28.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	506	188	249	506	253	169	1041	182	546	1696	129
Future Volume (veh/h)	86	506	188	249	506	253	169	1041	182	546	1696	129
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1827	1827	1827	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	86	506	188	249	506	253	169	1041	182	546	1696	129
Adj No. of Lanes	1	2	0	1	1	1	1	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	4	4	4	4	4	4
Cap, veh/h	109	535	198	255	544	462	190	1054	184	499	2115	659
Arrive On Green	0.06	0.21	0.21	0.15	0.30	0.30	0.11	0.25	0.25	0.29	0.42	0.42
Sat Flow, veh/h	1757	2507	927	1740	1827	1553	1740	4274	746	1740	4988	1553
Grp Volume(v), veh/h	86	353	341	249	506	253	169	809	414	546	1696	129
Grp Sat Flow(s),veh/h/ln	1757	1752	1681	1740	1827	1553	1740	1663	1695	1740	1663	1553
Q Serve(g_s), s	7.2	29.8	30.0	21.4	40.3	20.5	14.4	36.4	36.5	43.0	44.5	7.8
Cycle Q Clear(g_c), s	7.2	29.8	30.0	21.4	40.3	20.5	14.4	36.4	36.5	43.0	44.5	7.8
Prop In Lane	1.00		0.55	1.00		1.00	1.00		0.44	1.00		1.00
Lane Grp Cap(c), veh/h	109	374	359	255	544	462	190	820	418	499	2115	659
V/C Ratio(X)	0.79	0.94	0.95	0.98	0.93	0.55	0.89	0.99	0.99	1.09	0.80	0.20
Avail Cap(c_a), veh/h	187	374	359	255	544	462	197	820	418	499	2115	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.4	58.1	58.2	63.7	51.1	44.2	65.9	56.3	56.3	53.5	37.7	27.1
Incr Delay (d2), s/veh	11.7	32.4	34.8	49.4	22.7	1.4	34.7	28.1	40.9	68.5	2.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	17.8	17.4	13.8	23.8	9.0	8.7	20.0	21.9	30.1	20.9	3.4
LnGrp Delay(d),s/veh	81.1	90.5	93.1	113.1	73.9	45.5	100.6	84.4	97.2	122.0	40.0	27.3
LnGrp LOS	F	F	F	F	E	D	F	F	F	F	D	C
Approach Vol, veh/h		780			1008			1392			2371	
Approach Delay, s/veh		90.6			76.5			90.2			58.2	
Approach LOS		F			E			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	47.0	41.0	26.0	36.0	20.4	67.6	13.3	48.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	43.0	37.0	22.0	32.0	17.0	63.0	16.0	38.0
Max Q Clear Time (g_c+I1), s	45.0	38.5	23.4	32.0	16.4	46.5	9.2	42.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	12.7	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	74.1
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	332	385	92	177	633	197	91	876	3	480	1227	521
Future Volume (veh/h)	332	385	92	177	633	197	91	876	3	480	1227	521
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	332	385	92	177	633	197	91	876	3	480	1227	521
Adj No. of Lanes	1	2	0	1	2	1	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	365	777	184	214	666	298	148	987	3	490	1318	590
Arrive On Green	0.21	0.28	0.28	0.12	0.19	0.19	0.04	0.28	0.28	0.15	0.38	0.38
Sat Flow, veh/h	1757	2814	666	1757	3505	1568	3375	3548	12	3375	3471	1553
Grp Volume(v), veh/h	332	238	239	177	633	197	91	428	451	480	1227	521
Grp Sat Flow(s),veh/h/ln	1757	1752	1727	1757	1752	1568	1688	1736	1825	1688	1736	1553
Q Serve(g_s), s	16.5	10.2	10.4	8.8	16.0	10.4	2.4	21.2	21.2	12.7	30.3	28.0
Cycle Q Clear(g_c), s	16.5	10.2	10.4	8.8	16.0	10.4	2.4	21.2	21.2	12.7	30.3	28.0
Prop In Lane	1.00		0.39	1.00		1.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	365	484	477	214	666	298	148	483	508	490	1318	590
V/C Ratio(X)	0.91	0.49	0.50	0.83	0.95	0.66	0.62	0.89	0.89	0.98	0.93	0.88
Avail Cap(c_a), veh/h	373	484	477	314	666	298	151	485	510	490	1319	590
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.6	27.1	27.2	38.4	35.8	33.6	42.0	30.9	30.9	38.1	26.6	25.9
Incr Delay (d2), s/veh	25.4	0.8	0.8	11.2	23.4	5.3	7.1	17.8	17.1	35.0	11.8	14.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.6	5.0	5.1	4.9	9.9	4.9	1.2	12.5	13.0	8.3	16.7	14.4
LnGrp Delay(d),s/veh	60.1	27.9	28.0	49.6	59.2	38.9	49.1	48.7	48.0	73.1	38.5	40.6
LnGrp LOS	E	C	C	D	E	D	D	D	D	E	D	D
Approach Vol, veh/h		809			1007			970			2228	
Approach Delay, s/veh		41.1			53.5			48.4			46.4	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	28.9	14.9	28.7	7.9	38.0	22.6	21.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	13.0	25.0	16.0	20.0	4.0	34.0	19.0	17.0
Max Q Clear Time (g_c+I1), s	14.7	23.2	10.8	12.4	4.4	32.3	18.5	18.0
Green Ext Time (p_c), s	0.0	1.7	0.2	4.5	0.0	1.6	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	47.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	1485	59	232	864	91	136	605	263	22	329	1
Future Volume (veh/h)	23	1485	59	232	864	91	136	605	263	22	329	1
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1900	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	23	1485	59	232	864	91	136	605	263	22	329	1
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	33	1525	682	235	1760	185	141	742	332	33	539	2
Arrive On Green	0.02	0.45	0.45	0.14	0.57	0.57	0.08	0.21	0.21	0.02	0.15	0.15
Sat Flow, veh/h	1707	3406	1524	1707	3110	328	1757	3505	1568	1757	3584	11
Grp Volume(v), veh/h	23	1485	59	232	473	482	136	605	263	22	161	169
Grp Sat Flow(s),veh/h/ln	1707	1703	1524	1707	1703	1735	1757	1752	1568	1757	1752	1843
Q Serve(g_s), s	1.2	37.2	1.9	11.8	14.5	14.5	6.7	14.3	13.8	1.1	7.5	7.5
Cycle Q Clear(g_c), s	1.2	37.2	1.9	11.8	14.5	14.5	6.7	14.3	13.8	1.1	7.5	7.5
Prop In Lane	1.00		1.00	1.00		0.19	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	33	1525	682	235	964	982	141	742	332	33	263	277
V/C Ratio(X)	0.69	0.97	0.09	0.99	0.49	0.49	0.96	0.82	0.79	0.66	0.61	0.61
Avail Cap(c_a), veh/h	98	1525	682	235	964	982	141	765	342	81	322	339
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.4	23.5	13.8	37.5	11.4	11.4	39.9	32.7	32.5	42.4	34.6	34.6
Incr Delay (d2), s/veh	22.1	17.1	0.1	54.7	0.4	0.4	64.3	6.7	11.7	20.1	2.3	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	21.0	0.8	9.1	6.8	6.9	5.8	7.6	7.0	0.7	3.8	4.0
LnGrp Delay(d),s/veh	64.5	40.7	13.9	92.1	11.7	11.7	104.2	39.4	44.2	62.5	36.9	36.8
LnGrp LOS	E	D	B	F	B	B	F	D	D	E	D	D
Approach Vol, veh/h		1567			1187			1004			352	
Approach Delay, s/veh		40.0			27.5			49.4			38.5	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.7	22.4	16.0	43.0	11.0	17.1	5.7	53.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	19.0	12.0	39.0	7.0	16.0	5.0	46.0
Max Q Clear Time (g_c+I1), s	3.1	16.3	13.8	39.2	8.7	9.5	3.2	16.5
Green Ext Time (p_c), s	0.0	1.7	0.0	0.0	0.0	3.6	0.0	22.5

Intersection Summary	
HCM 2010 Ctrl Delay	38.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	243	561	83	310	101	197	561	166	15	613	96
Future Volume (veh/h)	46	243	561	83	310	101	197	561	166	15	613	96
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	46	243	561	83	310	101	197	561	166	15	613	96
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	63	948	424	105	770	246	252	1347	603	26	897	401
Arrive On Green	0.04	0.27	0.27	0.06	0.29	0.29	0.14	0.38	0.38	0.01	0.26	0.26
Sat Flow, veh/h	1757	3505	1568	1757	2613	836	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	46	243	561	83	206	205	197	561	166	15	613	96
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1697	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	1.5	3.2	16.0	2.8	5.6	5.7	6.4	6.9	4.3	0.5	9.3	2.9
Cycle Q Clear(g_c), s	1.5	3.2	16.0	2.8	5.6	5.7	6.4	6.9	4.3	0.5	9.3	2.9
Prop In Lane	1.00		1.00	1.00		0.49	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	63	948	424	105	516	500	252	1347	603	26	897	401
V/C Ratio(X)	0.73	0.26	1.32	0.79	0.40	0.41	0.78	0.42	0.28	0.58	0.68	0.24
Avail Cap(c_a), veh/h	148	948	424	148	516	500	624	2014	901	119	1007	451
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.2	16.9	21.6	27.4	16.7	16.7	24.5	13.3	12.5	29.0	19.9	17.4
Incr Delay (d2), s/veh	14.9	0.1	161.1	16.7	0.5	0.5	5.3	0.2	0.2	18.7	1.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	1.6	25.8	1.8	2.8	2.8	3.4	3.4	1.9	0.4	4.7	1.3
LnGrp Delay(d),s/veh	43.1	17.1	182.6	44.2	17.2	17.3	29.7	13.6	12.8	47.7	21.5	17.8
LnGrp LOS	D	B	F	D	B	B	C	B	B	D	C	B
Approach Vol, veh/h		850			494			924			724	
Approach Delay, s/veh		127.7			21.8			16.9			21.6	
Approach LOS		F			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.9	26.7	7.5	20.0	12.5	19.1	6.1	21.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	34.0	5.0	16.0	21.0	17.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	2.5	8.9	4.8	18.0	8.4	11.3	3.5	7.7
Green Ext Time (p_c), s	0.0	10.2	0.0	0.0	0.4	3.8	0.0	4.0

Intersection Summary	
HCM 2010 Ctrl Delay	50.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	679	97	159	727	282	109	303	105	338	987	60
Future Volume (veh/h)	79	679	97	159	727	282	109	303	105	338	987	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	79	679	97	159	727	282	109	303	105	338	987	60
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	100	806	361	186	978	437	139	733	328	373	1199	536
Arrive On Green	0.06	0.23	0.23	0.11	0.28	0.28	0.08	0.21	0.21	0.21	0.34	0.34
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	79	679	97	159	727	282	109	303	105	338	987	60
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1568	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	2.9	12.2	3.3	5.9	12.4	10.4	4.0	4.9	3.7	12.4	17.0	1.7
Cycle Q Clear(g_c), s	2.9	12.2	3.3	5.9	12.4	10.4	4.0	4.9	3.7	12.4	17.0	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	100	806	361	186	978	437	139	733	328	373	1199	536
V/C Ratio(X)	0.79	0.84	0.27	0.85	0.74	0.64	0.78	0.41	0.32	0.91	0.82	0.11
Avail Cap(c_a), veh/h	133	850	380	186	978	437	186	903	404	373	1275	570
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.7	24.3	20.8	29.0	21.6	20.9	29.8	22.6	22.1	25.3	19.9	14.8
Incr Delay (d2), s/veh	19.9	7.4	0.4	29.7	3.1	3.2	14.3	0.4	0.6	25.0	4.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	6.7	1.5	4.4	6.4	4.9	2.5	2.4	1.7	8.6	8.9	0.8
LnGrp Delay(d),s/veh	50.6	31.6	21.2	58.7	24.7	24.1	44.1	23.0	22.7	50.4	24.1	14.9
LnGrp LOS	D	C	C	E	C	C	D	C	C	D	C	B
Approach Vol, veh/h		855			1168			517			1385	
Approach Delay, s/veh		32.2			29.2			27.4			30.2	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	17.8	11.0	19.2	9.2	26.6	7.8	22.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	14.0	17.0	7.0	16.0	7.0	24.0	5.0	18.0
Max Q Clear Time (g_c+I1), s	14.4	6.9	7.9	14.2	6.0	19.0	4.9	14.4
Green Ext Time (p_c), s	0.0	6.3	0.0	1.0	0.0	3.6	0.0	2.9

Intersection Summary	
HCM 2010 Ctrl Delay	30.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	241	445	121	427	506	788	97	2693	294	505	2883	426
Future Volume (veh/h)	241	445	121	427	506	788	97	2693	294	505	2883	426
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	241	445	121	427	506	788	97	2693	294	505	2883	426
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	260	869	389	283	892	561	78	2147	669	348	2545	792
Arrive On Green	0.08	0.25	0.25	0.08	0.25	0.25	0.02	0.43	0.43	0.10	0.51	0.51
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	241	445	121	427	506	788	97	2693	294	505	2883	426
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	10.6	16.5	9.5	12.5	18.9	38.3	3.5	64.8	20.0	15.5	76.8	27.9
Cycle Q Clear(g_c), s	10.6	16.5	9.5	12.5	18.9	38.3	3.5	64.8	20.0	15.5	76.8	27.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	260	869	389	283	892	561	78	2147	669	348	2545	792
V/C Ratio(X)	0.93	0.51	0.31	1.51	0.57	1.41	1.24	1.25	0.44	1.45	1.13	0.54
Avail Cap(c_a), veh/h	260	869	389	283	892	561	78	2147	669	348	2545	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.1	48.8	46.1	69.0	48.9	48.4	73.5	42.8	30.1	67.5	36.8	24.9
Incr Delay (d2), s/veh	35.8	0.2	0.2	246.3	0.5	193.2	177.8	118.3	0.2	219.1	65.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	8.0	4.1	15.5	9.3	53.4	3.6	53.2	8.6	17.8	50.5	12.0
LnGrp Delay(d),s/veh	104.9	49.0	46.3	315.3	49.4	241.5	251.3	161.2	30.3	286.6	102.1	25.3
LnGrp LOS	F	D	D	F	D	F	F	F	C	F	F	C
Approach Vol, veh/h		807			1721			3084			3814	
Approach Delay, s/veh		65.3			203.3			151.5			118.0	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	81.6	17.0	42.9	21.0	69.6	18.0	41.9
Change Period (Y+Rc), s	5.5	4.8	5.5	* 4.6	5.5	* 4.8	5.5	4.6
Max Green Setting (Gmax), s	3.5	76.6	11.5	* 38	15.5	* 65	12.5	37.0
Max Q Clear Time (g_c+I1), s	5.5	78.8	12.6	40.3	17.5	66.8	14.5	18.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1

Intersection Summary	
HCM 2010 Ctrl Delay	140.0
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	0	1	29	0	109	0	2383	7	44	2903	4
Future Volume (veh/h)	1	0	1	29	0	109	0	2383	7	44	2903	4
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	1	0	1	29	0	109	0	2383	7	44	2903	4
Adj No. of Lanes	0	1	0	1	0	2	1	3	1	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	1	0	1	95	0	170	2	3446	1073	55	3992	5
Arrive On Green	0.00	0.00	0.00	0.05	0.00	0.05	0.00	0.69	0.69	0.03	0.78	0.78
Sat Flow, veh/h	828	0	828	1757	0	3136	1740	4988	1553	1740	5144	7
Grp Volume(v), veh/h	2	0	0	29	0	109	0	2383	7	44	1876	1031
Grp Sat Flow(s),veh/h/ln	1657	0	0	1757	0	1568	1740	1663	1553	1740	1663	1826
Q Serve(g_s), s	0.1	0.0	0.0	1.5	0.0	3.2	0.0	26.9	0.1	2.4	27.6	27.6
Cycle Q Clear(g_c), s	0.1	0.0	0.0	1.5	0.0	3.2	0.0	26.9	0.1	2.4	27.6	27.6
Prop In Lane	0.50		0.50	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	3	0	0	95	0	170	2	3446	1073	55	2581	1417
V/C Ratio(X)	0.74	0.00	0.00	0.30	0.00	0.64	0.00	0.69	0.01	0.80	0.73	0.73
Avail Cap(c_a), veh/h	52	0	0	221	0	395	55	3625	1129	90	2581	1417
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.5	0.0	0.0	43.3	0.0	44.1	0.0	8.7	4.6	45.8	5.5	5.5
Incr Delay (d2), s/veh	88.0	0.0	0.0	0.7	0.0	1.5	0.0	0.9	0.0	9.3	1.5	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.8	0.0	1.4	0.0	12.4	0.1	1.3	12.8	14.6
LnGrp Delay(d),s/veh	135.5	0.0	0.0	44.0	0.0	45.6	0.0	9.6	4.6	55.1	7.0	8.3
LnGrp LOS	F			D		D		A	A	E	A	A
Approach Vol, veh/h		2			138			2390			2951	
Approach Delay, s/veh		135.5			45.3			9.6			8.2	
Approach LOS		F			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	78.9		5.7	8.1	70.8		10.7
Change Period (Y+Rc), s	* 4.6	5.0		5.5	* 5.1	* 5		5.5
Max Green Setting (Gmax), s	* 3	71.4		3.0	* 4.9	* 69		12.0
Max Q Clear Time (g_c+I1), s	0.0	29.6		2.1	4.4	28.9		5.2
Green Ext Time (p_c), s	0.0	41.6		0.0	0.0	36.8		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	9.8
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	404	23	209	47	440	9	2129	189	463	2541	0
Future Volume (veh/h)	0	404	23	209	47	440	9	2129	189	463	2541	0
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1845	1845	1845	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	0	404	23	209	47	440	9	2129	189	463	2541	0
Adj No. of Lanes	2	2	1	2	2	1	2	3	0	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	2	486	217	242	878	628	21	2247	198	506	3115	0
Arrive On Green	0.00	0.14	0.14	0.07	0.25	0.25	0.01	0.48	0.48	0.15	0.62	0.00
Sat Flow, veh/h	3375	3471	1553	3408	3505	1568	3375	4669	410	3375	5152	0
Grp Volume(v), veh/h	0	404	23	209	47	440	9	1510	808	463	2541	0
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1704	1752	1568	1688	1663	1754	1688	1663	0
Q Serve(g_s), s	0.0	15.8	1.8	8.4	1.4	32.6	0.4	60.1	61.6	18.8	54.3	0.0
Cycle Q Clear(g_c), s	0.0	15.8	1.8	8.4	1.4	32.6	0.4	60.1	61.6	18.8	54.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.23	1.00		0.00
Lane Grp Cap(c), veh/h	2	486	217	242	878	628	21	1600	844	506	3115	0
V/C Ratio(X)	0.00	0.83	0.11	0.86	0.05	0.70	0.42	0.94	0.96	0.92	0.82	0.00
Avail Cap(c_a), veh/h	73	723	323	242	901	638	73	1624	857	516	3115	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	58.3	52.3	64.0	39.6	34.8	68.9	34.3	34.7	58.3	20.0	0.0
Incr Delay (d2), s/veh	0.0	3.3	0.1	24.8	0.0	2.8	4.8	11.4	20.6	20.4	1.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.8	0.8	4.8	0.7	14.6	0.2	30.0	34.7	10.2	25.2	0.0
LnGrp Delay(d),s/veh	0.0	61.6	52.3	88.8	39.6	37.6	73.7	45.7	55.3	78.7	21.7	0.0
LnGrp LOS		E	D	F	D	D	E	D	E	E	C	
Approach Vol, veh/h		427			696			2327			3004	
Approach Delay, s/veh		61.1			53.1			49.1			30.4	
Approach LOS		E			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	92.3	0.0	40.6	26.4	72.3	15.4	25.2
Change Period (Y+Rc), s	5.5	5.3	5.5	* 5.7	5.5	* 5.3	5.5	* 5.7
Max Green Setting (Gmax), s	3.0	86.2	3.0	* 36	21.3	* 68	9.9	* 29
Max Q Clear Time (g_c+I1), s	2.4	56.3	0.0	34.6	20.8	63.6	10.4	17.8
Green Ext Time (p_c), s	0.0	24.5	0.0	0.3	0.0	3.3	0.0	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	41.7
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	13	34	2276	23	79	2692
Future Volume (veh/h)	13	34	2276	23	79	2692
Number	3	18	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1827	1900	1827	1827
Adj Flow Rate, veh/h	13	34	2276	23	79	2692
Adj No. of Lanes	1	1	3	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	4	4	4	4
Cap, veh/h	53	47	3638	37	101	2896
Arrive On Green	0.03	0.03	0.71	0.71	0.06	0.83
Sat Flow, veh/h	1757	1568	5256	51	1740	3563
Grp Volume(v), veh/h	13	34	1486	813	79	2692
Grp Sat Flow(s),veh/h/ln	1757	1568	1663	1818	1740	1736
Q Serve(g_s), s	0.5	1.6	17.5	17.6	3.4	43.5
Cycle Q Clear(g_c), s	0.5	1.6	17.5	17.6	3.4	43.5
Prop In Lane	1.00	1.00		0.03	1.00	
Lane Grp Cap(c), veh/h	53	47	2376	1299	101	2896
V/C Ratio(X)	0.25	0.72	0.63	0.63	0.79	0.93
Avail Cap(c_a), veh/h	69	62	2376	1299	213	3049
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	36.5	5.6	5.6	35.3	4.6
Incr Delay (d2), s/veh	0.9	14.9	0.4	0.7	5.0	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.9	8.0	8.8	1.8	21.6
LnGrp Delay(d),s/veh	36.9	51.5	6.0	6.3	40.3	10.1
LnGrp LOS	D	D	A	A	D	B
Approach Vol, veh/h	47		2299			2771
Approach Delay, s/veh	47.4		6.1			11.0
Approach LOS	D		A			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		68.1			9.1	59.1		7.8
Change Period (Y+Rc), s		4.8			* 4.7	4.8		5.5
Max Green Setting (Gmax), s		66.7			* 9.3	52.7		3.0
Max Q Clear Time (g_c+I1), s		45.5			5.4	19.6		3.6
Green Ext Time (p_c), s		17.9			0.0	28.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	9.1
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	169	1019	516	57	772	533	401	1959	100	776	1846	147
Future Volume (veh/h)	169	1019	516	57	772	533	401	1959	100	776	1846	147
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	169	1019	516	57	772	533	401	1959	100	776	1846	147
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	4	4	4	4	4	4
Cap, veh/h	182	970	434	68	865	387	444	1757	547	685	2107	656
Arrive On Green	0.06	0.28	0.28	0.02	0.25	0.25	0.13	0.35	0.35	0.20	0.42	0.42
Sat Flow, veh/h	3312	3406	1524	3312	3406	1524	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	169	1019	516	57	772	533	401	1959	100	776	1846	147
Grp Sat Flow(s),veh/h/ln	1656	1703	1524	1656	1703	1524	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	7.4	41.4	41.4	2.5	31.8	36.9	17.0	51.2	6.5	29.5	49.3	8.8
Cycle Q Clear(g_c), s	7.4	41.4	41.4	2.5	31.8	36.9	17.0	51.2	6.5	29.5	49.3	8.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	182	970	434	68	865	387	444	1757	547	685	2107	656
V/C Ratio(X)	0.93	1.05	1.19	0.83	0.89	1.38	0.90	1.11	0.18	1.13	0.88	0.22
Avail Cap(c_a), veh/h	182	970	434	68	865	387	486	1757	547	685	2107	656
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.4	51.9	52.0	70.9	52.3	54.2	62.2	47.1	32.6	57.9	38.5	26.8
Incr Delay (d2), s/veh	45.5	43.0	105.8	53.4	11.3	185.4	18.2	60.1	0.1	76.9	4.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	25.2	30.2	1.6	16.3	35.5	9.1	33.2	2.8	21.0	23.4	3.8
LnGrp Delay(d),s/veh	113.8	94.9	157.8	124.3	63.5	239.6	80.4	107.2	32.6	134.8	42.8	26.8
LnGrp LOS	F	F	F	F	E	F	F	F	C	F	D	C
Approach Vol, veh/h		1704			1362			2460			2769	
Approach Delay, s/veh		115.8			135.0			99.8			67.7	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	42.3	23.8	66.2	8.5	46.8	34.0	56.0
Change Period (Y+Rc), s	5.0	* 5.4	* 4.7	4.8	5.5	* 5.4	4.5	4.8
Max Green Setting (Gmax), s	8.0	* 37	* 21	59.6	3.0	* 41	29.5	51.2
Max Q Clear Time (g_c+I1), s	9.4	38.9	19.0	51.3	4.5	43.4	31.5	53.2
Green Ext Time (p_c), s	0.0	0.0	0.1	7.1	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	98.2
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	466	78	224	143	122	18	116	2066	105	236	2408	180
Future Volume (veh/h)	466	78	224	143	122	18	116	2066	105	236	2408	180
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	466	78	224	143	122	18	116	2066	105	236	2408	180
Adj No. of Lanes	1	1	1	1	1	0	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	437	449	382	164	136	20	115	1972	614	227	2317	721
Arrive On Green	0.25	0.24	0.24	0.09	0.09	0.09	0.07	0.40	0.40	0.13	0.46	0.46
Sat Flow, veh/h	1757	1845	1568	1757	1572	232	1740	4988	1553	1740	4988	1553
Grp Volume(v), veh/h	466	78	224	143	0	140	116	2066	105	236	2408	180
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1804	1740	1663	1553	1740	1663	1553
Q Serve(g_s), s	37.5	5.0	19.0	12.1	0.0	11.6	10.0	59.6	6.6	19.7	70.0	10.6
Cycle Q Clear(g_c), s	37.5	5.0	19.0	12.1	0.0	11.6	10.0	59.6	6.6	19.7	70.0	10.6
Prop In Lane	1.00		1.00	1.00		0.13	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	437	449	382	164	0	156	115	1972	614	227	2317	721
V/C Ratio(X)	1.07	0.17	0.59	0.87	0.00	0.90	1.00	1.05	0.17	1.04	1.04	0.25
Avail Cap(c_a), veh/h	437	449	382	246	0	156	115	1972	614	227	2317	721
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.6	45.0	50.3	67.4	0.0	68.2	70.3	45.5	29.5	65.5	40.4	24.4
Incr Delay (d2), s/veh	61.7	0.1	1.6	13.6	0.0	43.2	85.0	34.0	0.0	69.8	29.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	25.6	2.6	8.4	6.5	0.0	7.7	7.5	33.4	2.8	13.8	38.4	4.5
LnGrp Delay(d),s/veh	118.3	45.1	51.9	81.0	0.0	111.4	155.4	79.5	29.6	135.4	70.2	24.5
LnGrp LOS	F	D	D	F		F	F	F	C	F	F	C
Approach Vol, veh/h		768			283			2287			2824	
Approach Delay, s/veh		91.5			96.1			81.1			72.8	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.6	74.8	43.0	18.3	25.0	64.4	19.3	42.0
Change Period (Y+Rc), s	* 4.6	4.8	5.5	* 5.3	* 5.3	4.8	* 5.2	* 5.3
Max Green Setting (Gmax), s	* 10	70.0	37.5	* 13	* 20	59.6	* 21	* 29
Max Q Clear Time (g_c+I1), s	12.0	72.0	39.5	13.6	21.7	61.6	14.1	21.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	79.3
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	484	847	339	30	776	726	144	1081	5	728	2072	190
Future Volume (veh/h)	484	847	339	30	776	726	144	1081	5	728	2072	190
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	484	847	339	30	776	726	144	1081	5	728	2072	190
Adj No. of Lanes	2	1	1	1	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	534	824	700	56	1127	504	108	1217	379	319	1551	483
Arrive On Green	0.16	0.45	0.45	0.03	0.32	0.32	0.03	0.24	0.24	0.09	0.31	0.31
Sat Flow, veh/h	3408	1845	1568	1757	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	484	847	339	30	776	726	144	1081	5	728	2072	190
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1757	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	18.8	60.0	20.5	2.3	25.9	43.2	4.3	28.1	0.3	12.7	41.8	12.9
Cycle Q Clear(g_c), s	18.8	60.0	20.5	2.3	25.9	43.2	4.3	28.1	0.3	12.7	41.8	12.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	534	824	700	56	1127	504	108	1217	379	319	1551	483
V/C Ratio(X)	0.91	1.03	0.48	0.54	0.69	1.44	1.33	0.89	0.01	2.28	1.34	0.39
Avail Cap(c_a), veh/h	812	824	700	418	1127	504	108	1217	379	319	1551	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.7	37.2	26.3	64.1	39.7	45.6	65.0	49.0	38.5	60.8	46.3	36.3
Incr Delay (d2), s/veh	7.1	38.8	0.2	3.0	1.5	209.2	199.9	8.0	0.0	586.8	155.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.3	39.3	8.9	1.1	12.7	47.9	5.0	13.8	0.1	31.9	41.4	5.5
LnGrp Delay(d),s/veh	62.8	76.0	26.4	67.0	41.2	254.8	265.0	57.0	38.5	647.6	201.7	36.5
LnGrp LOS	E	F	C	E	D	F	F	E	D	F	F	D
Approach Vol, veh/h		1670			1532			1230			2990	
Approach Delay, s/veh		62.1			142.9			81.3			299.8	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	46.9	28.2	50.3	18.0	37.9	11.4	67.1
Change Period (Y+Rc), s	* 4.7	5.1	7.1	* 7.1	* 5.3	5.1	7.1	7.1
Max Green Setting (Gmax), s	* 4.3	41.8	32.0	* 43	* 13	32.8	32.0	42.9
Max Q Clear Time (g_c+I1), s	6.3	43.8	20.8	45.2	14.7	30.1	4.3	62.0
Green Ext Time (p_c), s	0.0	0.0	0.3	0.0	0.0	2.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	177.7
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	746	311	705	91	347	9	220	1029	11	20	2075	900
Future Volume (veh/h)	746	311	705	91	347	9	220	1029	11	20	2075	900
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	746	311	705	91	347	9	220	1029	11	20	2075	900
Adj No. of Lanes	1	2	1	1	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	602	1341	600	93	324	145	182	2044	636	38	1851	576
Arrive On Green	0.35	0.39	0.39	0.05	0.09	0.09	0.05	0.41	0.41	0.01	0.37	0.37
Sat Flow, veh/h	1740	3471	1553	1740	3471	1553	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	746	311	705	91	347	9	220	1029	11	20	2075	900
Grp Sat Flow(s),veh/h/ln	1740	1736	1553	1740	1736	1553	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	51.9	9.1	58.0	7.8	14.0	0.8	8.1	23.0	0.6	0.9	55.7	55.7
Cycle Q Clear(g_c), s	51.9	9.1	58.0	7.8	14.0	0.8	8.1	23.0	0.6	0.9	55.7	55.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	602	1341	600	93	324	145	182	2044	636	38	1851	576
V/C Ratio(X)	1.24	0.23	1.17	0.98	1.07	0.06	1.21	0.50	0.02	0.52	1.12	1.56
Avail Cap(c_a), veh/h	602	1341	600	93	324	145	182	2044	636	81	1851	576
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.1	31.0	46.1	71.0	68.1	62.1	71.0	32.9	26.3	73.8	47.2	47.2
Incr Delay (d2), s/veh	121.7	0.4	95.3	86.9	70.4	0.8	133.7	0.9	0.0	4.1	62.4	261.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	45.2	4.4	40.7	6.0	9.9	0.4	7.2	10.7	0.3	0.4	36.2	65.7
LnGrp Delay(d),s/veh	170.8	31.4	141.4	157.8	138.4	62.9	204.7	33.8	26.4	77.9	109.6	308.4
LnGrp LOS	F	C	F	F	F	E	F	C	C	E	F	F
Approach Vol, veh/h		1762			447			1260			2995	
Approach Delay, s/veh		134.4			140.9			63.6			169.1	
Approach LOS		F			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	60.9	57.0	19.2	7.2	66.7	13.0	63.2
Change Period (Y+Rc), s	* 4.9	* 5.2	* 5.1	* 5.2	5.5	* 5.2	5.0	* 5.2
Max Green Setting (Gmax), s	* 8.1	* 56	* 52	* 14	3.6	* 60	8.0	* 58
Max Q Clear Time (g_c+I1), s	10.1	57.7	53.9	16.0	2.9	25.0	9.8	60.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	34.7	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	137.1
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	679	542	149	616	90	341	1170	106	358	2285	112
Future Volume (veh/h)	109	679	542	149	616	90	341	1170	106	358	2285	112
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	109	679	542	149	616	90	341	1170	106	358	2285	112
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	125	808	362	160	845	378	337	2117	659	410	2225	693
Arrive On Green	0.04	0.23	0.23	0.05	0.24	0.24	0.10	0.42	0.42	0.12	0.45	0.45
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	109	679	542	149	616	90	341	1170	106	358	2285	112
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	4.0	23.2	28.9	5.5	20.3	5.8	12.5	22.1	5.3	13.1	55.9	5.4
Cycle Q Clear(g_c), s	4.0	23.2	28.9	5.5	20.3	5.8	12.5	22.1	5.3	13.1	55.9	5.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	125	808	362	160	845	378	337	2117	659	410	2225	693
V/C Ratio(X)	0.87	0.84	1.50	0.93	0.73	0.24	1.01	0.55	0.16	0.87	1.03	0.16
Avail Cap(c_a), veh/h	125	808	362	160	845	378	337	2117	659	547	2225	693
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.1	46.0	48.2	59.5	43.8	38.3	56.4	27.1	22.3	54.1	34.7	20.7
Incr Delay (d2), s/veh	42.7	10.2	238.5	49.7	4.6	1.0	52.3	0.8	0.4	9.4	26.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	12.4	36.5	3.7	10.4	2.6	8.2	10.3	2.3	6.7	31.0	2.4
LnGrp Delay(d),s/veh	102.8	56.2	286.7	109.2	48.4	39.3	108.8	27.9	22.6	63.5	61.0	21.1
LnGrp LOS	F	E	F	F	D	D	F	C	C	E	F	C
Approach Vol, veh/h		1330			855			1617			2755	
Approach Delay, s/veh		154.0			58.1			44.6			59.7	
Approach LOS		F			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	61.4	10.1	35.8	20.7	58.7	11.4	34.5
Change Period (Y+Rc), s	5.5	* 5.5	5.5	5.6	5.5	* 5.5	5.5	* 5.6
Max Green Setting (Gmax), s	12.5	* 56	4.6	30.0	20.3	* 48	5.9	* 29
Max Q Clear Time (g_c+I1), s	14.5	57.9	6.0	22.3	15.1	24.1	7.5	30.9
Green Ext Time (p_c), s	0.0	0.0	0.0	7.4	0.2	23.8	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	74.9
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	1374	322	121	1083	5	85	30	75	4	32	23
Future Volume (veh/h)	14	1374	322	121	1083	5	85	30	75	4	32	23
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	14	1374	322	121	1083	5	85	30	75	4	32	23
Adj No. of Lanes	1	2	1	1	2	1	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	23	1774	794	152	2031	908	108	64	159	8	66	48
Arrive On Green	0.01	0.52	0.52	0.09	0.60	0.60	0.06	0.14	0.14	0.00	0.07	0.07
Sat Flow, veh/h	1707	3406	1524	1707	3406	1524	1757	468	1170	1757	999	718
Grp Volume(v), veh/h	14	1374	322	121	1083	5	85	0	105	4	0	55
Grp Sat Flow(s),veh/h/ln	1707	1703	1524	1707	1703	1524	1757	0	1638	1757	0	1718
Q Serve(g_s), s	0.6	23.1	9.2	5.0	13.4	0.1	3.4	0.0	4.2	0.2	0.0	2.2
Cycle Q Clear(g_c), s	0.6	23.1	9.2	5.0	13.4	0.1	3.4	0.0	4.2	0.2	0.0	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.71	1.00		0.42
Lane Grp Cap(c), veh/h	23	1774	794	152	2031	908	108	0	223	8	0	114
V/C Ratio(X)	0.60	0.77	0.41	0.80	0.53	0.01	0.78	0.00	0.47	0.53	0.00	0.48
Avail Cap(c_a), veh/h	96	1820	814	180	2031	908	138	0	519	99	0	506
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.0	13.7	10.4	31.9	8.5	5.8	33.0	0.0	28.4	35.4	0.0	32.1
Incr Delay (d2), s/veh	15.9	2.4	0.6	17.4	0.4	0.0	17.6	0.0	1.4	34.5	0.0	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	11.3	3.9	3.1	6.3	0.0	2.2	0.0	2.0	0.1	0.0	1.1
LnGrp Delay(d),s/veh	50.9	16.1	10.9	49.3	8.9	5.8	50.6	0.0	29.8	69.9	0.0	35.0
LnGrp LOS	D	B	B	D	A	A	D		C	E		C
Approach Vol, veh/h		1710			1209			190			59	
Approach Delay, s/veh		15.4			13.0			39.1			37.4	
Approach LOS		B			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	43.5	8.8	9.1	4.5	48.9	3.8	14.1
Change Period (Y+Rc), s	3.5	6.4	4.4	* 4.4	3.5	6.4	3.5	4.4
Max Green Setting (Gmax), s	7.5	38.1	5.6	* 21	4.0	41.6	4.0	22.6
Max Q Clear Time (g_c+I1), s	7.0	25.1	5.4	4.2	2.6	15.4	2.2	6.2
Green Ext Time (p_c), s	0.0	12.1	0.0	0.7	0.0	24.8	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	16.3
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1043	577	26	1028	179	536	229	8	400	395	1
Future Volume (veh/h)	1	1043	577	26	1028	179	536	229	8	400	395	1
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	1	1043	577	26	1028	179	536	229	8	400	395	1
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	1	893	474	33	1257	219	472	423	360	424	372	316
Arrive On Green	0.00	0.40	0.40	0.02	0.42	0.42	0.27	0.23	0.23	0.24	0.20	0.20
Sat Flow, veh/h	1757	2213	1176	1757	2986	519	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	1	817	803	26	603	604	536	229	8	400	395	1
Grp Sat Flow(s),veh/h/ln	1757	1752	1637	1757	1752	1753	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	0.1	60.0	60.0	2.2	45.1	45.3	40.0	16.2	0.6	33.3	30.0	0.1
Cycle Q Clear(g_c), s	0.1	60.0	60.0	2.2	45.1	45.3	40.0	16.2	0.6	33.3	30.0	0.1
Prop In Lane	1.00		0.72	1.00		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1	707	660	33	738	738	472	423	360	424	372	316
V/C Ratio(X)	0.70	1.16	1.22	0.80	0.82	0.82	1.13	0.54	0.02	0.94	1.06	0.00
Avail Cap(c_a), veh/h	47	707	660	47	738	738	472	423	360	472	372	316
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	74.3	44.4	44.4	72.7	38.0	38.0	54.4	50.4	44.4	55.5	59.4	47.4
Incr Delay (d2), s/veh	231.4	85.6	110.8	43.4	7.1	7.2	83.8	1.4	0.0	26.5	64.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	45.7	47.3	1.5	23.2	23.5	30.3	8.4	0.3	19.2	21.8	0.0
LnGrp Delay(d),s/veh	305.7	130.0	155.2	116.1	45.1	45.3	138.2	51.8	44.4	82.0	123.3	47.4
LnGrp LOS	F	F	F	F	D	D	F	D	D	F	F	D
Approach Vol, veh/h		1621			1233			773			796	
Approach Delay, s/veh		142.6			46.7			111.6			102.5	
Approach LOS		F			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	39.9	38.1	6.8	64.0	44.0	34.0	4.1	66.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	40.0	30.0	4.0	60.0	40.0	30.0	4.0	60.0
Max Q Clear Time (g_c+I1), s	35.3	18.2	4.2	62.0	42.0	32.0	2.1	47.3
Green Ext Time (p_c), s	0.6	3.0	0.0	0.0	0.0	0.0	0.0	11.6

Intersection Summary		
HCM 2010 Ctrl Delay		103.2
HCM 2010 LOS		F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	359	9	61	371	3	10	39	37	56	56	66
Future Volume (veh/h)	0	359	9	61	371	3	10	39	37	56	56	66
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1900	1845	1900	1900	1845	1900
Adj Flow Rate, veh/h	0	359	9	61	371	3	10	39	37	56	56	66
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	3	3	3	3	3	3
Cap, veh/h	5	837	21	89	1431	12	22	87	83	78	78	91
Arrive On Green	0.00	0.24	0.24	0.05	0.41	0.41	0.11	0.11	0.11	0.14	0.14	0.14
Sat Flow, veh/h	1740	3461	87	1740	3529	29	198	773	734	537	537	633
Grp Volume(v), veh/h	0	180	188	61	182	192	86	0	0	178	0	0
Grp Sat Flow(s),veh/h/ln	1740	1736	1812	1740	1736	1822	1705	0	0	1706	0	0
Q Serve(g_s), s	0.0	3.1	3.1	1.2	2.5	2.5	1.7	0.0	0.0	3.5	0.0	0.0
Cycle Q Clear(g_c), s	0.0	3.1	3.1	1.2	2.5	2.5	1.7	0.0	0.0	3.5	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.02	0.12		0.43	0.31		0.37
Lane Grp Cap(c), veh/h	5	420	438	89	704	739	192	0	0	246	0	0
V/C Ratio(X)	0.00	0.43	0.43	0.69	0.26	0.26	0.45	0.00	0.00	0.72	0.00	0.00
Avail Cap(c_a), veh/h	294	830	867	245	781	820	768	0	0	768	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	11.4	11.4	16.6	7.0	7.0	14.7	0.0	0.0	14.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.7	9.1	0.2	0.2	1.6	0.0	0.0	4.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.6	1.6	0.8	1.2	1.3	0.9	0.0	0.0	1.9	0.0	0.0
LnGrp Delay(d),s/veh	0.0	12.1	12.1	25.7	7.2	7.2	16.4	0.0	0.0	18.5	0.0	0.0
LnGrp LOS		B	B	C	A	A	B			B		
Approach Vol, veh/h		368			435			86			178	
Approach Delay, s/veh		12.1			9.8			16.4			18.5	
Approach LOS		B			A			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		8.0	5.8	12.6		9.1	0.0	18.4
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	5.0	17.0		16.0	6.0	16.0
Max Q Clear Time (g_c+I1), s		3.7	3.2	5.1		5.5	0.0	4.5
Green Ext Time (p_c), s		0.3	0.0	3.5		0.7	0.0	3.4

Intersection Summary	
HCM 2010 Ctrl Delay	12.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	120	161	129	251	141	131	371	50	109	529	46
Future Volume (veh/h)	203	120	161	129	251	141	131	371	50	109	529	46
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	203	120	161	129	251	141	131	371	50	109	529	46
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	185	372	333	109	364	198	165	648	551	122	603	513
Arrive On Green	0.11	0.21	0.21	0.06	0.17	0.17	0.09	0.35	0.35	0.07	0.33	0.33
Sat Flow, veh/h	1757	1752	1568	1757	2194	1193	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	203	120	161	129	199	193	131	371	50	109	529	46
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1634	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	6.8	3.7	5.8	4.0	6.9	7.2	4.7	10.6	1.4	4.0	17.5	1.3
Cycle Q Clear(g_c), s	6.8	3.7	5.8	4.0	6.9	7.2	4.7	10.6	1.4	4.0	17.5	1.3
Prop In Lane	1.00		1.00	1.00		0.73	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	185	372	333	109	291	271	165	648	551	122	603	513
V/C Ratio(X)	1.10	0.32	0.48	1.19	0.68	0.71	0.79	0.57	0.09	0.89	0.88	0.09
Avail Cap(c_a), veh/h	185	841	752	109	754	703	209	885	752	122	796	677
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.9	21.5	22.3	30.3	25.4	25.5	28.7	17.0	14.0	29.8	20.5	15.1
Incr Delay (d2), s/veh	94.9	0.2	0.4	144.8	1.1	1.3	11.5	0.3	0.0	48.4	7.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	1.8	2.5	6.3	3.4	3.4	2.8	5.4	0.6	3.6	10.0	0.6
LnGrp Delay(d),s/veh	123.8	21.7	22.7	175.1	26.4	26.8	40.2	17.3	14.1	78.2	27.7	15.1
LnGrp LOS	F	C	C	F	C	C	D	B	B	E	C	B
Approach Vol, veh/h		484			521			552			684	
Approach Delay, s/veh		64.9			63.4			22.4			34.9	
Approach LOS		E			E			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	15.5	11.6	25.5	9.0	18.5	10.0	27.1
Change Period (Y+Rc), s	* 5.2	4.8	5.5	* 4.4	5.0	* 4.8	5.5	* 4.4
Max Green Setting (Gmax), s	* 6.8	27.8	7.7	* 28	4.0	* 31	4.5	* 31
Max Q Clear Time (g_c+I1), s	8.8	9.2	6.7	19.5	6.0	7.8	6.0	12.6
Green Ext Time (p_c), s	0.0	1.5	0.0	1.6	0.0	1.5	0.0	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	44.9
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	800	0	0	739	1	6	0	1	1	0	2
Future Volume (veh/h)	2	800	0	0	739	1	6	0	1	1	0	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1900	1845	1900	1900	1845	1900
Adj Flow Rate, veh/h	2	800	0	0	739	1	6	0	1	1	0	2
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	5	1973	0	5	1599	2	129	0	21	2	0	3
Arrive On Green	0.00	0.56	0.00	0.00	0.45	0.45	0.09	0.00	0.09	0.00	0.00	0.00
Sat Flow, veh/h	1757	3597	0	1757	3591	5	1480	0	247	542	0	1084
Grp Volume(v), veh/h	2	800	0	0	361	379	7	0	0	3	0	0
Grp Sat Flow(s),veh/h/ln	1757	1752	0	1757	1752	1844	1727	0	0	1626	0	0
Q Serve(g_s), s	0.0	4.5	0.0	0.0	5.0	5.0	0.1	0.0	0.0	0.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	4.5	0.0	0.0	5.0	5.0	0.1	0.0	0.0	0.1	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	0.86		0.14	0.33		0.67
Lane Grp Cap(c), veh/h	5	1973	0	5	780	821	150	0	0	5	0	0
V/C Ratio(X)	0.39	0.41	0.00	0.00	0.46	0.46	0.05	0.00	0.00	0.64	0.00	0.00
Avail Cap(c_a), veh/h	204	2133	0	204	1066	1122	801	0	0	848	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.2	4.3	0.0	0.0	6.7	6.7	14.4	0.0	0.0	17.2	0.0	0.0
Incr Delay (d2), s/veh	42.7	0.1	0.0	0.0	0.4	0.4	0.1	0.0	0.0	92.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.1	0.0	0.0	2.4	2.5	0.1	0.0	0.0	0.1	0.0	0.0
LnGrp Delay(d),s/veh	59.9	4.4	0.0	0.0	7.1	7.1	14.6	0.0	0.0	109.6	0.0	0.0
LnGrp LOS	E	A			A	A	B			F		
Approach Vol, veh/h		802			740			7			3	
Approach Delay, s/veh		4.5			7.1			14.6			109.6	
Approach LOS		A			A			B			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		7.0	0.0	23.4		4.1	4.1	19.4
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	4.0	21.0		18.0	4.0	21.0
Max Q Clear Time (g_c+I1), s		2.1	0.0	6.5		2.1	2.0	7.0
Green Ext Time (p_c), s		0.0	0.0	8.6		0.0	0.0	8.4

Intersection Summary	
HCM 2010 Ctrl Delay	6.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	31	17	943	44	385	48	1271	687	387	1873	59
Future Volume (veh/h)	73	31	17	943	44	385	48	1271	687	387	1873	59
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	73	31	17	943	44	385	48	1271	687	387	1873	59
Adj No. of Lanes	1	1	0	2	1	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	90	57	31	935	506	430	60	1563	487	405	2003	63
Arrive On Green	0.05	0.05	0.05	0.27	0.27	0.27	0.03	0.31	0.31	0.12	0.40	0.40
Sat Flow, veh/h	1757	1121	615	3408	1845	1568	1740	4988	1553	3375	4968	156
Grp Volume(v), veh/h	73	0	48	943	44	385	48	1271	687	387	1253	679
Grp Sat Flow(s),veh/h/ln	1757	0	1736	1704	1845	1568	1740	1663	1553	1688	1663	1799
Q Serve(g_s), s	3.7	0.0	2.4	24.7	1.6	21.3	2.5	21.1	28.2	10.3	32.5	32.6
Cycle Q Clear(g_c), s	3.7	0.0	2.4	24.7	1.6	21.3	2.5	21.1	28.2	10.3	32.5	32.6
Prop In Lane	1.00		0.35	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	90	0	89	935	506	430	60	1563	487	405	1340	725
V/C Ratio(X)	0.81	0.00	0.54	1.01	0.09	0.89	0.80	0.81	1.41	0.96	0.93	0.94
Avail Cap(c_a), veh/h	90	0	89	935	506	430	72	1563	487	405	1340	725
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.3	0.0	41.7	32.6	24.3	31.4	43.1	28.5	30.9	39.4	25.7	25.8
Incr Delay (d2), s/veh	39.0	0.0	3.6	31.4	0.0	20.1	33.6	3.2	197.3	33.0	12.0	19.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	1.2	15.6	0.8	11.5	1.7	10.1	38.7	6.6	17.0	19.9
LnGrp Delay(d),s/veh	81.3	0.0	45.3	64.1	24.3	51.5	76.7	31.6	228.2	72.4	37.7	45.0
LnGrp LOS	F		D	F	C	D	E	C	F	E	D	D
Approach Vol, veh/h		121			1372			2006			2319	
Approach Delay, s/veh		67.0			59.3			100.0			45.7	
Approach LOS		E			E			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.2	41.5		10.1	16.3	33.4		30.2
Change Period (Y+Rc), s	* 5.1	* 5.2		5.5	5.5	* 5.2		5.5
Max Green Setting (Gmax), s	* 3.7	* 36		4.6	10.8	* 28		24.7
Max Q Clear Time (g_c+I1), s	4.5	34.6		5.7	12.3	30.2		26.7
Green Ext Time (p_c), s	0.0	1.1		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	68.1
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	161	110	373	286	128	24	191	1153	121	8	2359	286
Future Volume (veh/h)	161	110	373	286	128	24	191	1153	121	8	2359	286
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	161	110	373	286	128	24	191	1153	121	8	2359	286
Adj No. of Lanes	2	2	1	2	2	0	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	207	750	336	304	717	132	205	2654	826	19	2380	741
Arrive On Green	0.06	0.21	0.21	0.09	0.24	0.24	0.06	0.53	0.53	0.01	0.48	0.48
Sat Flow, veh/h	3408	3505	1568	3408	2959	543	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	161	110	373	286	75	77	191	1153	121	8	2359	286
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1749	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	6.5	3.6	30.0	11.7	4.7	4.9	7.9	19.7	5.5	0.3	65.8	16.5
Cycle Q Clear(g_c), s	6.5	3.6	30.0	11.7	4.7	4.9	7.9	19.7	5.5	0.3	65.8	16.5
Prop In Lane	1.00		1.00	1.00		0.31	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	207	750	336	304	425	424	205	2654	826	19	2380	741
V/C Ratio(X)	0.78	0.15	1.11	0.94	0.18	0.18	0.93	0.43	0.15	0.41	0.99	0.39
Avail Cap(c_a), veh/h	224	750	336	304	425	424	205	2654	826	72	2380	741
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.9	44.7	55.1	63.5	42.0	42.1	65.6	20.0	16.6	69.5	36.4	23.5
Incr Delay (d2), s/veh	13.0	0.0	82.7	35.9	0.1	0.1	43.9	0.0	0.0	5.2	16.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	1.7	20.7	7.0	2.3	2.4	4.9	9.1	2.4	0.2	33.7	7.1
LnGrp Delay(d),s/veh	77.9	44.7	137.8	99.4	42.1	42.2	109.4	20.0	16.7	74.6	52.7	23.6
LnGrp LOS	E	D	F	F	D	D	F	C	B	E	D	C
Approach Vol, veh/h		644			438			1465			2653	
Approach Delay, s/veh		106.9			79.5			31.4			49.6	
Approach LOS		F			E			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	72.5	14.0	39.7	6.3	80.2	18.0	35.7
Change Period (Y+Rc), s	5.5	* 5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	8.5	* 67	9.2	* 34	3.0	* 72	12.5	* 30
Max Q Clear Time (g_c+I1), s	9.9	67.8	8.5	6.9	2.3	21.7	13.7	32.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.0	23.9	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	54.1
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	199	818	562	31	587	136	382	1141	39	148	2593	282
Future Volume (veh/h)	199	818	562	31	587	136	382	1141	39	148	2593	282
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	199	818	562	31	587	136	382	1141	39	148	2593	0
Adj No. of Lanes	1	1	1	1	1	1	1	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	4	4	4	4	4	4
Cap, veh/h	133	596	507	36	501	426	239	2601	89	170	2407	750
Arrive On Green	0.08	0.33	0.33	0.02	0.28	0.28	0.14	0.53	0.53	0.10	0.48	0.00
Sat Flow, veh/h	1707	1792	1524	1707	1792	1524	1740	4953	169	1740	4988	1553
Grp Volume(v), veh/h	199	818	562	31	587	136	382	766	414	148	2593	0
Grp Sat Flow(s),veh/h/ln	1707	1792	1524	1707	1792	1524	1740	1663	1797	1740	1663	1553
Q Serve(g_s), s	11.7	49.9	49.9	2.7	41.9	10.6	20.6	21.3	21.3	12.6	72.4	0.0
Cycle Q Clear(g_c), s	11.7	49.9	49.9	2.7	41.9	10.6	20.6	21.3	21.3	12.6	72.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	133	596	507	36	501	426	239	1746	944	170	2407	750
V/C Ratio(X)	1.49	1.37	1.11	0.85	1.17	0.32	1.60	0.44	0.44	0.87	1.08	0.00
Avail Cap(c_a), veh/h	133	596	507	36	501	426	239	1746	944	244	2407	750
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.87	0.87	0.87	0.73	0.73	0.73	0.18	0.18	0.00
Uniform Delay (d), s/veh	69.2	50.1	50.1	73.2	54.0	42.8	64.7	22.0	22.0	66.8	38.8	0.0
Incr Delay (d2), s/veh	257.8	177.8	73.2	81.1	95.0	0.1	283.4	0.6	1.1	3.5	36.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.0	54.1	31.3	2.1	33.9	4.5	28.7	9.9	10.9	6.2	41.4	0.0
LnGrp Delay(d),s/veh	326.9	227.8	123.2	154.3	149.1	42.9	348.1	22.6	23.1	70.2	75.3	0.0
LnGrp LOS	F	F	F	F	F	D	F	C	C	E	F	
Approach Vol, veh/h		1579			754			1562			2741	
Approach Delay, s/veh		203.1			130.1			102.3			75.0	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	78.0	16.0	47.5	19.6	84.4	8.0	55.5
Change Period (Y+Rc), s	* 5.4	5.1	* 4.3	5.6	5.0	5.1	* 4.8	* 5.6
Max Green Setting (Gmax), s	* 21	55.9	* 12	41.4	21.0	55.9	* 3.2	* 50
Max Q Clear Time (g_c+I1), s	22.6	74.4	13.7	43.9	14.6	23.3	4.7	51.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	20.3	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	118.2
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	394	420	30	93	256	5	53	1178	23	50	2727	424
Future Volume (veh/h)	394	420	30	93	256	5	53	1178	23	50	2727	424
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	394	420	30	93	256	5	53	1178	23	50	2727	424
Adj No. of Lanes	2	1	0	2	1	0	1	3	0	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	333	442	32	122	356	7	53	2645	52	64	2332	345
Arrive On Green	0.10	0.26	0.26	0.04	0.20	0.20	0.03	0.53	0.53	0.04	0.53	0.53
Sat Flow, veh/h	3408	1702	122	3408	1803	35	1740	5036	98	1740	4388	650
Grp Volume(v), veh/h	394	0	450	93	0	261	53	778	423	50	2034	1117
Grp Sat Flow(s),veh/h/ln	1704	0	1823	1704	0	1838	1740	1663	1810	1740	1663	1712
Q Serve(g_s), s	14.5	0.0	36.0	4.0	0.0	19.7	4.5	21.5	21.5	4.2	78.8	78.8
Cycle Q Clear(g_c), s	14.5	0.0	36.0	4.0	0.0	19.7	4.5	21.5	21.5	4.2	78.8	78.8
Prop In Lane	1.00		0.07	1.00		0.02	1.00		0.05	1.00		0.38
Lane Grp Cap(c), veh/h	333	0	473	122	0	363	53	1746	950	64	1767	910
V/C Ratio(X)	1.18	0.00	0.95	0.76	0.00	0.72	1.00	0.45	0.45	0.78	1.15	1.23
Avail Cap(c_a), veh/h	333	0	494	122	0	384	53	1746	950	119	1767	910
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.9	0.0	54.0	70.9	0.0	55.7	71.9	21.8	21.8	70.8	34.7	34.7
Incr Delay (d2), s/veh	108.5	0.0	27.5	22.3	0.0	5.0	124.9	0.1	0.1	7.6	74.9	112.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.8	0.0	21.7	2.3	0.0	10.5	4.0	9.8	10.7	2.2	54.5	65.5
LnGrp Delay(d),s/veh	175.4	0.0	81.5	93.1	0.0	60.6	196.8	21.9	21.9	78.4	109.7	147.1
LnGrp LOS	F		F	F		E	F	C	C	E	F	F
Approach Vol, veh/h		844			354			1254			3201	
Approach Delay, s/veh		125.3			69.2			29.3			122.2	
Approach LOS		F			E			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	83.8	20.0	34.5	10.9	82.9	10.8	43.7
Change Period (Y+Rc), s	5.5	5.0	5.5	* 5.2	5.5	5.0	5.5	* 5.2
Max Green Setting (Gmax), s	4.5	78.8	14.5	* 31	10.1	73.2	5.3	* 40
Max Q Clear Time (g_c+I1), s	6.5	80.8	16.5	21.7	6.2	23.5	6.0	38.0
Green Ext Time (p_c), s	0.0	0.0	0.0	1.3	0.0	31.1	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	98.8
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	773	426	50	443	156	214	727	14	356	1886	565
Future Volume (veh/h)	120	773	426	50	443	156	214	727	14	356	1886	565
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1792	1792	1900	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	120	773	426	50	443	156	214	727	14	356	1886	565
Adj No. of Lanes	2	2	0	2	2	0	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	6	6	6	4	4	4	4	4	4
Cap, veh/h	175	692	379	86	727	254	237	1694	527	413	1954	608
Arrive On Green	0.05	0.32	0.32	0.03	0.29	0.29	0.07	0.34	0.34	0.12	0.39	0.39
Sat Flow, veh/h	3375	2165	1187	3312	2478	865	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	120	619	580	50	303	296	214	727	14	356	1886	565
Grp Sat Flow(s),veh/h/ln	1688	1736	1617	1656	1703	1640	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	3.8	35.0	35.0	1.6	16.8	17.0	6.9	12.3	0.7	11.3	40.5	38.1
Cycle Q Clear(g_c), s	3.8	35.0	35.0	1.6	16.8	17.0	6.9	12.3	0.7	11.3	40.5	38.1
Prop In Lane	1.00		0.73	1.00		0.53	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	175	554	517	86	500	481	237	1694	527	413	1954	608
V/C Ratio(X)	0.69	1.12	1.12	0.58	0.61	0.61	0.90	0.43	0.03	0.86	0.97	0.93
Avail Cap(c_a), veh/h	194	554	517	94	500	481	237	1694	527	465	1962	611
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.1	37.3	37.3	52.8	33.3	33.4	50.6	28.0	24.1	47.2	32.6	31.9
Incr Delay (d2), s/veh	6.4	74.2	77.9	4.1	1.5	1.7	32.8	0.1	0.0	12.8	13.0	20.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	28.1	26.7	0.8	8.1	8.0	4.3	5.7	0.3	6.0	20.9	19.7
LnGrp Delay(d),s/veh	57.4	111.5	115.2	56.8	34.8	35.1	83.4	28.0	24.1	60.0	45.6	52.2
LnGrp LOS	E	F	F	E	C	D	F	C	C	E	D	D
Approach Vol, veh/h		1319			649			955			2807	
Approach Delay, s/veh		108.2			36.6			40.4			48.7	
Approach LOS		F			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	48.0	11.2	37.2	18.9	42.3	8.3	40.0
Change Period (Y+Rc), s	5.5	* 5.1	5.5	* 5	5.5	* 5.1	5.5	* 5
Max Green Setting (Gmax), s	7.7	* 43	6.3	* 32	15.1	* 36	3.1	* 35
Max Q Clear Time (g_c+I1), s	8.9	42.5	5.8	19.0	13.3	14.3	3.6	37.0
Green Ext Time (p_c), s	0.0	0.4	0.0	4.3	0.1	10.6	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	59.7
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	171	335	145	66	257	338	91	745	56	519	1872	159
Future Volume (veh/h)	171	335	145	66	257	338	91	745	56	519	1872	159
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	171	335	145	66	257	338	91	745	56	519	1872	159
Adj No. of Lanes	2	2	1	1	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	243	963	431	70	853	382	127	1536	478	452	2026	631
Arrive On Green	0.07	0.27	0.27	0.04	0.24	0.24	0.04	0.31	0.31	0.13	0.41	0.41
Sat Flow, veh/h	3408	3505	1568	1757	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	171	335	145	66	257	338	91	745	56	519	1872	159
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1757	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	4.3	6.7	6.5	3.3	5.2	18.2	2.3	10.6	2.3	11.7	31.2	5.9
Cycle Q Clear(g_c), s	4.3	6.7	6.5	3.3	5.2	18.2	2.3	10.6	2.3	11.7	31.2	5.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	243	963	431	70	853	382	127	1536	478	452	2026	631
V/C Ratio(X)	0.70	0.35	0.34	0.94	0.30	0.89	0.71	0.49	0.12	1.15	0.92	0.25
Avail Cap(c_a), veh/h	370	1242	556	70	1014	454	127	1568	488	452	2059	641
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.7	25.4	25.3	41.9	27.0	31.9	41.6	24.6	21.7	37.9	24.7	17.2
Incr Delay (d2), s/veh	1.4	0.1	0.2	85.1	0.1	15.0	15.0	0.1	0.0	90.1	7.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	3.3	2.8	3.2	2.5	9.4	1.4	4.9	1.0	11.0	15.6	2.5
LnGrp Delay(d),s/veh	41.1	25.5	25.5	127.0	27.1	46.9	56.6	24.7	21.8	128.0	32.1	17.2
LnGrp LOS	D	C	C	F	C	D	E	C	C	F	C	B
Approach Vol, veh/h		651			661			892			2550	
Approach Delay, s/veh		29.6			47.2			27.8			50.7	
Approach LOS		C			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	40.6	11.7	26.7	17.0	32.0	9.0	29.4
Change Period (Y+Rc), s	* 5.1	5.1	5.5	* 5.4	* 5.3	5.1	5.5	* 5.4
Max Green Setting (Gmax), s	* 3.3	36.1	9.5	* 25	* 12	27.5	3.5	* 31
Max Q Clear Time (g_c+I1), s	4.3	33.2	6.3	20.2	13.7	12.6	5.3	8.7
Green Ext Time (p_c), s	0.0	2.3	0.0	1.1	0.0	8.4	0.0	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	43.0
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	936	2	126	638	5	12	400	38	3	599	87
Future Volume (veh/h)	104	936	2	126	638	5	12	400	38	3	599	87
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1900	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	104	936	2	126	638	5	12	400	38	3	599	87
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	130	1107	2	151	1142	9	13	586	56	3	632	537
Arrive On Green	0.08	0.32	0.32	0.09	0.33	0.33	0.01	0.35	0.35	0.00	0.34	0.34
Sat Flow, veh/h	1707	3487	7	1707	3463	27	1757	1659	158	1757	1845	1568
Grp Volume(v), veh/h	104	457	481	126	314	329	12	0	438	3	599	87
Grp Sat Flow(s),veh/h/ln	1707	1703	1791	1707	1703	1788	1757	0	1817	1757	1845	1568
Q Serve(g_s), s	5.2	21.8	21.8	6.3	13.2	13.2	0.6	0.0	17.9	0.1	27.5	3.4
Cycle Q Clear(g_c), s	5.2	21.8	21.8	6.3	13.2	13.2	0.6	0.0	17.9	0.1	27.5	3.4
Prop In Lane	1.00		0.00	1.00		0.02	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	130	541	569	151	561	589	13	0	641	3	632	537
V/C Ratio(X)	0.80	0.85	0.85	0.83	0.56	0.56	0.91	0.00	0.68	0.99	0.95	0.16
Avail Cap(c_a), veh/h	177	570	599	151	561	589	40	0	641	40	636	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.5	27.7	27.7	39.0	23.9	23.9	43.1	0.0	24.0	43.4	27.8	19.9
Incr Delay (d2), s/veh	11.7	11.4	10.9	29.6	1.6	1.5	49.6	0.0	5.8	142.8	25.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	11.9	12.4	4.2	6.4	6.7	0.5	0.0	9.9	0.2	18.4	1.6
LnGrp Delay(d),s/veh	51.2	39.1	38.6	68.6	25.5	25.4	92.8	0.0	29.8	186.2	52.8	20.5
LnGrp LOS	D	D	D	E	C	C	F		C	F	D	C
Approach Vol, veh/h		1042			769			450			689	
Approach Delay, s/veh		40.0			32.5			31.5			49.3	
Approach LOS		D			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.1	34.0	5.1	35.8	11.0	35.1	4.2	36.7
Change Period (Y+Rc), s	4.4	6.4	4.4	6.0	4.4	6.4	* 4	6.0
Max Green Setting (Gmax), s	7.7	29.1	2.0	30.0	9.0	27.8	* 2	30.4
Max Q Clear Time (g_c+I1), s	8.3	23.8	2.6	29.5	7.2	15.2	2.1	19.9
Green Ext Time (p_c), s	0.0	3.8	0.0	0.3	0.0	9.4	0.0	9.4

Intersection Summary	
HCM 2010 Ctrl Delay	39.0
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

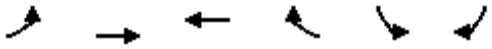
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1008	44	729	27	77	110	535	2141	17	146	1251	837
Future Volume (veh/h)	1008	44	729	27	77	110	535	2141	17	146	1251	837
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1900	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	1039	0	729	27	77	110	535	2141	17	146	1251	0
Adj No. of Lanes	2	0	1	0	1	1	1	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	981	0	438	24	67	78	445	2184	17	151	1279	398
Arrive On Green	0.28	0.00	0.28	0.05	0.05	0.05	0.26	0.43	0.43	0.09	0.26	0.00
Sat Flow, veh/h	3480	0	1553	473	1348	1568	1740	5104	41	1740	4988	1553
Grp Volume(v), veh/h	1039	0	729	104	0	110	535	1394	764	146	1251	0
Grp Sat Flow(s),veh/h/ln	1740	0	1553	1821	0	1568	1740	1663	1820	1740	1663	1553
Q Serve(g_s), s	36.7	0.0	36.7	6.5	0.0	6.5	33.3	53.8	53.9	10.9	32.4	0.0
Cycle Q Clear(g_c), s	36.7	0.0	36.7	6.5	0.0	6.5	33.3	53.8	53.9	10.9	32.4	0.0
Prop In Lane	1.00		1.00	0.26		1.00	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	981	0	438	91	0	78	445	1422	779	151	1279	398
V/C Ratio(X)	1.06	0.00	1.67	1.14	0.00	1.41	1.20	0.98	0.98	0.97	0.98	0.00
Avail Cap(c_a), veh/h	981	0	438	91	0	78	445	1422	779	151	1279	398
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	46.8	0.0	46.8	61.9	0.0	61.9	48.4	36.7	36.7	59.3	48.0	0.0
Incr Delay (d2), s/veh	45.8	0.0	309.4	138.4	0.0	242.4	110.8	19.2	27.4	62.7	19.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	23.8	0.0	53.4	6.8	0.0	8.1	29.6	28.4	32.9	7.9	17.2	0.0
LnGrp Delay(d),s/veh	92.5	0.0	356.2	200.3	0.0	304.2	159.2	55.9	64.1	122.0	67.9	0.0
LnGrp LOS	F		F	F		F	F	E	E	F	E	
Approach Vol, veh/h		1768			214			2693			1397	
Approach Delay, s/veh		201.2			253.7			78.7			73.6	
Approach LOS		F			F			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	38.0	38.2		12.0	15.7	60.5		42.0
Change Period (Y+Rc), s	* 4.7	4.8		5.5	* 4.4	* 4.8		5.3
Max Green Setting (Gmax), s	* 33	33.2		6.5	* 11	* 56		36.7
Max Q Clear Time (g_c+I1), s	35.3	34.4		8.5	12.9	55.9		38.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		119.4
HCM 2010 LOS		F

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	86	620	811	277	638	348
Future Volume (veh/h)	86	620	811	277	638	348
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845
Adj Flow Rate, veh/h	86	620	811	277	638	348
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	133	1748	950	324	694	620
Arrive On Green	0.08	0.50	0.37	0.37	0.40	0.40
Sat Flow, veh/h	1757	3597	2659	876	1757	1568
Grp Volume(v), veh/h	86	620	554	534	638	348
Grp Sat Flow(s),veh/h/ln	1757	1752	1752	1690	1757	1568
Q Serve(g_s), s	3.6	8.1	22.0	22.0	26.0	13.0
Cycle Q Clear(g_c), s	3.6	8.1	22.0	22.0	26.0	13.0
Prop In Lane	1.00			0.52	1.00	1.00
Lane Grp Cap(c), veh/h	133	1748	649	626	694	620
V/C Ratio(X)	0.65	0.35	0.85	0.85	0.92	0.56
Avail Cap(c_a), veh/h	372	2274	673	649	768	685
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.9	11.5	21.9	21.9	21.7	17.7
Incr Delay (d2), s/veh	5.2	0.1	10.1	10.5	15.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	3.9	12.4	12.1	15.5	11.8
LnGrp Delay(d),s/veh	39.1	11.6	32.0	32.4	36.9	18.6
LnGrp LOS	D	B	C	C	D	B
Approach Vol, veh/h		706	1088		986	
Approach Delay, s/veh		15.0	32.2		30.4	
Approach LOS		B	C		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		41.7		33.9	9.7	32.0		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		49.0		33.0	16.0	29.0		
Max Q Clear Time (g_c+I1), s		10.1		28.0	5.6	24.0		
Green Ext Time (p_c), s		16.9		1.8	0.1	4.0		

Intersection Summary	
HCM 2010 Ctrl Delay	27.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	533	370	31	66	260	723	56	2124	10	996	1659	411
Future Volume (veh/h)	533	370	31	66	260	723	56	2124	10	996	1659	411
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	533	370	31	66	260	723	56	2124	10	996	1659	411
Adj No. of Lanes	2	3	0	2	1	2	2	3	0	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	375	1307	108	105	361	1251	91	1769	8	694	2612	813
Arrive On Green	0.11	0.28	0.28	0.03	0.20	0.20	0.03	0.34	0.34	0.20	0.52	0.52
Sat Flow, veh/h	3408	4741	392	3514	1845	3136	3408	5173	24	3408	5036	1568
Grp Volume(v), veh/h	533	260	141	66	260	723	56	1378	756	996	1659	411
Grp Sat Flow(s),veh/h/ln	1704	1679	1776	1757	1845	1568	1704	1679	1840	1704	1679	1568
Q Serve(g_s), s	16.5	9.1	9.3	2.8	19.8	27.0	2.4	51.2	51.2	30.5	35.4	25.6
Cycle Q Clear(g_c), s	16.5	9.1	9.3	2.8	19.8	27.0	2.4	51.2	51.2	30.5	35.4	25.6
Prop In Lane	1.00		0.22	1.00		1.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	375	926	490	105	361	1251	91	1148	629	694	2612	813
V/C Ratio(X)	1.42	0.28	0.29	0.63	0.72	0.58	0.61	1.20	1.20	1.44	0.64	0.51
Avail Cap(c_a), veh/h	375	926	490	160	369	1267	134	1148	629	694	2612	813
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.6	42.6	42.7	71.8	56.4	35.1	72.1	49.3	49.3	59.6	25.9	23.5
Incr Delay (d2), s/veh	203.8	0.1	0.1	2.3	5.6	0.4	2.5	98.9	105.3	204.0	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.3	4.2	4.6	1.4	10.7	11.7	1.2	39.4	44.3	33.9	16.5	11.1
LnGrp Delay(d),s/veh	270.4	42.7	42.8	74.1	62.0	35.6	74.6	148.2	154.6	263.6	26.3	23.7
LnGrp LOS	F	D	D	E	E	D	E	F	F	F	C	C
Approach Vol, veh/h		934			1049			2190			3066	
Approach Delay, s/veh		172.7			44.5			148.5			103.0	
Approach LOS		F			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	83.3	22.0	35.0	36.0	56.8	10.0	47.0
Change Period (Y+Rc), s	5.5	5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	5.9	75.5	16.5	* 30	30.5	* 51	6.8	* 40
Max Q Clear Time (g_c+I1), s	4.4	37.4	18.5	29.0	32.5	53.2	4.8	11.3
Green Ext Time (p_c), s	0.0	21.4	0.0	0.3	0.0	0.0	0.0	2.3

Intersection Summary	
HCM 2010 Ctrl Delay	117.3
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	311	103	44	69	49	159	17	1577	31	71	1610	51
Future Volume (veh/h)	311	103	44	69	49	159	17	1577	31	71	1610	51
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	229	218	44	59	63	159	17	1577	31	71	1610	51
Adj No. of Lanes	1	1	0	1	1	1	1	3	0	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	302	256	52	219	230	196	21	2024	40	111	2243	71
Arrive On Green	0.17	0.17	0.17	0.12	0.12	0.12	0.01	0.40	0.40	0.06	0.45	0.45
Sat Flow, veh/h	1757	1491	301	1757	1845	1568	1757	5084	100	1757	5015	159
Grp Volume(v), veh/h	229	0	262	59	63	159	17	1041	567	71	1078	583
Grp Sat Flow(s),veh/h/ln	1757	0	1792	1757	1845	1568	1757	1679	1827	1757	1679	1817
Q Serve(g_s), s	10.5	0.0	12.0	2.6	2.6	8.3	0.8	22.8	22.8	3.3	22.0	22.0
Cycle Q Clear(g_c), s	10.5	0.0	12.0	2.6	2.6	8.3	0.8	22.8	22.8	3.3	22.0	22.0
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.05	1.00		0.09
Lane Grp Cap(c), veh/h	302	0	308	219	230	196	21	1337	727	111	1501	812
V/C Ratio(X)	0.76	0.00	0.85	0.27	0.27	0.81	0.83	0.78	0.78	0.64	0.72	0.72
Avail Cap(c_a), veh/h	585	0	597	565	593	504	67	1529	832	125	1632	883
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.2	0.0	33.9	33.4	33.4	35.9	41.6	22.1	22.1	38.6	19.0	19.0
Incr Delay (d2), s/veh	1.5	0.0	2.6	0.2	0.2	3.1	25.4	1.9	3.5	5.7	1.1	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.0	6.1	1.3	1.3	3.8	0.5	10.9	12.2	1.8	10.4	11.5
LnGrp Delay(d),s/veh	34.7	0.0	36.4	33.7	33.7	39.0	67.0	24.1	25.6	44.3	20.1	21.1
LnGrp LOS	C		D	C	C	D	E	C	C	D	C	C
Approach Vol, veh/h		491			281			1625			1732	
Approach Delay, s/veh		35.6			36.7			25.1			21.4	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.8	42.5		16.0	9.9	38.4		20.0
Change Period (Y+Rc), s	* 4.8	4.8		5.5	* 4.6	4.8		5.5
Max Green Setting (Gmax), s	* 3.2	41.0		27.1	* 6	38.4		28.1
Max Q Clear Time (g_c+I1), s	2.8	24.0		10.3	5.3	24.8		14.0
Green Ext Time (p_c), s	0.0	10.1		0.2	0.0	8.7		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	25.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	1511	678	231	1030	288	665	1161	110	416	1228	60
Future Volume (veh/h)	66	1511	678	231	1030	288	665	1161	110	416	1228	60
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	66	1511	678	231	1030	288	665	1161	110	416	1228	60
Adj No. of Lanes	2	3	0	2	3	1	2	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	104	1291	559	216	2052	639	557	1417	441	448	1227	60
Arrive On Green	0.03	0.37	0.37	0.06	0.41	0.41	0.16	0.28	0.28	0.13	0.25	0.25
Sat Flow, veh/h	3408	3446	1493	3408	5036	1568	3408	5036	1568	3408	4919	240
Grp Volume(v), veh/h	66	1471	718	231	1030	288	665	1161	110	416	838	450
Grp Sat Flow(s),veh/h/ln	1704	1679	1581	1704	1679	1568	1704	1679	1568	1704	1679	1802
Q Serve(g_s), s	2.9	56.2	56.2	9.5	22.8	20.0	24.5	32.3	8.1	18.1	37.4	37.4
Cycle Q Clear(g_c), s	2.9	56.2	56.2	9.5	22.8	20.0	24.5	32.3	8.1	18.1	37.4	37.4
Prop In Lane	1.00		0.94	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	104	1258	592	216	2052	639	557	1417	441	448	837	449
V/C Ratio(X)	0.64	1.17	1.21	1.07	0.50	0.45	1.19	0.82	0.25	0.93	1.00	1.00
Avail Cap(c_a), veh/h	155	1258	592	216	2052	639	557	1417	441	448	837	449
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.9	46.9	46.9	70.3	33.1	32.2	62.8	50.3	41.7	64.5	56.3	56.3
Incr Delay (d2), s/veh	2.4	85.0	110.6	81.1	0.1	0.2	104.2	3.7	0.1	25.5	31.4	42.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	40.9	42.7	6.9	10.6	8.7	19.6	15.4	3.6	10.1	21.0	23.9
LnGrp Delay(d),s/veh	74.3	131.9	157.5	151.3	33.2	32.4	167.0	54.0	41.8	90.0	87.7	99.1
LnGrp LOS	E	F	F	F	C	C	F	D	D	F	F	F
Approach Vol, veh/h		2255			1549			1936			1704	
Approach Delay, s/veh		138.4			50.7			92.1			91.3	
Approach LOS		F			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.0	43.0	10.1	66.9	25.2	47.8	15.0	62.0
Change Period (Y+Rc), s	5.5	* 5.6	5.5	5.8	5.5	* 5.6	5.5	5.8
Max Green Setting (Gmax), s	24.5	* 37	6.8	58.9	19.7	* 42	9.5	56.2
Max Q Clear Time (g_c+I1), s	26.5	39.4	4.9	24.8	20.1	34.3	11.5	58.2
Green Ext Time (p_c), s	0.0	0.0	0.0	16.2	0.0	4.8	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	97.3
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	958	207	54	771	680	88	302	38	724	694	244
Future Volume (veh/h)	67	958	207	54	771	680	88	302	38	724	694	244
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	67	958	207	54	771	680	88	302	38	724	694	244
Adj No. of Lanes	1	2	0	2	2	1	1	1	0	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	85	1022	221	97	1133	507	106	353	44	772	736	625
Arrive On Green	0.05	0.36	0.36	0.03	0.32	0.32	0.06	0.22	0.22	0.23	0.40	0.40
Sat Flow, veh/h	1757	2869	619	3408	3505	1568	1757	1607	202	3408	1845	1568
Grp Volume(v), veh/h	67	585	580	54	771	680	88	0	340	724	694	244
Grp Sat Flow(s),veh/h/ln	1757	1752	1735	1704	1752	1568	1757	0	1809	1704	1845	1568
Q Serve(g_s), s	4.4	37.2	37.4	1.8	22.1	37.4	5.7	0.0	20.9	24.1	41.9	12.8
Cycle Q Clear(g_c), s	4.4	37.2	37.4	1.8	22.1	37.4	5.7	0.0	20.9	24.1	41.9	12.8
Prop In Lane	1.00		0.36	1.00		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	85	625	618	97	1133	507	106	0	398	772	736	625
V/C Ratio(X)	0.78	0.94	0.94	0.56	0.68	1.34	0.83	0.00	0.85	0.94	0.94	0.39
Avail Cap(c_a), veh/h	114	640	634	118	1133	507	106	0	516	784	859	730
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.4	35.9	36.0	55.4	33.9	39.1	53.7	0.0	43.3	43.9	33.5	24.7
Incr Delay (d2), s/veh	15.9	20.7	21.2	4.9	1.4	166.6	39.2	0.0	8.7	18.3	16.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	21.6	21.5	0.9	10.9	39.5	3.9	0.0	11.4	13.3	24.5	5.5
LnGrp Delay(d),s/veh	70.3	56.6	57.2	60.3	35.3	205.7	92.9	0.0	52.0	62.2	49.6	24.9
LnGrp LOS	E	E	E	E	D	F	F		D	E	D	C
Approach Vol, veh/h		1232			1505			428			1662	
Approach Delay, s/veh		57.6			113.2			60.4			51.5	
Approach LOS		E			F			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.1	42.3	11.0	51.2	7.3	46.1	31.7	30.5
Change Period (Y+Rc), s	5.5	* 4.9	4.0	* 5.1	4.0	* 4.9	5.5	* 5.1
Max Green Setting (Gmax), s	7.5	* 37	7.0	* 54	4.0	* 42	26.6	* 33
Max Q Clear Time (g_c+I1), s	6.4	39.4	7.7	43.9	3.8	39.4	26.1	22.9
Green Ext Time (p_c), s	0.0	0.0	0.0	2.2	0.0	1.8	0.1	2.2

Intersection Summary	
HCM 2010 Ctrl Delay	73.1
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	242	542	247	185	278	354	86	2122	93	341	1435	380
Future Volume (veh/h)	242	542	247	185	278	354	86	2122	93	341	1435	380
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	242	542	247	185	278	354	86	2122	93	341	1435	380
Adj No. of Lanes	2	2	1	2	1	2	2	4	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	260	915	409	249	471	1131	137	2205	545	355	2072	645
Arrive On Green	0.08	0.26	0.26	0.07	0.26	0.26	0.04	0.35	0.35	0.11	0.42	0.42
Sat Flow, veh/h	3408	3505	1568	3514	1845	3136	3375	6285	1553	3375	4988	1553
Grp Volume(v), veh/h	242	542	247	185	278	354	86	2122	93	341	1435	380
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1757	1845	1568	1688	1571	1553	1688	1663	1553
Q Serve(g_s), s	7.4	14.1	14.5	5.4	13.8	8.5	2.6	34.6	4.3	10.5	24.7	19.8
Cycle Q Clear(g_c), s	7.4	14.1	14.5	5.4	13.8	8.5	2.6	34.6	4.3	10.5	24.7	19.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	260	915	409	249	471	1131	137	2205	545	355	2072	645
V/C Ratio(X)	0.93	0.59	0.60	0.74	0.59	0.31	0.63	0.96	0.17	0.96	0.69	0.59
Avail Cap(c_a), veh/h	260	971	434	373	564	1288	158	2209	546	355	2072	645
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.1	33.8	33.9	47.7	34.2	24.1	49.4	33.3	23.5	46.6	25.1	23.7
Incr Delay (d2), s/veh	36.6	1.1	2.7	1.6	3.2	0.4	3.5	11.5	0.1	37.3	1.6	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	7.0	6.6	2.7	7.4	3.8	1.3	16.8	1.9	6.7	11.6	9.0
LnGrp Delay(d),s/veh	84.7	34.9	36.6	49.3	37.4	24.6	52.9	44.8	23.5	83.9	26.7	26.8
LnGrp LOS	F	C	D	D	D	C	D	D	C	F	C	C
Approach Vol, veh/h		1031			817			2301			2156	
Approach Delay, s/veh		47.0			34.5			44.2			35.8	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	48.9	13.5	32.5	16.5	42.1	12.9	33.1
Change Period (Y+Rc), s	5.5	* 5.4	5.5	5.8	5.5	* 5.4	5.5	* 5.8
Max Green Setting (Gmax), s	4.9	* 43	8.0	32.0	11.0	* 37	11.1	* 29
Max Q Clear Time (g_c+I1), s	4.6	26.7	9.4	15.8	12.5	36.6	7.4	16.5
Green Ext Time (p_c), s	0.0	15.8	0.0	10.9	0.0	0.1	0.0	9.0

Intersection Summary	
HCM 2010 Ctrl Delay	40.5
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	522	1197	887	404	703	121	522	1020	544	42	1727	167
Future Volume (veh/h)	522	1197	887	404	703	121	522	1020	544	42	1727	167
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1827	1827	1827	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	522	1197	887	404	703	121	522	1020	544	42	1727	167
Adj No. of Lanes	2	2	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	4	4	4	4	4	4
Cap, veh/h	566	1238	554	281	1349	420	371	1946	606	72	1503	468
Arrive On Green	0.17	0.35	0.35	0.08	0.27	0.27	0.11	0.39	0.39	0.02	0.30	0.30
Sat Flow, veh/h	3408	3505	1568	3375	4988	1553	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	522	1197	887	404	703	121	522	1020	544	42	1727	167
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1688	1663	1553	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	22.6	50.3	53.0	12.5	18.0	9.2	16.5	23.5	49.3	1.8	45.2	12.6
Cycle Q Clear(g_c), s	22.6	50.3	53.0	12.5	18.0	9.2	16.5	23.5	49.3	1.8	45.2	12.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	566	1238	554	281	1349	420	371	1946	606	72	1503	468
V/C Ratio(X)	0.92	0.97	1.60	1.44	0.52	0.29	1.41	0.52	0.90	0.59	1.15	0.36
Avail Cap(c_a), veh/h	720	1238	554	281	1349	420	371	1946	606	88	1503	468
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.6	47.6	48.5	68.8	46.5	43.3	66.8	35.1	42.9	72.8	52.4	41.0
Incr Delay (d2), s/veh	13.4	18.3	278.9	215.5	1.1	1.3	198.1	0.5	16.9	2.8	75.3	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.7	27.4	65.8	14.2	8.4	4.1	17.9	10.9	23.9	0.9	31.2	5.5
LnGrp Delay(d),s/veh	75.0	65.9	327.4	284.3	47.6	44.6	264.9	35.5	59.9	75.6	127.7	42.0
LnGrp LOS	E	E	F	F	D	D	F	D	E	E	F	D
Approach Vol, veh/h		2606			1228			2086			1936	
Approach Delay, s/veh		156.7			125.1			99.3			119.2	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	51.0	30.4	46.6	8.7	64.3	18.0	59.0
Change Period (Y+Rc), s	5.5	* 5.8	5.5	* 6	5.5	* 5.8	5.5	6.0
Max Green Setting (Gmax), s	16.5	* 45	31.7	* 34	3.9	* 58	12.5	53.0
Max Q Clear Time (g_c+I1), s	18.5	47.2	24.6	20.0	3.8	51.3	14.5	55.0
Green Ext Time (p_c), s	0.0	0.0	0.3	13.8	0.0	6.6	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	127.3
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	598	1565	562	33	777	261	352	1270	47	815	1870	234
Future Volume (veh/h)	598	1565	562	33	777	261	352	1270	47	815	1870	234
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	598	1565	562	33	777	261	352	1270	47	815	1870	234
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	561	1849	576	58	1106	344	340	1183	368	758	1801	561
Arrive On Green	0.16	0.37	0.37	0.02	0.22	0.22	0.10	0.24	0.24	0.22	0.36	0.36
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	598	1565	562	33	777	261	352	1270	47	815	1870	234
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	24.7	42.8	53.1	1.4	21.4	23.4	15.1	35.6	3.6	33.7	54.2	17.0
Cycle Q Clear(g_c), s	24.7	42.8	53.1	1.4	21.4	23.4	15.1	35.6	3.6	33.7	54.2	17.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	561	1849	576	58	1106	344	340	1183	368	758	1801	561
V/C Ratio(X)	1.07	0.85	0.98	0.56	0.70	0.76	1.04	1.07	0.13	1.08	1.04	0.42
Avail Cap(c_a), veh/h	561	1849	576	70	1141	355	340	1183	368	758	1801	561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.7	43.6	46.8	73.2	54.0	54.8	67.5	57.2	45.0	58.2	47.9	36.1
Incr Delay (d2), s/veh	56.8	3.7	31.3	3.1	1.6	7.8	58.6	48.3	0.1	54.8	31.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.0	20.5	27.9	0.7	10.1	10.9	9.8	21.6	1.5	21.5	30.2	7.3
LnGrp Delay(d),s/veh	119.5	47.3	78.1	76.3	55.6	62.6	126.1	105.5	45.1	113.0	79.8	36.2
LnGrp LOS	F	D	E	E	E	E	F	F	D	F	F	D
Approach Vol, veh/h		2725			1071			1669			2919	
Approach Delay, s/veh		69.5			57.9			108.1			85.5	
Approach LOS		E			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.6	60.2	30.2	39.1	39.2	41.6	8.1	61.2
Change Period (Y+Rc), s	5.5	6.0	5.5	* 6.1	5.5	* 6	5.5	* 6.1
Max Green Setting (Gmax), s	15.1	53.6	24.7	* 34	33.7	* 36	3.1	* 55
Max Q Clear Time (g_c+I1), s	17.1	56.2	26.7	25.4	35.7	37.6	3.4	55.1
Green Ext Time (p_c), s	0.0	0.0	0.0	6.2	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	81.3
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	274	1105	333	79	816	520	202	836	78	960	1850	409
Future Volume (veh/h)	274	1105	333	79	816	520	202	836	78	960	1850	409
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1759	1759	1759	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	274	1105	333	79	816	520	202	836	78	960	1850	409
Adj No. of Lanes	2	3	0	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	8	8	8	4	4	4	4	4	4
Cap, veh/h	332	1071	323	110	1034	322	238	1016	316	954	2074	646
Arrive On Green	0.10	0.28	0.28	0.03	0.22	0.22	0.07	0.20	0.20	0.28	0.42	0.42
Sat Flow, veh/h	3408	3840	1157	3250	4803	1495	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	274	966	472	79	816	520	202	836	78	960	1850	409
Grp Sat Flow(s),veh/h/ln	1704	1679	1640	1625	1601	1495	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	8.6	30.5	30.5	2.6	17.6	23.5	6.5	17.5	4.6	30.9	37.7	22.8
Cycle Q Clear(g_c), s	8.6	30.5	30.5	2.6	17.6	23.5	6.5	17.5	4.6	30.9	37.7	22.8
Prop In Lane	1.00		0.71	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	332	936	457	110	1034	322	238	1016	316	954	2074	646
V/C Ratio(X)	0.83	1.03	1.03	0.72	0.79	1.62	0.85	0.82	0.25	1.01	0.89	0.63
Avail Cap(c_a), veh/h	358	936	457	110	1034	322	238	1044	325	954	2102	654
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.4	39.4	39.4	52.3	40.6	42.9	50.3	41.7	36.5	39.2	29.7	25.3
Incr Delay (d2), s/veh	12.5	37.9	50.5	17.7	3.8	290.9	23.2	4.9	0.1	30.8	5.1	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	19.0	20.1	1.5	8.1	35.7	3.8	8.5	2.0	18.4	18.1	10.0
LnGrp Delay(d),s/veh	61.0	77.3	90.0	70.0	44.4	333.8	73.4	46.6	36.7	70.0	34.7	26.8
LnGrp LOS	E	F	F	E	D	F	E	D	D	F	C	C
Approach Vol, veh/h		1712			1415			1116			3219	
Approach Delay, s/veh		78.2			152.2			50.7			44.3	
Approach LOS		E			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	51.0	16.2	29.0	36.4	27.8	9.2	36.0
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	7.7	46.1	11.5	22.7	30.9	22.9	3.7	30.5
Max Q Clear Time (g_c+I1), s	8.5	39.7	10.6	25.5	32.9	19.5	4.6	32.5
Green Ext Time (p_c), s	0.0	4.8	0.0	0.0	0.0	2.7	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	73.5
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	568	118	210	214	196	66	683	266	383	1356	62
Future Volume (veh/h)	0	568	118	210	214	196	66	683	266	383	1356	62
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1759	1900	1900	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	0	568	118	210	214	196	66	683	266	383	1356	62
Adj No. of Lanes	0	1	0	0	1	1	1	2	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	8	8	8	3	3	3	4	4	4	4	4	4
Cap, veh/h	0	419	87	176	179	309	55	821	367	410	1111	51
Arrive On Green	0.00	0.30	0.30	0.20	0.20	0.20	0.03	0.24	0.24	0.12	0.33	0.33
Sat Flow, veh/h	0	1414	294	892	909	1568	1740	3471	1553	3375	3381	154
Grp Volume(v), veh/h	0	0	686	424	0	196	66	683	266	383	695	723
Grp Sat Flow(s),veh/h/ln	0	0	1707	1800	0	1568	1740	1736	1553	1688	1736	1800
Q Serve(g_s), s	0.0	0.0	41.5	27.6	0.0	16.1	4.4	26.2	22.1	15.7	46.0	46.0
Cycle Q Clear(g_c), s	0.0	0.0	41.5	27.6	0.0	16.1	4.4	26.2	22.1	15.7	46.0	46.0
Prop In Lane	0.00		0.17	0.50		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	0	0	506	355	0	309	55	821	367	410	570	591
V/C Ratio(X)	0.00	0.00	1.36	1.19	0.00	0.63	1.21	0.83	0.72	0.93	1.22	1.22
Avail Cap(c_a), veh/h	0	0	506	355	0	309	55	821	367	410	570	591
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	49.3	56.2	0.0	51.6	67.8	50.8	49.2	60.9	47.0	47.0
Incr Delay (d2), s/veh	0.0	0.0	172.5	112.0	0.0	4.2	188.1	7.3	6.9	28.5	113.7	114.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	43.8	24.7	0.0	7.3	5.0	13.4	10.2	9.0	40.0	41.7
LnGrp Delay(d),s/veh	0.0	0.0	221.7	168.2	0.0	55.8	256.0	58.1	56.2	89.5	160.7	161.8
LnGrp LOS			F	F		E	F	E	E	F	F	F
Approach Vol, veh/h		686			620			1015			1801	
Approach Delay, s/veh		221.7			132.7			70.5			146.0	
Approach LOS		F			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.0	51.0		33.0	21.9	38.1		47.0
Change Period (Y+Rc), s	* 4.6	5.0		* 5.4	* 4.9	5.0		5.5
Max Green Setting (Gmax), s	* 4.4	46.0		* 28	* 17	33.1		41.5
Max Q Clear Time (g_c+I1), s	6.4	48.0		29.6	17.7	28.2		43.5
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	4.4		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		138.0
HCM 2010 LOS		F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	826	6	259	563	173	1	747	493	343	1116	204
Future Volume (veh/h)	103	826	6	259	563	173	1	747	493	343	1116	204
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	103	826	6	259	563	173	1	747	493	343	1116	204
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	4	4	4	4	4	4
Cap, veh/h	158	963	431	238	1044	595	4	1120	501	282	1408	704
Arrive On Green	0.05	0.28	0.28	0.07	0.31	0.31	0.00	0.32	0.32	0.08	0.41	0.41
Sat Flow, veh/h	3312	3406	1524	3312	3406	1524	3375	3471	1553	3375	3471	1553
Grp Volume(v), veh/h	103	826	6	259	563	173	1	747	493	343	1116	204
Grp Sat Flow(s),veh/h/ln	1656	1703	1524	1656	1703	1524	1688	1736	1553	1688	1736	1553
Q Serve(g_s), s	2.6	19.2	0.2	6.0	11.5	6.5	0.0	15.5	26.4	7.0	23.6	6.9
Cycle Q Clear(g_c), s	2.6	19.2	0.2	6.0	11.5	6.5	0.0	15.5	26.4	7.0	23.6	6.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	158	963	431	238	1044	595	4	1120	501	282	1408	704
V/C Ratio(X)	0.65	0.86	0.01	1.09	0.54	0.29	0.25	0.67	0.98	1.21	0.79	0.29
Avail Cap(c_a), veh/h	158	1018	455	238	1099	619	121	1120	501	282	1408	704
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.1	28.4	21.6	38.8	24.1	17.5	41.8	24.4	28.1	38.3	21.8	14.4
Incr Delay (d2), s/veh	7.2	6.7	0.0	84.6	0.2	0.1	11.4	1.2	35.7	124.4	2.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	9.8	0.1	5.5	5.4	2.8	0.0	7.6	16.2	8.1	11.7	2.9
LnGrp Delay(d),s/veh	46.4	35.1	21.6	123.4	24.3	17.6	53.2	25.7	63.9	162.8	24.7	14.5
LnGrp LOS	D	D	C	F	C	B	D	C	E	F	C	B
Approach Vol, veh/h		935			995			1241			1663	
Approach Delay, s/veh		36.2			48.9			40.9			51.9	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	29.7	4.1	39.9	8.0	31.7	11.0	33.0
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	6.0	25.0	3.0	31.0	4.0	27.0	7.0	27.0
Max Q Clear Time (g_c+I1), s	8.0	21.2	2.0	25.6	4.6	13.5	9.0	28.4
Green Ext Time (p_c), s	0.0	2.4	0.0	4.3	0.0	6.1	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	45.4
HCM 2010 LOS	D

Notes

User approved changes to right turn type.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	729	3	15	503	910	476
Future Volume (veh/h)	729	3	15	503	910	476
Number	7	14	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1900	1827	1827	1827	1900
Adj Flow Rate, veh/h	729	3	15	503	910	476
Adj No. of Lanes	0	0	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	4	4	4	4
Cap, veh/h	745	3	18	1640	935	482
Arrive On Green	0.46	0.46	0.01	0.47	0.42	0.42
Sat Flow, veh/h	1635	7	1740	3563	2310	1142
Grp Volume(v), veh/h	733	0	15	503	709	677
Grp Sat Flow(s),veh/h/ln	1644	0	1740	1736	1736	1625
Q Serve(g_s), s	59.0	0.0	1.2	12.0	53.8	55.7
Cycle Q Clear(g_c), s	59.0	0.0	1.2	12.0	53.8	55.7
Prop In Lane	0.99	0.00	1.00			0.70
Lane Grp Cap(c), veh/h	749	0	18	1640	732	685
V/C Ratio(X)	0.98	0.00	0.86	0.31	0.97	0.99
Avail Cap(c_a), veh/h	757	0	77	1770	732	685
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	0.0	66.6	21.9	38.1	38.6
Incr Delay (d2), s/veh	27.3	0.0	32.5	0.0	25.5	31.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	32.4	0.0	0.7	5.7	31.0	31.0
LnGrp Delay(d),s/veh	63.3	0.0	99.0	22.0	63.6	69.9
LnGrp LOS	E		F	C	E	E
Approach Vol, veh/h	733			518	1386	
Approach Delay, s/veh	63.3			24.2	66.7	
Approach LOS	E			C	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	6.9	62.5		65.4		69.4		
Change Period (Y+Rc), s	5.5	* 5.7		4.0		* 5.7		
Max Green Setting (Gmax), s	6.0	* 57		62.0		* 69		
Max Q Clear Time (g_c+I1), s	3.2	57.7		61.0		14.0		
Green Ext Time (p_c), s	0.0	0.0		0.4		6.3		

Intersection Summary	
HCM 2010 Ctrl Delay	57.4
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	30	26	23	24	28	30	1442	2	32	1162	128
Future Volume (veh/h)	92	30	26	23	24	28	30	1442	2	32	1162	128
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1583	1845	1845	1845	1845	1810	1845	1845	1845
Adj Flow Rate, veh/h	92	30	26	23	24	28	30	1442	2	32	1162	128
Adj No. of Lanes	2	1	1	1	1	1	2	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	20	3	3	3	3	5	3	3	3
Cap, veh/h	178	167	142	32	109	93	89	2081	913	48	2086	933
Arrive On Green	0.05	0.09	0.09	0.02	0.06	0.06	0.03	0.59	0.59	0.03	0.60	0.60
Sat Flow, veh/h	3408	1845	1568	1508	1845	1568	3408	3505	1538	1757	3505	1568
Grp Volume(v), veh/h	92	30	26	23	24	28	30	1442	2	32	1162	128
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1508	1845	1568	1704	1752	1538	1757	1752	1568
Q Serve(g_s), s	1.6	0.9	0.9	0.9	0.7	1.0	0.5	17.0	0.0	1.1	12.0	2.2
Cycle Q Clear(g_c), s	1.6	0.9	0.9	0.9	0.7	1.0	0.5	17.0	0.0	1.1	12.0	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	178	167	142	32	109	93	89	2081	913	48	2086	933
V/C Ratio(X)	0.52	0.18	0.18	0.72	0.22	0.30	0.34	0.69	0.00	0.66	0.56	0.14
Avail Cap(c_a), veh/h	285	524	445	101	493	419	228	2224	976	147	2282	1021
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.6	25.2	25.2	29.1	26.9	27.0	28.6	8.4	4.9	28.8	7.3	5.3
Incr Delay (d2), s/veh	2.3	0.5	0.6	25.7	1.0	1.8	2.2	0.9	0.0	14.3	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.5	0.4	0.6	0.4	0.5	0.3	8.3	0.0	0.7	5.7	1.0
LnGrp Delay(d),s/veh	29.9	25.7	25.8	54.9	27.9	28.8	30.8	9.3	5.0	43.1	7.6	5.4
LnGrp LOS	C	C	C	D	C	C	C	A	A	D	A	A
Approach Vol, veh/h		148			75			1474			1322	
Approach Delay, s/veh		28.4			36.5			9.7			8.2	
Approach LOS		C			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.7	39.6	5.3	9.4	5.6	39.6	7.1	7.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	38.0	4.0	17.0	4.0	39.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	3.1	19.0	2.9	2.9	2.5	14.0	3.6	3.0
Green Ext Time (p_c), s	0.0	16.6	0.0	0.3	0.0	21.0	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	10.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	918	688	4	76	370	108	4	922	88	78	849	586
Future Volume (veh/h)	918	688	4	76	370	108	4	922	88	78	849	586
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1810	1810	1810	1810	1810	1810
Adj Flow Rate, veh/h	918	688	4	76	370	108	4	922	88	78	849	586
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	5	5	5	5	5	5
Cap, veh/h	931	1566	701	123	736	329	11	888	397	96	1021	457
Arrive On Green	0.28	0.46	0.46	0.04	0.22	0.22	0.00	0.26	0.26	0.03	0.30	0.30
Sat Flow, veh/h	3312	3406	1524	3312	3406	1524	3343	3438	1538	3343	3438	1538
Grp Volume(v), veh/h	918	688	4	76	370	108	4	922	88	78	849	586
Grp Sat Flow(s),veh/h/ln	1656	1703	1524	1656	1703	1524	1672	1719	1538	1672	1719	1538
Q Serve(g_s), s	28.8	14.3	0.1	2.4	10.0	6.3	0.1	27.0	4.7	2.4	24.1	31.1
Cycle Q Clear(g_c), s	28.8	14.3	0.1	2.4	10.0	6.3	0.1	27.0	4.7	2.4	24.1	31.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	931	1566	701	123	736	329	11	888	397	96	1021	457
V/C Ratio(X)	0.99	0.44	0.01	0.62	0.50	0.33	0.38	1.04	0.22	0.81	0.83	1.28
Avail Cap(c_a), veh/h	931	1674	749	190	912	408	96	888	397	96	1021	457
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.4	19.1	15.3	49.6	36.1	34.6	52.0	38.8	30.5	50.5	34.3	36.8
Incr Delay (d2), s/veh	26.0	0.4	0.0	1.9	1.1	1.2	8.2	40.7	0.3	39.4	5.9	143.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.5	6.8	0.1	1.1	4.8	2.8	0.1	17.7	2.0	1.6	12.3	31.3
LnGrp Delay(d),s/veh	63.4	19.5	15.3	51.5	37.2	35.8	60.2	79.5	30.8	89.9	40.2	179.8
LnGrp LOS	E	B	B	D	D	D	E	F	C	F	D	F
Approach Vol, veh/h		1610			554			1014			1513	
Approach Delay, s/veh		44.5			38.9			75.2			96.8	
Approach LOS		D			D			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	34.0	28.6	4.9	37.1	8.5	54.1	9.0	33.0
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	6.0	6.0
Max Green Setting (Gmax), s	29.4	28.0	3.0	28.4	6.0	51.4	3.0	27.0
Max Q Clear Time (g_c+I1), s	30.8	12.0	2.1	33.1	4.4	16.3	4.4	29.0
Green Ext Time (p_c), s	0.0	10.6	0.0	0.0	0.0	17.6	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	67.4
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	560	41	467	760	92	89	543	273	123	905	217
Future Volume (veh/h)	134	560	41	467	760	92	89	543	273	123	905	217
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	134	560	41	467	760	92	89	543	273	123	905	217
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	167	601	44	499	1299	581	100	931	417	153	1038	464
Arrive On Green	0.10	0.18	0.18	0.28	0.37	0.37	0.06	0.27	0.27	0.09	0.30	0.30
Sat Flow, veh/h	1757	3312	242	1757	3505	1568	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	134	296	305	467	760	92	89	543	273	123	905	217
Grp Sat Flow(s),veh/h/ln	1757	1752	1802	1757	1752	1568	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	6.6	14.7	14.7	22.9	15.4	3.5	4.4	11.9	13.7	6.1	21.6	10.0
Cycle Q Clear(g_c), s	6.6	14.7	14.7	22.9	15.4	3.5	4.4	11.9	13.7	6.1	21.6	10.0
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	167	318	327	499	1299	581	100	931	417	153	1038	464
V/C Ratio(X)	0.80	0.93	0.93	0.93	0.59	0.16	0.89	0.58	0.66	0.80	0.87	0.47
Avail Cap(c_a), veh/h	259	318	327	518	1299	581	100	931	417	179	1073	480
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.1	35.6	35.6	30.8	22.3	18.6	41.3	28.1	28.8	39.5	29.4	25.4
Incr Delay (d2), s/veh	9.6	32.9	33.0	24.1	0.7	0.1	57.5	0.9	3.7	19.9	7.8	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	10.0	10.3	14.4	7.5	1.5	3.7	5.9	6.3	3.8	11.6	4.4
LnGrp Delay(d),s/veh	48.7	68.5	68.6	54.8	23.0	18.7	98.8	29.1	32.5	59.4	37.3	26.1
LnGrp LOS	D	E	E	D	C	B	F	C	C	E	D	C
Approach Vol, veh/h		735			1319			905			1245	
Approach Delay, s/veh		64.9			34.0			37.0			37.5	
Approach LOS		E			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.7	27.4	29.1	20.0	9.0	30.1	12.4	36.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	9.0	23.0	26.0	16.0	5.0	27.0	13.0	29.0
Max Q Clear Time (g_c+I1), s	8.1	15.7	24.9	16.7	6.4	23.6	8.6	17.4
Green Ext Time (p_c), s	0.0	5.7	0.2	0.0	0.0	2.5	0.1	6.9

Intersection Summary	
HCM 2010 Ctrl Delay	41.1
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	578	173	105	572	143	243	821	82	157	1218	209
Future Volume (veh/h)	2	578	173	105	572	143	243	821	82	157	1218	209
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	2	578	173	105	572	143	243	821	82	157	1218	209
Adj No. of Lanes	1	2	1	1	2	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	4	651	291	118	697	174	252	1462	146	192	1258	214
Arrive On Green	0.00	0.19	0.19	0.07	0.25	0.25	0.15	0.46	0.46	0.11	0.42	0.42
Sat Flow, veh/h	1757	3505	1568	1757	2781	693	1740	3188	318	1740	2967	506
Grp Volume(v), veh/h	2	578	173	105	360	355	243	447	456	157	709	718
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1722	1740	1736	1771	1740	1736	1738
Q Serve(g_s), s	0.1	14.4	9.1	5.3	17.4	17.5	12.4	16.8	16.8	7.9	35.7	36.3
Cycle Q Clear(g_c), s	0.1	14.4	9.1	5.3	17.4	17.5	12.4	16.8	16.8	7.9	35.7	36.3
Prop In Lane	1.00		1.00	1.00		0.40	1.00		0.18	1.00		0.29
Lane Grp Cap(c), veh/h	4	651	291	118	439	431	252	796	812	192	736	737
V/C Ratio(X)	0.53	0.89	0.59	0.89	0.82	0.82	0.96	0.56	0.56	0.82	0.96	0.97
Avail Cap(c_a), veh/h	78	665	297	118	439	431	252	796	812	291	736	737
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.7	35.6	33.4	41.5	31.7	31.7	38.1	17.7	17.7	39.0	25.2	25.3
Incr Delay (d2), s/veh	81.7	13.7	3.1	51.4	11.7	12.2	46.3	0.9	0.9	10.4	24.6	26.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	8.2	4.1	4.2	9.8	9.8	9.2	8.3	8.4	4.4	22.0	22.8
LnGrp Delay(d),s/veh	126.4	49.3	36.5	92.9	43.4	43.9	84.4	18.6	18.6	49.5	49.7	52.2
LnGrp LOS	F	D	D	F	D	D	F	B	B	D	D	D
Approach Vol, veh/h		753			820			1146			1584	
Approach Delay, s/veh		46.6			50.0			32.5			50.8	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.9	45.1	10.0	20.6	17.0	42.0	4.2	26.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	15.0	36.0	6.0	17.0	13.0	38.0	4.0	19.0
Max Q Clear Time (g_c+I1), s	9.9	18.8	7.3	16.4	14.4	38.3	2.1	19.5
Green Ext Time (p_c), s	0.2	13.6	0.0	0.2	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	45.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	1120	374	118	1287	152	183	784	74	63	1357	163
Future Volume (veh/h)	202	1120	374	118	1287	152	183	784	74	63	1357	163
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1827	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	202	1120	374	118	1287	152	183	784	74	63	1357	163
Adj No. of Lanes	1	3	0	1	3	1	1	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	206	1110	371	127	1270	395	190	1396	132	81	1294	579
Arrive On Green	0.12	0.30	0.30	0.07	0.25	0.25	0.11	0.44	0.44	0.05	0.37	0.37
Sat Flow, veh/h	1740	3699	1235	1740	4988	1553	1740	3207	303	1740	3471	1553
Grp Volume(v), veh/h	202	1007	487	118	1287	152	183	424	434	63	1357	163
Grp Sat Flow(s),veh/h/ln	1740	1663	1609	1740	1663	1553	1740	1736	1774	1740	1736	1553
Q Serve(g_s), s	12.7	33.0	33.0	7.4	28.0	8.9	11.5	20.1	20.1	3.9	41.0	8.1
Cycle Q Clear(g_c), s	12.7	33.0	33.0	7.4	28.0	8.9	11.5	20.1	20.1	3.9	41.0	8.1
Prop In Lane	1.00		0.77	1.00		1.00	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	206	998	483	127	1270	395	190	756	772	81	1294	579
V/C Ratio(X)	0.98	1.01	1.01	0.93	1.01	0.38	0.96	0.56	0.56	0.78	1.05	0.28
Avail Cap(c_a), veh/h	206	998	483	127	1270	395	190	756	772	142	1294	579
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.4	38.5	38.5	50.7	41.0	33.9	48.8	23.2	23.2	51.9	34.5	24.2
Incr Delay (d2), s/veh	57.5	30.8	43.3	59.4	28.7	0.6	54.8	0.9	0.9	15.0	38.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	19.4	20.4	5.7	16.2	3.9	8.4	9.7	10.0	2.2	26.6	3.5
LnGrp Delay(d),s/veh	105.9	69.3	81.9	110.2	69.7	34.5	103.5	24.1	24.1	66.9	73.4	24.4
LnGrp LOS	F	F	F	F	F	C	F	C	C	E	F	C
Approach Vol, veh/h		1696			1557			1041			1583	
Approach Delay, s/veh		77.3			69.3			38.1			68.1	
Approach LOS		E			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	51.9	12.0	37.0	16.0	45.0	17.0	32.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	9.0	44.0	8.0	33.0	12.0	41.0	13.0	28.0
Max Q Clear Time (g_c+I1), s	5.9	22.1	9.4	35.0	13.5	43.0	14.7	30.0
Green Ext Time (p_c), s	0.0	16.7	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	65.8
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	169	1238	143	284	1064	19	285	275	101	262	1091	89
Future Volume (veh/h)	169	1238	143	284	1064	19	285	275	101	262	1091	89
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1827	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	169	1238	143	284	1064	19	285	275	101	262	1091	89
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	3	3	3	3	3	3
Cap, veh/h	192	1031	119	236	1229	550	238	900	403	289	1001	448
Arrive On Green	0.11	0.33	0.33	0.14	0.35	0.35	0.14	0.26	0.26	0.16	0.29	0.29
Sat Flow, veh/h	1740	3138	361	1740	3471	1553	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	169	683	698	284	1064	19	285	275	101	262	1091	89
Grp Sat Flow(s),veh/h/ln	1740	1736	1763	1740	1736	1553	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	13.4	46.0	46.0	19.0	40.0	1.1	19.0	8.9	7.2	20.5	40.0	6.0
Cycle Q Clear(g_c), s	13.4	46.0	46.0	19.0	40.0	1.1	19.0	8.9	7.2	20.5	40.0	6.0
Prop In Lane	1.00		0.20	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	192	570	579	236	1229	550	238	900	403	289	1001	448
V/C Ratio(X)	0.88	1.20	1.20	1.20	0.87	0.03	1.20	0.31	0.25	0.91	1.09	0.20
Avail Cap(c_a), veh/h	211	570	579	236	1229	550	238	900	403	402	1001	448
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.4	47.0	47.0	60.5	42.1	29.6	60.5	41.9	41.3	57.4	50.0	37.9
Incr Delay (d2), s/veh	30.3	105.1	107.9	124.4	6.7	0.0	121.4	0.2	0.3	19.0	56.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	38.7	39.7	17.3	20.4	0.5	17.2	4.3	3.2	11.5	27.1	2.6
LnGrp Delay(d),s/veh	91.7	152.1	154.9	184.9	48.9	29.6	181.9	42.1	41.6	76.4	106.0	38.1
LnGrp LOS	F	F	F	F	D	C	F	D	D	E	F	D
Approach Vol, veh/h		1550			1367			661			1442	
Approach Delay, s/veh		146.7			76.9			102.3			96.4	
Approach LOS		F			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.0	40.0	23.0	50.0	23.0	44.0	19.4	53.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	32.0	27.0	19.0	46.0	19.0	40.0	17.0	48.0
Max Q Clear Time (g_c+I1), s	22.5	10.9	21.0	48.0	21.0	42.0	15.4	42.0
Green Ext Time (p_c), s	0.5	9.3	0.0	0.0	0.0	0.0	0.1	5.5

Intersection Summary	
HCM 2010 Ctrl Delay	107.4
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	593	39	82	546	52	56	879	103	169	1385	340
Future Volume (veh/h)	42	593	39	82	546	52	56	879	103	169	1385	340
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1827	1827	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	42	593	39	82	546	52	56	879	103	169	1385	340
Adj No. of Lanes	2	3	1	2	3	1	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	111	1020	317	161	1094	341	133	1321	155	261	1596	714
Arrive On Green	0.03	0.20	0.20	0.05	0.22	0.22	0.04	0.42	0.42	0.08	0.46	0.46
Sat Flow, veh/h	3375	4988	1553	3375	4988	1553	3375	3131	367	3375	3471	1553
Grp Volume(v), veh/h	42	593	39	82	546	52	56	487	495	169	1385	340
Grp Sat Flow(s),veh/h/ln	1688	1663	1553	1688	1663	1553	1688	1736	1762	1688	1736	1553
Q Serve(g_s), s	0.8	6.9	1.3	1.5	6.2	1.7	1.0	14.5	14.5	3.1	23.1	9.7
Cycle Q Clear(g_c), s	0.8	6.9	1.3	1.5	6.2	1.7	1.0	14.5	14.5	3.1	23.1	9.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	111	1020	317	161	1094	341	133	732	743	261	1596	714
V/C Ratio(X)	0.38	0.58	0.12	0.51	0.50	0.15	0.42	0.67	0.67	0.65	0.87	0.48
Avail Cap(c_a), veh/h	210	1240	386	210	1240	386	210	732	743	367	1618	724
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	23.1	20.9	29.9	22.0	20.3	30.2	14.9	14.9	28.8	15.6	12.0
Incr Delay (d2), s/veh	2.1	0.5	0.2	2.5	0.4	0.2	2.1	2.3	2.3	2.7	5.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.2	0.6	0.8	2.9	0.8	0.5	7.4	7.5	1.6	12.1	4.2
LnGrp Delay(d),s/veh	32.6	23.6	21.1	32.4	22.4	20.5	32.3	17.2	17.2	31.6	20.9	12.5
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	C	B
Approach Vol, veh/h		674			680			1038			1894	
Approach Delay, s/veh		24.0			23.4			18.0			20.3	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	31.1	7.1	17.2	6.5	33.6	6.1	18.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	27.0	4.0	16.0	4.0	30.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	5.1	16.5	3.5	8.9	3.0	25.1	2.8	8.2
Green Ext Time (p_c), s	0.1	9.4	0.0	4.2	0.0	4.5	0.0	4.6

Intersection Summary	
HCM 2010 Ctrl Delay	20.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	392	56	35	373	3	72	12	14	20	119	87
Future Volume (veh/h)	36	392	56	35	373	3	72	12	14	20	119	87
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1827	1827	1827	1845	1845	1845
Adj Flow Rate, veh/h	36	392	56	35	373	3	72	12	14	20	119	87
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	3	3	3
Cap, veh/h	59	850	121	58	980	8	102	333	283	36	266	226
Arrive On Green	0.03	0.28	0.28	0.03	0.28	0.28	0.06	0.18	0.18	0.02	0.14	0.14
Sat Flow, veh/h	1740	3053	433	1740	3529	28	1740	1827	1553	1757	1845	1568
Grp Volume(v), veh/h	36	222	226	35	183	193	72	12	14	20	119	87
Grp Sat Flow(s),veh/h/ln	1740	1736	1750	1740	1736	1822	1740	1827	1553	1757	1845	1568
Q Serve(g_s), s	0.7	3.5	3.5	0.7	2.8	2.8	1.3	0.2	0.2	0.4	1.9	1.7
Cycle Q Clear(g_c), s	0.7	3.5	3.5	0.7	2.8	2.8	1.3	0.2	0.2	0.4	1.9	1.7
Prop In Lane	1.00		0.25	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	59	483	487	58	482	506	102	333	283	36	266	226
V/C Ratio(X)	0.61	0.46	0.46	0.60	0.38	0.38	0.71	0.04	0.05	0.56	0.45	0.39
Avail Cap(c_a), veh/h	264	843	850	264	843	885	317	1054	896	213	952	809
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.7	9.8	9.8	15.7	9.6	9.6	15.2	11.1	11.1	16.0	12.9	12.8
Incr Delay (d2), s/veh	9.6	0.7	0.7	9.7	0.5	0.5	8.6	0.0	0.1	13.0	1.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.8	1.8	0.5	1.4	1.5	0.9	0.1	0.1	0.3	1.1	0.8
LnGrp Delay(d),s/veh	25.3	10.5	10.5	25.4	10.1	10.1	23.8	11.1	11.2	29.0	14.1	13.9
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		484			411			98			226	
Approach Delay, s/veh		11.6			11.4			20.5			15.3	
Approach LOS		B			B			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.7	10.0	5.1	13.2	5.9	8.7	5.1	13.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	19.0	5.0	16.0	6.0	17.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	2.4	2.2	2.7	5.5	3.3	3.9	2.7	4.8
Green Ext Time (p_c), s	0.0	0.9	0.0	3.6	0.0	0.8	0.0	3.8

Intersection Summary	
HCM 2010 Ctrl Delay	12.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	6	255	50	9	1	117	1552	55	1	1893	0
Future Volume (veh/h)	32	6	255	50	9	1	117	1552	55	1	1893	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1759	1900	1845	1845	1900	1792	1792	1792	1792	1792	1900
Adj Flow Rate, veh/h	32	6	255	50	9	1	117	1552	55	1	1893	0
Adj No. of Lanes	0	1	0	1	1	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	8	8	8	3	3	3	6	6	6	6	6	6
Cap, veh/h	24	5	195	83	77	9	126	1822	815	209	1989	0
Arrive On Green	0.15	0.15	0.15	0.05	0.05	0.05	0.07	0.54	0.54	0.12	0.58	0.00
Sat Flow, veh/h	166	31	1321	1757	1631	181	1707	3406	1524	1707	3495	0
Grp Volume(v), veh/h	293	0	0	50	0	10	117	1552	55	1	1893	0
Grp Sat Flow(s),veh/h/ln	1518	0	0	1757	0	1813	1707	1703	1524	1707	1703	0
Q Serve(g_s), s	16.0	0.0	0.0	3.0	0.0	0.6	7.4	42.2	1.9	0.1	56.5	0.0
Cycle Q Clear(g_c), s	16.0	0.0	0.0	3.0	0.0	0.6	7.4	42.2	1.9	0.1	56.5	0.0
Prop In Lane	0.11		0.87	1.00		0.10	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	224	0	0	83	0	85	126	1822	815	209	1989	0
V/C Ratio(X)	1.31	0.00	0.00	0.60	0.00	0.12	0.93	0.85	0.07	0.00	0.95	0.00
Avail Cap(c_a), veh/h	224	0	0	259	0	268	126	2136	956	209	2011	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	46.2	0.0	0.0	50.7	0.0	49.5	49.9	21.5	12.2	41.7	21.1	0.0
Incr Delay (d2), s/veh	166.9	0.0	0.0	6.9	0.0	0.6	58.5	3.1	0.0	0.0	10.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.0	0.0	0.0	1.6	0.0	0.3	5.5	20.4	0.8	0.0	29.3	0.0
LnGrp Delay(d),s/veh	213.1	0.0	0.0	57.6	0.0	50.1	108.5	24.6	12.2	41.8	32.0	0.0
LnGrp LOS	F			E		D	F	C	B	D	C	
Approach Vol, veh/h		293			60			1724			1894	
Approach Delay, s/veh		213.1			56.3			29.9			32.0	
Approach LOS		F			E			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	17.3	62.0		20.0	12.0	67.3		9.1
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	68.0		16.0	8.0	64.0		16.0
Max Q Clear Time (g_c+I1), s	2.1	44.2		18.0	9.4	58.5		5.0
Green Ext Time (p_c), s	1.8	13.8		0.0	0.0	4.8		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	44.8
HCM 2010 LOS	D

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	358	47	22	1294	1774	432
Future Volume (veh/h)	358	47	22	1294	1774	432
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	358	47	22	1294	1774	432
Adj No. of Lanes	1	1	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	361	322	33	2465	1802	422
Arrive On Green	0.21	0.21	0.02	0.70	0.64	0.64
Sat Flow, veh/h	1757	1568	1757	3597	2913	660
Grp Volume(v), veh/h	358	47	22	1294	1075	1131
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1752	1752	1728
Q Serve(g_s), s	17.8	2.2	1.1	15.2	50.2	56.0
Cycle Q Clear(g_c), s	17.8	2.2	1.1	15.2	50.2	56.0
Prop In Lane	1.00	1.00	1.00			0.38
Lane Grp Cap(c), veh/h	361	322	33	2465	1120	1104
V/C Ratio(X)	0.99	0.15	0.66	0.52	0.96	1.02
Avail Cap(c_a), veh/h	361	322	80	2559	1120	1104
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	28.5	42.7	6.1	14.8	15.8
Incr Delay (d2), s/veh	45.2	0.2	20.2	0.2	18.1	33.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.1	2.1	0.7	7.3	29.5	36.7
LnGrp Delay(d),s/veh	80.0	28.7	62.9	6.3	32.8	49.4
LnGrp LOS	F	C	E	A	C	F
Approach Vol, veh/h	405			1316	2206	
Approach Delay, s/veh	74.1			7.2	41.3	
Approach LOS	E			A	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		65.7		22.0	5.7	60.0		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		64.0		18.0	4.0	56.0		
Max Q Clear Time (g_c+I1), s		17.2		19.8	3.1	58.0		
Green Ext Time (p_c), s		43.6		0.0	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	33.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	16	40	140	4	221	50	1256	191	641	1341	9
Future Volume (veh/h)	4	16	40	140	4	221	50	1256	191	641	1341	9
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	4	16	40	140	4	221	50	1256	191	641	1341	9
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	7	39	98	132	4	240	64	1190	180	600	2480	17
Arrive On Green	0.00	0.08	0.08	0.08	0.16	0.16	0.04	0.39	0.39	0.34	0.69	0.69
Sat Flow, veh/h	1757	468	1170	1757	28	1544	1757	3054	462	1757	3569	24
Grp Volume(v), veh/h	4	0	56	140	0	225	50	717	730	641	658	692
Grp Sat Flow(s),veh/h/ln	1757	0	1638	1757	0	1572	1757	1752	1763	1757	1752	1840
Q Serve(g_s), s	0.3	0.0	4.7	11.0	0.0	20.6	4.1	57.0	57.0	50.0	26.9	26.9
Cycle Q Clear(g_c), s	0.3	0.0	4.7	11.0	0.0	20.6	4.1	57.0	57.0	50.0	26.9	26.9
Prop In Lane	1.00		0.71	1.00		0.98	1.00		0.26	1.00		0.01
Lane Grp Cap(c), veh/h	7	0	138	132	0	244	64	683	687	600	1218	1279
V/C Ratio(X)	0.56	0.00	0.41	1.06	0.00	0.92	0.78	1.05	1.06	1.07	0.54	0.54
Avail Cap(c_a), veh/h	48	0	179	132	0	247	108	683	687	600	1218	1279
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.7	0.0	63.5	67.7	0.0	60.9	69.9	44.7	44.7	48.2	10.9	10.9
Incr Delay (d2), s/veh	53.2	0.0	1.9	95.2	0.0	36.7	18.1	48.6	52.0	56.1	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	2.2	8.8	0.0	11.5	2.3	36.7	37.6	33.5	13.0	13.8
LnGrp Delay(d),s/veh	125.9	0.0	65.5	163.0	0.0	97.6	88.0	93.2	96.6	104.3	11.4	11.4
LnGrp LOS	F		E	F		F	F	F	F	F	B	B
Approach Vol, veh/h		60			365			1497			1991	
Approach Delay, s/veh		69.5			122.7			94.7			41.3	
Approach LOS		E			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	54.0	61.0	15.0	16.3	9.3	105.7	4.6	26.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	50.0	57.0	11.0	16.0	9.0	98.0	4.0	23.0
Max Q Clear Time (g_c+I1), s	52.0	59.0	13.0	6.7	6.1	28.9	2.3	22.6
Green Ext Time (p_c), s	0.0	0.0	0.0	1.1	0.0	45.8	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	69.8
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	314	12	14	1	6	4	10	1107	0	3	1239	346
Future Volume (veh/h)	314	12	14	1	6	4	10	1107	0	3	1239	346
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1900	1845	1900	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	314	12	14	1	6	4	10	1107	0	3	1239	0
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	369	14	341	2	10	7	18	1834	0	6	1809	809
Arrive On Green	0.22	0.22	0.22	0.01	0.01	0.01	0.01	0.52	0.00	0.00	0.52	0.00
Sat Flow, veh/h	1695	65	1568	157	941	628	1757	3597	0	1757	3505	1568
Grp Volume(v), veh/h	326	0	14	11	0	0	10	1107	0	3	1239	0
Grp Sat Flow(s),veh/h/ln	1760	0	1568	1726	0	0	1757	1752	0	1757	1752	1568
Q Serve(g_s), s	11.6	0.0	0.5	0.4	0.0	0.0	0.4	14.4	0.0	0.1	17.3	0.0
Cycle Q Clear(g_c), s	11.6	0.0	0.5	0.4	0.0	0.0	0.4	14.4	0.0	0.1	17.3	0.0
Prop In Lane	0.96		1.00	0.09		0.36	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	383	0	341	19	0	0	18	1834	0	6	1809	809
V/C Ratio(X)	0.85	0.00	0.04	0.58	0.00	0.00	0.56	0.60	0.00	0.53	0.68	0.00
Avail Cap(c_a), veh/h	458	0	408	423	0	0	108	1984	0	108	1984	888
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.5	0.0	20.2	32.2	0.0	0.0	32.2	10.9	0.0	32.5	11.8	0.0
Incr Delay (d2), s/veh	12.4	0.0	0.0	24.4	0.0	0.0	24.7	0.5	0.0	59.3	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	0.0	0.2	0.3	0.0	0.0	0.3	7.0	0.0	0.1	8.5	0.0
LnGrp Delay(d),s/veh	37.0	0.0	20.2	56.6	0.0	0.0	56.9	11.3	0.0	91.8	12.7	0.0
LnGrp LOS	D		C	E			E	B		F	B	
Approach Vol, veh/h		340			11			1117			1242	
Approach Delay, s/veh		36.3			56.6			11.7			12.9	
Approach LOS		D			E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.2	38.2		18.2	4.7	37.7		4.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	37.0		17.0	4.0	37.0		16.0
Max Q Clear Time (g_c+I1), s	2.1	16.4		13.6	2.4	19.3		2.4
Green Ext Time (p_c), s	0.0	16.4		0.6	0.0	14.5		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		15.5
HCM 2010 LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	361	504	422	76	400	3	315	1385	86	2	977	394
Future Volume (veh/h)	361	504	422	76	400	3	315	1385	86	2	977	394
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	361	504	422	76	400	3	315	1385	86	2	977	394
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	401	963	431	143	697	312	401	1654	740	7	1249	559
Arrive On Green	0.12	0.27	0.27	0.04	0.20	0.20	0.12	0.47	0.47	0.00	0.36	0.36
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	361	504	422	76	400	3	315	1385	86	2	977	394
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	8.0	9.3	20.4	1.7	7.9	0.1	6.9	26.4	2.3	0.0	19.0	16.5
Cycle Q Clear(g_c), s	8.0	9.3	20.4	1.7	7.9	0.1	6.9	26.4	2.3	0.0	19.0	16.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	401	963	431	143	697	312	401	1654	740	7	1249	559
V/C Ratio(X)	0.90	0.52	0.98	0.53	0.57	0.01	0.79	0.84	0.12	0.27	0.78	0.71
Avail Cap(c_a), veh/h	401	963	431	178	734	328	446	1654	740	178	1330	595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.3	23.5	27.5	35.9	27.7	24.6	32.8	17.6	11.3	38.1	22.0	21.2
Incr Delay (d2), s/veh	22.6	0.5	37.9	3.1	1.0	0.0	8.2	4.0	0.1	18.3	2.9	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	4.5	13.4	0.8	3.9	0.1	3.7	13.6	1.0	0.0	9.6	7.7
LnGrp Delay(d),s/veh	55.8	24.0	65.4	38.9	28.7	24.6	40.9	21.6	11.3	56.4	24.9	24.7
LnGrp LOS	E	C	E	D	C	C	D	C	B	E	C	C
Approach Vol, veh/h		1287			479			1786			1373	
Approach Delay, s/veh		46.5			30.3			24.5			24.9	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.2	40.1	7.2	25.0	13.0	31.2	13.0	19.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	35.0	4.0	21.0	10.0	29.0	9.0	16.0
Max Q Clear Time (g_c+I1), s	2.0	28.4	3.7	22.4	8.9	21.0	10.0	9.9
Green Ext Time (p_c), s	0.0	6.2	0.0	0.0	0.1	6.2	0.0	3.7

Intersection Summary	
HCM 2010 Ctrl Delay	30.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	222	1675	381	23	1389	59	95	69	14	68	149	164
Future Volume (veh/h)	222	1675	381	23	1389	59	95	69	14	68	149	164
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	222	1675	381	23	1389	59	95	69	14	68	149	164
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	256	1762	386	34	1677	71	112	268	227	87	241	205
Arrive On Green	0.15	0.62	0.62	0.02	0.49	0.49	0.06	0.15	0.15	0.05	0.13	0.13
Sat Flow, veh/h	1757	2860	627	1757	3426	145	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	222	1002	1054	23	709	739	95	69	14	68	149	164
Grp Sat Flow(s),veh/h/ln	1757	1752	1734	1757	1752	1819	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	11.6	48.2	56.0	1.2	32.7	32.9	5.0	3.1	0.7	3.6	7.2	9.6
Cycle Q Clear(g_c), s	11.6	48.2	56.0	1.2	32.7	32.9	5.0	3.1	0.7	3.6	7.2	9.6
Prop In Lane	1.00		0.36	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	256	1080	1069	34	858	890	112	268	227	87	241	205
V/C Ratio(X)	0.87	0.93	0.99	0.68	0.83	0.83	0.85	0.26	0.06	0.78	0.62	0.80
Avail Cap(c_a), veh/h	299	1080	1069	75	858	890	112	314	267	112	314	267
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.3	16.2	17.7	45.9	20.6	20.6	43.6	35.7	34.7	44.2	38.7	39.7
Incr Delay (d2), s/veh	20.3	13.4	24.2	21.5	6.7	6.6	42.3	0.5	0.1	23.1	2.6	12.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	27.1	33.6	0.8	17.4	18.1	3.8	1.6	0.3	2.3	3.9	4.8
LnGrp Delay(d),s/veh	59.6	29.6	41.9	67.3	27.3	27.3	85.9	36.2	34.8	67.3	41.2	51.9
LnGrp LOS	E	C	D	E	C	C	F	D	C	E	D	D
Approach Vol, veh/h		2278			1471			178			381	
Approach Delay, s/veh		38.2			27.9			62.6			50.5	
Approach LOS		D			C			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	17.7	5.8	62.0	10.0	16.3	17.7	50.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	16.0	4.0	58.0	6.0	16.0	16.0	46.0
Max Q Clear Time (g_c+I1), s	5.6	5.1	3.2	58.0	7.0	11.6	13.6	34.9
Green Ext Time (p_c), s	0.0	1.4	0.0	0.0	0.0	0.8	0.1	10.9

Intersection Summary	
HCM 2010 Ctrl Delay	36.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1260	1178	667	8	719	277	576	994	10	390	1446	815
Future Volume (veh/h)	1260	1178	667	8	719	277	576	994	10	390	1446	815
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	1260	1178	667	8	719	277	576	994	10	390	1446	815
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	1022	1644	736	26	620	277	472	1362	424	442	1317	410
Arrive On Green	0.30	0.47	0.47	0.01	0.18	0.18	0.14	0.27	0.27	0.13	0.26	0.26
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	1260	1178	667	8	719	277	576	994	10	390	1446	815
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	39.0	34.9	51.1	0.3	23.0	23.0	18.0	23.3	0.6	14.6	34.0	34.0
Cycle Q Clear(g_c), s	39.0	34.9	51.1	0.3	23.0	23.0	18.0	23.3	0.6	14.6	34.0	34.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1022	1644	736	26	620	277	472	1362	424	442	1317	410
V/C Ratio(X)	1.23	0.72	0.91	0.30	1.16	1.00	1.22	0.73	0.02	0.88	1.10	1.99
Avail Cap(c_a), veh/h	1022	1644	736	105	620	277	472	1362	424	472	1317	410
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.5	27.6	31.9	64.2	53.5	53.5	56.0	43.1	34.8	55.6	48.0	48.0
Incr Delay (d2), s/veh	113.2	1.5	15.0	6.3	88.8	53.6	117.1	2.0	0.0	16.9	56.1	453.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	34.4	17.2	25.1	0.2	18.8	14.1	16.1	11.0	0.3	7.9	22.6	66.3
LnGrp Delay(d),s/veh	158.7	29.1	46.8	70.5	142.3	107.1	173.1	45.1	34.8	72.5	104.1	501.0
LnGrp LOS	F	C	D	E	F	F	F	D	C	E	F	F
Approach Vol, veh/h		3105			1004			1580			2651	
Approach Delay, s/veh		85.5			132.0			91.7			221.5	
Approach LOS		F			F			F			F	

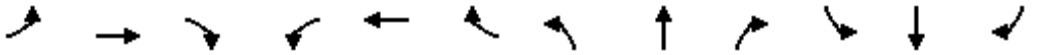
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.8	39.2	5.0	65.0	22.0	38.0	43.0	27.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	18.0	34.0	4.0	58.0	18.0	34.0	39.0	23.0
Max Q Clear Time (g_c+I1), s	16.6	25.3	2.3	53.1	20.0	36.0	41.0	25.0
Green Ext Time (p_c), s	0.2	8.2	0.0	4.6	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		135.5
HCM 2010 LOS		F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1080	596	213	855	522	428	501	185	807	1017	0
Future Volume (veh/h)	0	1080	596	213	855	522	428	501	185	807	1017	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	0	1080	596	213	855	522	428	501	185	807	1017	0
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	4	1269	395	258	1904	593	472	767	343	859	1164	521
Arrive On Green	0.00	0.25	0.25	0.08	0.38	0.38	0.14	0.22	0.22	0.25	0.33	0.00
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	0	1080	596	213	855	522	428	501	185	807	1017	0
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	0.0	16.2	20.0	4.9	10.1	24.6	9.8	10.3	8.3	18.4	21.7	0.0
Cycle Q Clear(g_c), s	0.0	16.2	20.0	4.9	10.1	24.6	9.8	10.3	8.3	18.4	21.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	4	1269	395	258	1904	593	472	767	343	859	1164	521
V/C Ratio(X)	0.00	0.85	1.51	0.83	0.45	0.88	0.91	0.65	0.54	0.94	0.87	0.00
Avail Cap(c_a), veh/h	172	1269	395	258	1904	593	472	795	356	859	1192	533
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	28.3	29.7	36.2	18.5	23.0	33.7	28.3	27.5	29.1	24.9	0.0
Incr Delay (d2), s/veh	0.0	5.7	241.6	19.4	0.2	14.4	21.0	1.8	1.5	17.8	7.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	8.2	35.1	3.0	4.7	13.0	6.0	5.2	3.7	10.8	11.6	0.0
LnGrp Delay(d),s/veh	0.0	34.0	271.3	55.6	18.7	37.4	54.6	30.1	29.0	46.9	32.2	0.0
LnGrp LOS		C	F	E	B	D	D	C	C	D	C	
Approach Vol, veh/h		1676			1590			1114			1824	
Approach Delay, s/veh		118.4			29.8			39.3			38.7	
Approach LOS		F			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.0	21.4	10.0	24.0	15.0	30.4	0.0	34.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	20.0	18.0	6.0	20.0	11.0	27.0	4.0	22.0
Max Q Clear Time (g_c+I1), s	20.4	12.3	6.9	22.0	11.8	23.7	0.0	26.6
Green Ext Time (p_c), s	0.0	4.4	0.0	0.0	0.0	2.7	0.0	0.0

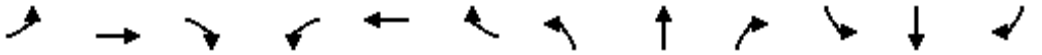
Intersection Summary	
HCM 2010 Ctrl Delay	58.0
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	178	46	117	68	515	22	578	96	920	903	7
Future Volume (veh/h)	31	178	46	117	68	515	22	578	96	920	903	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	31	178	46	117	68	515	22	578	96	920	903	7
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	90	746	334	192	852	381	69	750	336	932	1638	733
Arrive On Green	0.03	0.21	0.21	0.06	0.24	0.24	0.02	0.21	0.21	0.27	0.47	0.47
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	31	178	46	117	68	515	22	578	96	920	903	7
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	0.6	2.8	1.6	2.2	1.0	16.0	0.4	10.2	3.4	17.7	12.2	0.2
Cycle Q Clear(g_c), s	0.6	2.8	1.6	2.2	1.0	16.0	0.4	10.2	3.4	17.7	12.2	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	90	746	334	192	852	381	69	750	336	932	1638	733
V/C Ratio(X)	0.35	0.24	0.14	0.61	0.08	1.35	0.32	0.77	0.29	0.99	0.55	0.01
Avail Cap(c_a), veh/h	207	852	381	207	852	381	207	852	381	932	1638	733
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.5	21.5	21.0	30.3	19.2	24.9	31.8	24.3	21.7	23.8	12.6	9.4
Incr Delay (d2), s/veh	2.3	0.2	0.2	4.5	0.0	174.5	2.7	3.8	0.5	26.2	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.4	0.7	1.2	0.5	25.3	0.2	5.3	1.5	11.6	5.9	0.1
LnGrp Delay(d),s/veh	33.8	21.6	21.2	34.9	19.3	199.4	34.5	28.2	22.1	50.0	13.0	9.4
LnGrp LOS	C	C	C	C	B	F	C	C	C	D	B	A
Approach Vol, veh/h		255			700			696			1830	
Approach Delay, s/veh		23.0			154.4			27.6			31.6	
Approach LOS		C			F			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	18.1	7.7	18.0	5.3	34.8	5.7	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	18.0	16.0	4.0	16.0	4.0	30.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	19.7	12.2	4.2	4.8	2.4	14.2	2.6	18.0
Green Ext Time (p_c), s	0.0	1.9	0.0	3.0	0.0	9.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	54.9
HCM 2010 LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	315	322	28	175	116	144	334	48	190	481	69
Future Volume (veh/h)	85	315	322	28	175	116	144	334	48	190	481	69
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	85	315	322	28	175	116	144	334	48	190	481	69
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	198	990	443	89	879	393	253	857	383	313	919	411
Arrive On Green	0.06	0.28	0.28	0.03	0.25	0.25	0.07	0.24	0.24	0.09	0.26	0.26
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	85	315	322	28	175	116	144	334	48	190	481	69
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	1.1	3.2	8.4	0.4	1.8	2.7	1.8	3.6	1.1	2.4	5.3	1.5
Cycle Q Clear(g_c), s	1.1	3.2	8.4	0.4	1.8	2.7	1.8	3.6	1.1	2.4	5.3	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	198	990	443	89	879	393	253	857	383	313	919	411
V/C Ratio(X)	0.43	0.32	0.73	0.31	0.20	0.30	0.57	0.39	0.13	0.61	0.52	0.17
Avail Cap(c_a), veh/h	302	1244	556	302	1244	556	378	1322	591	529	1477	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.5	12.7	14.6	21.6	13.3	13.7	20.2	14.2	13.3	19.7	14.2	12.8
Incr Delay (d2), s/veh	1.5	0.2	3.6	2.0	0.1	0.4	2.0	0.3	0.1	1.9	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.6	4.0	0.2	0.9	1.2	0.9	1.8	0.5	1.2	2.6	0.7
LnGrp Delay(d),s/veh	22.0	12.9	18.2	23.5	13.4	14.1	22.2	14.5	13.4	21.6	14.7	13.0
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		722			319			526			740	
Approach Delay, s/veh		16.3			14.6			16.5			16.3	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	15.0	5.2	16.7	7.3	15.8	6.6	15.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	17.0	4.0	16.0	5.0	19.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	4.4	5.6	2.4	10.4	3.8	7.3	3.1	4.7
Green Ext Time (p_c), s	0.1	4.5	0.0	2.4	0.0	4.5	0.0	3.7

Intersection Summary	
HCM 2010 Ctrl Delay	16.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	1096	530	55	1041	85	196	47	31	202	181	51
Future Volume (veh/h)	52	1096	530	55	1041	85	196	47	31	202	181	51
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	52	1096	530	55	1041	85	196	47	31	202	181	51
Adj No. of Lanes	1	2	1	1	2	1	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	69	1390	622	71	1395	624	242	263	223	249	271	230
Arrive On Green	0.04	0.40	0.40	0.04	0.40	0.40	0.14	0.14	0.14	0.14	0.15	0.15
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	52	1096	530	55	1041	85	196	47	31	202	181	51
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	1.7	15.8	17.7	1.8	14.6	2.0	6.2	1.3	1.0	6.4	5.3	1.6
Cycle Q Clear(g_c), s	1.7	15.8	17.7	1.8	14.6	2.0	6.2	1.3	1.0	6.4	5.3	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	69	1390	622	71	1395	624	242	263	223	249	271	230
V/C Ratio(X)	0.75	0.79	0.85	0.77	0.75	0.14	0.81	0.18	0.14	0.81	0.67	0.22
Avail Cap(c_a), veh/h	122	1402	627	122	1402	627	275	545	464	306	577	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.3	15.2	15.8	27.3	14.8	11.0	24.1	21.7	21.6	23.9	23.2	21.6
Incr Delay (d2), s/veh	15.2	3.1	10.9	15.8	2.2	0.1	15.0	0.3	0.3	12.6	2.8	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	8.2	9.5	1.2	7.4	0.9	4.0	0.7	0.4	4.0	2.9	0.7
LnGrp Delay(d),s/veh	42.6	18.3	26.7	43.1	17.0	11.1	39.0	22.0	21.9	36.5	26.0	22.1
LnGrp LOS	D	B	C	D	B	B	D	C	C	D	C	C
Approach Vol, veh/h		1678			1181			274			434	
Approach Delay, s/veh		21.7			17.8			34.2			30.4	
Approach LOS		C			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.2	12.2	6.3	26.8	11.9	12.4	6.3	26.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	17.0	4.0	23.0	9.0	18.0	4.0	23.0
Max Q Clear Time (g_c+I1), s	8.4	3.3	3.8	19.7	8.2	7.3	3.7	16.6
Green Ext Time (p_c), s	0.1	1.3	0.0	3.1	0.0	1.1	0.0	5.9

Intersection Summary	
HCM 2010 Ctrl Delay	22.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	348	185	69	242	37	227	72	37	212	196	20
Future Volume (veh/h)	35	348	185	69	242	37	227	72	37	212	196	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	35	348	185	69	242	37	227	72	37	212	196	20
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	55	488	415	89	444	68	280	217	112	264	296	30
Arrive On Green	0.03	0.26	0.26	0.05	0.28	0.28	0.16	0.19	0.19	0.15	0.18	0.18
Sat Flow, veh/h	1757	1845	1568	1757	1563	239	1757	1150	591	1757	1647	168
Grp Volume(v), veh/h	35	348	185	69	0	279	227	0	109	212	0	216
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1802	1757	0	1740	1757	0	1815
Q Serve(g_s), s	0.9	7.9	4.6	1.8	0.0	6.1	5.8	0.0	2.5	5.4	0.0	5.1
Cycle Q Clear(g_c), s	0.9	7.9	4.6	1.8	0.0	6.1	5.8	0.0	2.5	5.4	0.0	5.1
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.34	1.00		0.09
Lane Grp Cap(c), veh/h	55	488	415	89	0	512	280	0	329	264	0	327
V/C Ratio(X)	0.64	0.71	0.45	0.77	0.00	0.54	0.81	0.00	0.33	0.80	0.00	0.66
Avail Cap(c_a), veh/h	152	637	541	152	0	622	303	0	601	303	0	627
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.2	15.4	14.2	21.7	0.0	14.0	18.8	0.0	16.3	19.0	0.0	17.7
Incr Delay (d2), s/veh	11.6	2.6	0.8	13.2	0.0	0.9	14.4	0.0	0.6	12.9	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	4.3	2.0	1.2	0.0	3.2	3.9	0.0	1.3	3.5	0.0	2.8
LnGrp Delay(d),s/veh	33.7	18.0	15.0	34.9	0.0	14.9	33.2	0.0	16.8	31.9	0.0	20.0
LnGrp LOS	C	B	B	C		B	C		B	C		B
Approach Vol, veh/h		568			348			336			428	
Approach Delay, s/veh		18.0			18.9			27.9			25.9	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	12.8	6.4	16.3	11.4	12.3	5.5	17.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	16.0	4.0	16.0	8.0	16.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	7.4	4.5	3.8	9.9	7.8	7.1	2.9	8.1
Green Ext Time (p_c), s	0.0	1.4	0.0	2.3	0.0	1.2	0.0	2.8

Intersection Summary	
HCM 2010 Ctrl Delay	22.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	262	110	559	113	97	221	260	1473	61	98	1511	328
Future Volume (veh/h)	262	110	559	113	97	221	260	1473	61	98	1511	328
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	262	110	559	113	97	221	260	1473	61	98	1511	328
Adj No. of Lanes	1	1	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	291	553	470	124	598	267	279	1661	743	150	1529	684
Arrive On Green	0.17	0.30	0.30	0.04	0.17	0.17	0.08	0.47	0.47	0.04	0.44	0.44
Sat Flow, veh/h	1757	1845	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	262	110	559	113	97	221	260	1473	61	98	1511	328
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	16.1	4.9	33.0	3.6	2.6	15.0	8.3	41.9	2.3	3.1	47.0	16.4
Cycle Q Clear(g_c), s	16.1	4.9	33.0	3.6	2.6	15.0	8.3	41.9	2.3	3.1	47.0	16.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	291	553	470	124	598	267	279	1661	743	150	1529	684
V/C Ratio(X)	0.90	0.20	1.19	0.91	0.16	0.83	0.93	0.89	0.08	0.65	0.99	0.48
Avail Cap(c_a), veh/h	319	553	470	124	598	267	279	1661	743	155	1529	684
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.0	28.7	38.5	52.8	38.9	44.0	50.2	26.2	15.8	51.7	30.7	22.1
Incr Delay (d2), s/veh	25.4	0.2	104.4	54.5	0.1	18.8	36.3	6.2	0.0	9.0	20.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.8	2.5	27.9	2.6	1.3	7.9	5.3	21.7	1.0	1.7	26.9	7.2
LnGrp Delay(d),s/veh	70.4	28.8	142.9	107.3	39.0	62.8	86.5	32.5	15.9	60.7	50.8	22.6
LnGrp LOS	E	C	F	F	D	E	F	C	B	E	D	C
Approach Vol, veh/h		931			431			1794			1937	
Approach Delay, s/veh		109.0			69.2			39.7			46.5	
Approach LOS		F			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	56.1	8.0	37.0	13.0	52.0	22.2	22.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	52.0	4.0	33.0	9.0	48.0	20.0	17.0
Max Q Clear Time (g_c+I1), s	5.1	43.9	5.6	35.0	10.3	49.0	18.1	17.0
Green Ext Time (p_c), s	0.0	7.8	0.0	0.0	0.0	0.0	0.2	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	57.5
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	154	0	0	350	195	0	0	0	516	0	0
Future Volume (veh/h)	0	154	0	0	350	195	0	0	0	516	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	0	154	0	0	350	195	0	0	0	516	0	0
Adj No. of Lanes	2	2	1	1	2	1	1	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	16	1201	537	8	1201	537	8	9	7	956	517	440
Arrive On Green	0.00	0.34	0.00	0.00	0.34	0.34	0.00	0.00	0.00	0.28	0.00	0.00
Sat Flow, veh/h	3408	3505	1568	1757	3505	1568	1757	1845	1568	3408	1845	1568
Grp Volume(v), veh/h	0	154	0	0	350	195	0	0	0	516	0	0
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1757	1752	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	0.0	0.6	0.0	0.0	1.5	2.0	0.0	0.0	0.0	2.7	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.6	0.0	0.0	1.5	2.0	0.0	0.0	0.0	2.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	16	1201	537	8	1201	537	8	9	7	956	517	440
V/C Ratio(X)	0.00	0.13	0.00	0.00	0.29	0.36	0.00	0.00	0.00	0.54	0.00	0.00
Avail Cap(c_a), veh/h	642	2972	1329	331	2972	1329	331	1390	1182	2569	2433	2068
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	4.8	0.0	0.0	5.1	5.2	0.0	0.0	0.0	6.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.1	0.4	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.3	0.0	0.0	0.8	0.9	0.0	0.0	0.0	1.3	0.0	0.0
LnGrp Delay(d),s/veh	0.0	4.8	0.0	0.0	5.2	5.6	0.0	0.0	0.0	7.0	0.0	0.0
LnGrp LOS		A			A	A				A		
Approach Vol, veh/h		154			545			0			516	
Approach Delay, s/veh		4.8			5.4			0.0			7.0	
Approach LOS		A			A						A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	0.0	0.0	11.3	0.0	10.0	0.0	11.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	16.0	4.0	18.0	4.0	28.0	4.0	18.0
Max Q Clear Time (g_c+I1), s	4.7	0.0	0.0	2.6	0.0	0.0	0.0	4.0
Green Ext Time (p_c), s	1.5	0.0	0.0	3.6	0.0	0.0	0.0	3.4

Intersection Summary	
HCM 2010 Ctrl Delay	6.0
HCM 2010 LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	449	264	0	434	11	0
Future Volume (veh/h)	449	264	0	434	11	0
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	449	264	0	434	11	0
Adj No. of Lanes	1	1	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	939	798	7	939	558	256
Arrive On Green	0.51	0.51	0.00	0.51	0.16	0.00
Sat Flow, veh/h	1845	1568	1757	1845	3408	1568
Grp Volume(v), veh/h	449	264	0	434	11	0
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1704	1568
Q Serve(g_s), s	3.9	2.4	0.0	3.7	0.1	0.0
Cycle Q Clear(g_c), s	3.9	2.4	0.0	3.7	0.1	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	939	798	7	939	558	256
V/C Ratio(X)	0.48	0.33	0.00	0.46	0.02	0.00
Avail Cap(c_a), veh/h	1358	1154	287	1961	2230	1026
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	3.9	3.5	0.0	3.9	8.6	0.0
Incr Delay (d2), s/veh	0.4	0.2	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	1.1	0.0	1.9	0.0	0.0
LnGrp Delay(d),s/veh	4.3	3.8	0.0	4.2	8.6	0.0
LnGrp LOS	A	A		A	A	
Approach Vol, veh/h	713			434	11	
Approach Delay, s/veh	4.1			4.2	8.6	
Approach LOS	A			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		8.0	0.0	16.5				16.5
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		16.0	4.0	18.0				26.0
Max Q Clear Time (g_c+I1), s		2.1	0.0	5.9				5.7
Green Ext Time (p_c), s		0.0	0.0	5.3				6.8

Intersection Summary	
HCM 2010 Ctrl Delay	4.2
HCM 2010 LOS	A

Intersection	
Intersection Delay, s/veh	30.7
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	94	292	36	136	2	17	211	10	8	390	107
Future Vol, veh/h	18	94	292	36	136	2	17	211	10	8	390	107
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	18	94	292	36	136	2	17	211	10	8	390	107
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	26.2	15.4	17.1	45.9
HCM LOS	D	C	C	E

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	4%	21%	2%
Vol Thru, %	89%	23%	78%	77%
Vol Right, %	4%	72%	1%	21%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	238	404	174	505
LT Vol	17	18	36	8
Through Vol	211	94	136	390
RT Vol	10	292	2	107
Lane Flow Rate	238	404	174	505
Geometry Grp	1	1	1	1
Degree of Util (X)	0.483	0.74	0.373	0.915
Departure Headway (Hd)	7.31	6.59	7.727	6.525
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	490	549	465	556
Service Time	5.381	4.646	5.804	4.581
HCM Lane V/C Ratio	0.486	0.736	0.374	0.908
HCM Control Delay	17.1	26.2	15.4	45.9
HCM Lane LOS	C	D	C	E
HCM 95th-tile Q	2.6	6.3	1.7	11.1

Intersection	
Intersection Delay, s/veh	131.3
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	465	0	196	354	7	15	64	137	142	263	65
Future Vol, veh/h	21	465	0	196	354	7	15	64	137	142	263	65
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	6	6	6	8	8	8	3	3	3	3	3	3
Mvmt Flow	21	465	0	196	354	7	15	64	137	142	263	65
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	126.4	194.6	27.1	109.4
HCM LOS	F	F	D	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	4%	35%	30%
Vol Thru, %	30%	96%	64%	56%
Vol Right, %	63%	0%	1%	14%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	216	486	557	470
LT Vol	15	21	196	142
Through Vol	64	465	354	263
RT Vol	137	0	7	65
Lane Flow Rate	216	486	557	470
Geometry Grp	1	1	1	1
Degree of Util (X)	0.554	1.154	1.336	1.105
Departure Headway (Hd)	11.132	9.707	9.409	9.626
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	326	379	390	381
Service Time	9.132	7.707	7.409	7.626
HCM Lane V/C Ratio	0.663	1.282	1.428	1.234
HCM Control Delay	27.1	126.4	194.6	109.4
HCM Lane LOS	D	F	F	F
HCM 95th-tile Q	3.2	16.7	24	15.1

Intersection	
Int Delay, s/veh	2.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	41	42	684	59	186	194
Future Vol, veh/h	41	42	684	59	186	194
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	70	0	-	-	85	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	4	4	3	3	3	3
Mvmt Flow	41	42	684	59	186	194

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1183	372	0	0	743	0
Stage 1	714	-	-	-	-	-
Stage 2	469	-	-	-	-	-
Critical Hdwy	6.88	6.98	-	-	4.16	-
Critical Hdwy Stg 1	5.88	-	-	-	-	-
Critical Hdwy Stg 2	5.88	-	-	-	-	-
Follow-up Hdwy	3.54	3.34	-	-	2.23	-
Pot Cap-1 Maneuver	179	620	-	-	854	-
Stage 1	441	-	-	-	-	-
Stage 2	590	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	140	620	-	-	854	-
Mov Cap-2 Maneuver	270	-	-	-	-	-
Stage 1	441	-	-	-	-	-
Stage 2	461	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.9	0	5.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	270	620	854	-
HCM Lane V/C Ratio	-	-	0.152	0.068	0.218	-
HCM Control Delay (s)	-	-	20.7	11.2	10.4	-
HCM Lane LOS	-	-	C	B	B	-
HCM 95th %tile Q(veh)	-	-	0.5	0.2	0.8	-

Intersection	
Int Delay, s/veh	85.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	576	237	682	214	275	1521
Future Vol, veh/h	576	237	682	214	275	1521
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	4	4	4	4
Mvmt Flow	576	237	682	214	275	1521

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1947	448	0	0	896	0
Stage 1	789	-	-	-	-	-
Stage 2	1158	-	-	-	-	-
Critical Hdwy	5.76	7.16	-	-	5.38	-
Critical Hdwy Stg 1	6.66	-	-	-	-	-
Critical Hdwy Stg 2	6.06	-	-	-	-	-
Follow-up Hdwy	3.83	3.93	-	-	3.14	-
Pot Cap-1 Maneuver	~ 99	475	-	-	433	-
Stage 1	~ 323	-	-	-	-	-
Stage 2	~ 233	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	0	475	-	-	433	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	~ 323	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 350.1	0	9
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	475	433	-
HCM Lane V/C Ratio	-	-	1.712	0.635	-
HCM Control Delay (s)	-	-	$ 350.1	26.7	5.8
HCM Lane LOS	-	-	F	D	A
HCM 95th %tile Q(veh)	-	-	48.5	4.3	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	83	1732	1141	25	14	30
Future Vol, veh/h	83	1732	1141	25	14	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	190	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	6	6	6	6	3	3
Mvmt Flow	83	1732	1141	25	14	30

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1166	0	-	0	2186	583
Stage 1	-	-	-	-	1154	-
Stage 2	-	-	-	-	1032	-
Critical Hdwy	4.22	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.26	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	573	-	-	-	38	453
Stage 1	-	-	-	-	260	-
Stage 2	-	-	-	-	302	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	573	-	-	-	32	453
Mov Cap-2 Maneuver	-	-	-	-	32	-
Stage 1	-	-	-	-	260	-
Stage 2	-	-	-	-	258	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	82.8
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	573	-	-	-	87
HCM Lane V/C Ratio	0.145	-	-	-	0.506
HCM Control Delay (s)	12.3	-	-	-	82.8
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.5	-	-	-	2.2

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	1	2	0	2	0	769	6	1	990	4
Future Vol, veh/h	2	0	1	2	0	2	0	769	6	1	990	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	2	0	1	2	0	2	0	769	6	1	990	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1767	1769	992	1767	1768	772	994	0	0	775	0	0
Stage 1	994	994	-	772	772	-	-	-	-	-	-	-
Stage 2	773	775	-	995	996	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	65	83	297	65	83	398	692	-	-	836	-	-
Stage 1	294	322	-	391	408	-	-	-	-	-	-	-
Stage 2	390	406	-	294	321	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	65	83	297	65	83	398	692	-	-	836	-	-
Mov Cap-2 Maneuver	65	83	-	65	83	-	-	-	-	-	-	-
Stage 1	294	321	-	391	408	-	-	-	-	-	-	-
Stage 2	388	406	-	292	320	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	47.3	38.3	0	0
HCM LOS	E	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	692	-	-	88	112	836	-	-
HCM Lane V/C Ratio	-	-	-	0.034	0.036	0.001	-	-
HCM Control Delay (s)	0	-	-	47.3	38.3	9.3	0	-
HCM Lane LOS	A	-	-	E	E	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1492	0	143	1107	1	2	0	88	2	4	4
Future Vol, veh/h	4	1492	0	143	1107	1	2	0	88	2	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	80	-	90	200	-	-	-	-	240	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	6	6	6	6	6	6	3	3	3	3	3	3
Mvmt Flow	4	1492	0	143	1107	1	2	0	88	2	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1108	0	0	1492	0	0	2342	2894	746	2148	2894	554
Stage 1	-	-	-	-	-	-	1500	1500	-	1394	1394	-
Stage 2	-	-	-	-	-	-	842	1394	-	754	1500	-
Critical Hdwy	4.22	-	-	4.22	-	-	7.56	6.56	6.96	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Follow-up Hdwy	2.26	-	-	2.26	-	-	3.53	4.03	3.33	3.53	4.03	3.33
Pot Cap-1 Maneuver	603	-	-	427	-	-	19	15	354	27	15	473
Stage 1	-	-	-	-	-	-	127	182	-	148	205	-
Stage 2	-	-	-	-	-	-	323	205	-	365	182	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	603	-	-	427	-	-	10	10	354	15	10	473
Mov Cap-2 Maneuver	-	-	-	-	-	-	10	10	-	15	10	-
Stage 1	-	-	-	-	-	-	126	181	-	147	136	-
Stage 2	-	-	-	-	-	-	207	136	-	272	181	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2	27.9	$ 349.9
HCM LOS			D	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	10	354	603	-	-	427	-	-	18
HCM Lane V/C Ratio	0.2	0.249	0.007	-	-	0.335	-	-	0.556
HCM Control Delay (s)	$ 439.6	18.5	11	-	-	17.6	-	-	$ 349.9
HCM Lane LOS	F	C	B	-	-	C	-	-	F
HCM 95th %tile Q(veh)	0.5	1	0	-	-	1.5	-	-	1.5

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	84	1	3	3	2	142
Future Vol, veh/h	84	1	3	3	2	142
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	84	1	3	3	2	142

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	82	73	144	0	-	0
Stage 1	73	-	-	-	-	-
Stage 2	9	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	918	986	1432	-	-	-
Stage 1	947	-	-	-	-	-
Stage 2	1011	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	916	986	1432	-	-	-
Mov Cap-2 Maneuver	916	-	-	-	-	-
Stage 1	947	-	-	-	-	-
Stage 2	1009	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	3.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1432	-	917	-	-
HCM Lane V/C Ratio	0.002	-	0.093	-	-
HCM Control Delay (s)	7.5	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	49	0	0	0	0	100
Future Vol, veh/h	49	0	0	0	0	100
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	49	0	0	0	0	100

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	50	50	100	0	-	0
Stage 1	50	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	-	-
Pot Cap-1 Maneuver	950	1004	1483	-	-	-
Stage 1	963	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	950	1004	1483	-	-	-
Mov Cap-2 Maneuver	950	-	-	-	-	-
Stage 1	963	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1483	-	950	-	-
HCM Lane V/C Ratio	-	-	0.052	-	-
HCM Control Delay (s)	0	-	9	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	4.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1000	13	328	1096	8	208
Future Vol, veh/h	1000	13	328	1096	8	208
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	0	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1000	13	328	1096	8	208

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1013	0	2211	507
Stage 1	-	-	-	-	1007	-
Stage 2	-	-	-	-	1204	-
Critical Hdwy	-	-	4.16	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	2.23	-	3.53	3.33
Pot Cap-1 Maneuver	-	-	674	-	37	508
Stage 1	-	-	-	-	312	-
Stage 2	-	-	-	-	245	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	674	-	19	508
Mov Cap-2 Maneuver	-	-	-	-	19	-
Stage 1	-	-	-	-	312	-
Stage 2	-	-	-	-	126	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.5	27.2
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	19	508	-	-	674	-
HCM Lane V/C Ratio	0.421	0.409	-	-	0.487	-
HCM Control Delay (s)	294.1	16.9	-	-	15.3	-
HCM Lane LOS	F	C	-	-	C	-
HCM 95th %tile Q(veh)	1.2	2	-	-	2.7	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	148
Future Vol, veh/h	0	0	0	0	0	148
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	0	0	0	0	148

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	148	0	0	0	0	0
Stage 1	0	-	-	-	-	-
Stage 2	148	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	842	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	877	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	842	-	-	-	-	-
Mov Cap-2 Maneuver	842	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	877	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	-

Intersection	
Int Delay, s/veh	17.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	338	174	14	80	298	340
Future Vol, veh/h	338	174	14	80	298	340
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Free
Storage Length	0	-	-	-	-	90
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	338	174	14	80	298	340

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	406	298	298	0	-	0
Stage 1	298	-	-	-	-	-
Stage 2	108	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	599	739	1258	-	-	0
Stage 1	751	-	-	-	-	0
Stage 2	914	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	592	739	1258	-	-	-
Mov Cap-2 Maneuver	592	-	-	-	-	-
Stage 1	751	-	-	-	-	-
Stage 2	903	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	30	1.2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	1258	-	635	-
HCM Lane V/C Ratio	0.011	-	0.806	-
HCM Control Delay (s)	7.9	0	30	-
HCM Lane LOS	A	A	D	-
HCM 95th %tile Q(veh)	0	-	8.2	-

Intersection	
Int Delay, s/veh	129

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	119	257	128	107	587	273
Future Vol, veh/h	119	257	128	107	587	273
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	150	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	119	257	128	107	587	273

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1575	128	0	0	128	0
Stage 1	128	-	-	-	-	-
Stage 2	1447	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	120	919	-	-	1452	-
Stage 1	895	-	-	-	-	-
Stage 2	215	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 71	919	-	-	1452	-
Mov Cap-2 Maneuver	~ 71	-	-	-	-	-
Stage 1	895	-	-	-	-	-
Stage 2	128	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 490.4	0	6.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	192	1452	-
HCM Lane V/C Ratio	-	-	1.958	0.404	-
HCM Control Delay (s)	-	-	$ 490.4	9.2	-
HCM Lane LOS	-	-	F	A	-
HCM 95th %tile Q(veh)	-	-	28	2	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	86.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	713	41	1	489	1	8	110	0	0	272	74
Future Vol, veh/h	10	713	41	1	489	1	8	110	0	0	272	74
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	8	8	8	10	10	10	8	8	8	8	8	8
Mvmt Flow	10	713	41	1	489	1	8	110	0	0	272	74

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	490	0	0	754	0	0	1419	1246	734	1301	1266	490
Stage 1	-	-	-	-	-	-	754	754	-	492	492	-
Stage 2	-	-	-	-	-	-	665	492	-	809	774	-
Critical Hdwy	4.18	-	-	4.2	-	-	7.18	6.58	6.28	7.18	6.58	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Follow-up Hdwy	2.272	-	-	2.29	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	1043	-	-	821	-	-	111	169	410	134	~ 164	566
Stage 1	-	-	-	-	-	-	392	408	-	547	538	-
Stage 2	-	-	-	-	-	-	440	538	-	366	400	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1043	-	-	821	-	-	-	166	410	62	~ 161	566
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	166	-	62	~ 161	-
Stage 1	-	-	-	-	-	-	385	401	-	538	537	-
Stage 2	-	-	-	-	-	-	188	537	-	261	393	-

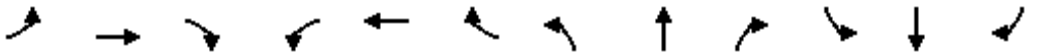
Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0		$ 431.5
HCM LOS			-	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1043	-	-	821	-	-	190
HCM Lane V/C Ratio	-	0.01	-	-	0.001	-	-	1.821
HCM Control Delay (s)	-	8.5	0	-	9.4	0	-	$ 431.5
HCM Lane LOS	-	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	24.7

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Cumulative Plus All Projects

AM

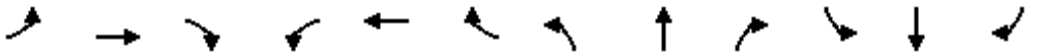


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	170	0	356	115	405	1264	0	1770	795	0	1906	488
Future Volume (vph)	170	0	356	115	405	1264	0	1770	795	0	1906	488
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00		0.88	0.86	0.81	0.91		0.91	1.00		0.86	1.00
Frt	1.00		0.85	1.00	0.91	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00	1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)	1752		2760	2985	2691	1413		4988	1553		6285	1553
Flt Permitted	0.95		1.00	0.95	1.00	1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)	1752		2760	2985	2691	1413		4988	1553		6285	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	170	0	356	115	405	1264	0	1770	795	0	1906	488
RTOR Reduction (vph)	0	0	309	0	42	42	0	0	0	0	0	171
Lane Group Flow (vph)	170	0	47	103	1007	590	0	1770	795	0	1906	317
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot		Perm	Split	NA	Perm		NA	Free		NA	Perm
Protected Phases	4			8	8			2			6	
Permitted Phases			4			8			Free			6
Actuated Green, G (s)	14.2		14.2	43.0	43.0	43.0		39.0	108.2		39.0	39.0
Effective Green, g (s)	14.2		14.2	43.0	43.0	43.0		39.0	108.2		39.0	39.0
Actuated g/C Ratio	0.13		0.13	0.40	0.40	0.40		0.36	1.00		0.36	0.36
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0		4.0			4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	229		362	1186	1069	561		1797	1553		2265	559
v/s Ratio Prot	c0.10			0.03	0.37			c0.35			0.30	
v/s Ratio Perm			0.02			c0.42			0.51			0.20
v/c Ratio	0.74		0.13	0.09	1.11dr	1.05		0.98	0.51		0.84	0.57
Uniform Delay, d1	45.2		41.5	20.3	31.4	32.6		34.3	0.0		31.8	27.8
Progression Factor	1.00		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	12.2		0.2	0.0	15.6	52.5		17.6	1.2		3.0	1.3
Delay (s)	57.5		41.7	20.4	47.0	85.1		51.9	1.2		34.8	29.1
Level of Service	E		D	C	D	F		D	A		C	C
Approach Delay (s)		46.8			59.0			36.2			33.6	
Approach LOS		D			E			D			C	

Intersection Summary			
HCM 2000 Control Delay	41.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	108.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	105.8%	ICU Level of Service	G
Analysis Period (min)	15		

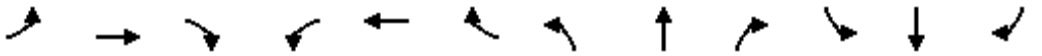
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group



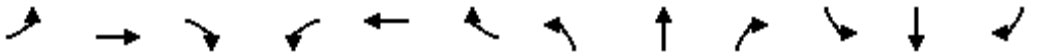
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	534	0	1711	0	0	0	0	1984	688	0	1221	682
Future Volume (vph)	534	0	1711	0	0	0	0	1984	688	0	1221	682
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	4.0		4.0	4.0
Lane Util. Factor	0.97		0.88					0.91	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3367		2733					4988	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3367		2733					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	534	0	1711	0	0	0	0	1984	688	0	1221	682
RTOR Reduction (vph)	0	0	11	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	534	0	1700	0	0	0	0	1984	688	0	1221	682
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	66.0		66.0					46.0	120.0		46.0	120.0
Effective Green, g (s)	66.0		66.0					46.0	120.0		46.0	120.0
Actuated g/C Ratio	0.55		0.55					0.38	1.00		0.38	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	1851		1503					1912	1553		1912	1553
v/s Ratio Prot								c0.40			0.24	
v/s Ratio Perm	0.16		c0.62						0.44			0.44
v/c Ratio	0.29		1.13					1.04	0.44		0.64	0.44
Uniform Delay, d1	14.4		27.0					37.0	0.0		30.2	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1		67.9					31.1	0.9		0.7	0.9
Delay (s)	14.5		94.9					68.1	0.9		30.9	0.9
Level of Service	B		F					E	A		C	A
Approach Delay (s)		75.8			0.0			50.8			20.2	
Approach LOS		E			A			D			C	

Intersection Summary			
HCM 2000 Control Delay	50.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	90.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



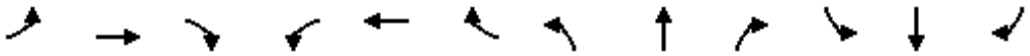
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	149	527	162	90	1149	805	577	1716	87	1265	1678	95
Future Volume (vph)	149	527	162	90	1149	805	577	1716	87	1265	1678	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		0.97	0.95	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	3349		3367	3471	2733	3367	4988	1553	3367	4988	1553
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	3349		3367	3471	2733	3367	4988	1553	3367	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	149	527	162	90	1149	805	577	1716	87	1265	1678	95
RTOR Reduction (vph)	0	22	0	0	0	479	0	0	60	0	0	56
Lane Group Flow (vph)	149	667	0	90	1149	326	577	1716	27	1265	1678	39
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	4.0	32.4		8.6	37.0	37.0	25.7	43.0	43.0	40.0	57.3	57.3
Effective Green, g (s)	4.0	32.4		8.6	37.0	37.0	25.7	43.0	43.0	40.0	57.3	57.3
Actuated g/C Ratio	0.03	0.23		0.06	0.26	0.26	0.18	0.31	0.31	0.29	0.41	0.41
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	96	775		206	917	722	618	1532	476	962	2041	635
v/s Ratio Prot	c0.04	0.20		0.03	c0.33		0.17	c0.34		c0.38	0.34	
v/s Ratio Perm						0.12			0.02			0.03
v/c Ratio	1.55	0.86		0.44	1.25	0.45	0.93	1.12	0.06	1.31	0.82	0.06
Uniform Delay, d1	68.0	51.6		63.4	51.5	43.0	56.3	48.5	34.2	50.0	36.8	25.1
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	293.1	9.7		1.5	122.9	0.5	21.3	63.4	0.0	149.2	2.8	0.0
Delay (s)	361.1	61.3		64.8	174.4	43.5	77.6	111.9	34.2	199.2	39.6	25.1
Level of Service	F	E		E	F	D	E	F	C	F	D	C
Approach Delay (s)		114.6			118.0			100.7			105.6	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	108.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	118.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	83	290	1284	5	548	27	1256	12	2	20	17	129
Future Volume (vph)	83	290	1284	5	548	27	1256	12	2	20	17	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.97	1.00
Satd. Flow (prot)	1736	3471	1553	1736	3471	1553	1618	1623	1524		1796	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.97	1.00
Satd. Flow (perm)	1736	3471	1553	1736	3471	1553	1618	1623	1524		1796	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	83	290	1284	5	548	27	1256	12	2	20	17	129
RTOR Reduction (vph)	0	0	258	0	0	21	0	0	1	0	0	118
Lane Group Flow (vph)	83	290	1026	5	548	6	628	640	1	0	37	11
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4	2	3	8		2	2		6	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	4.0	22.5	65.5	0.8	19.3	19.3	43.0	43.0	43.0		7.4	7.4
Effective Green, g (s)	4.0	22.5	65.5	0.8	19.3	19.3	43.0	43.0	43.0		7.4	7.4
Actuated g/C Ratio	0.04	0.25	0.73	0.01	0.22	0.22	0.48	0.48	0.48		0.08	0.08
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	77	870	1203	15	746	334	775	778	730		148	129
v/s Ratio Prot	c0.05	0.08	c0.41	0.00	0.16		0.39	0.39			c0.02	
v/s Ratio Perm			0.25			0.00			0.00			0.01
v/c Ratio	1.08	0.33	0.85	0.33	0.73	0.02	0.81	0.82	0.00		0.25	0.08
Uniform Delay, d1	42.9	27.5	8.7	44.2	32.8	27.7	19.9	20.1	12.2		38.6	38.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	125.5	0.2	6.0	12.7	3.8	0.0	6.4	7.0	0.0		0.9	0.3
Delay (s)	168.3	27.7	14.7	56.9	36.6	27.8	26.3	27.1	12.2		39.4	38.3
Level of Service	F	C	B	E	D	C	C	C	B		D	D
Approach Delay (s)		24.7			36.3			26.7			38.5	
Approach LOS		C			D			C			D	

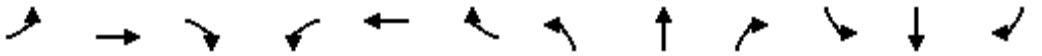
Intersection Summary			
HCM 2000 Control Delay	27.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	89.7	Sum of lost time (s)	20.0
Intersection Capacity Utilization	96.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	192	93	410	325	70	285	183	366	120	165	34
Future Volume (vph)	26	192	93	410	325	70	285	183	366	120	165	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		0.95	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85		0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00		0.98	
Satd. Flow (prot)	1752	3505	1568	1752	3412		1665	1733	1568		3385	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00		0.98	
Satd. Flow (perm)	1752	3505	1568	1752	3412		1665	1733	1568		3385	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	26	192	93	410	325	70	285	183	366	120	165	34
RTOR Reduction (vph)	0	0	78	0	18	0	0	0	295	0	10	0
Lane Group Flow (vph)	26	192	15	410	377	0	231	237	71	0	309	0
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4						2			
Actuated Green, G (s)	1.8	12.1	12.1	21.2	31.5		14.7	14.7	14.7		11.9	
Effective Green, g (s)	1.8	12.1	12.1	21.2	31.5		14.7	14.7	14.7		11.9	
Actuated g/C Ratio	0.02	0.16	0.16	0.28	0.42		0.19	0.19	0.19		0.16	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	41	558	249	489	1416		322	335	303		530	
v/s Ratio Prot	0.01	c0.05		c0.23	0.11		c0.14	0.14			c0.09	
v/s Ratio Perm			0.01						0.05			
v/c Ratio	0.63	0.34	0.06	0.84	0.27		0.72	0.71	0.23		0.58	
Uniform Delay, d1	36.7	28.4	27.1	25.7	14.6		28.7	28.6	25.8		29.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	27.9	0.4	0.1	11.9	0.1		7.4	6.7	0.4		1.6	
Delay (s)	64.6	28.7	27.2	37.7	14.7		36.1	35.3	26.2		31.3	
Level of Service	E	C	C	D	B		D	D	C		C	
Approach Delay (s)		31.3			26.4			31.5			31.3	
Approach LOS		C			C			C			C	

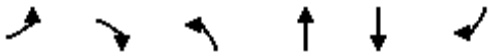
Intersection Summary			
HCM 2000 Control Delay	29.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	75.9	Sum of lost time (s)	20.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	2345	133	27	2398	8	517	42	211	7	16	55
Future Volume (vph)	14	2345	133	27	2398	8	517	42	211	7	16	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	6.4	6.4	3.5	6.4	6.4	4.4	4.4	4.4	3.5	3.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.88	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1703	3406	1524	1703	3406	1524	1752	1845	1568	1752	1630	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1703	3406	1524	1703	3406	1524	1752	1845	1568	1752	1630	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	14	2345	133	27	2398	8	517	42	211	7	16	55
RTOR Reduction (vph)	0	0	38	0	0	3	0	0	65	0	45	0
Lane Group Flow (vph)	14	2345	95	27	2398	5	517	42	146	7	26	0
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			
Actuated Green, G (s)	1.5	80.3	80.3	2.6	81.4	81.4	27.7	35.5	35.5	0.7	8.5	
Effective Green, g (s)	1.5	80.3	80.3	2.6	81.4	81.4	27.7	35.5	35.5	0.7	8.5	
Actuated g/C Ratio	0.01	0.59	0.59	0.02	0.59	0.59	0.20	0.26	0.26	0.01	0.06	
Clearance Time (s)	3.5	6.4	6.4	3.5	6.4	6.4	4.4	4.4	4.4	3.5	3.5	
Vehicle Extension (s)	2.4	4.5	4.5	2.4	4.5	4.5	2.4	2.8	2.8	2.4	2.8	
Lane Grp Cap (vph)	18	1997	893	32	2025	906	354	478	406	8	101	
v/s Ratio Prot	0.01	0.69		c0.02	c0.70		c0.30	0.02		0.00	0.02	
v/s Ratio Perm			0.06			0.00			c0.09			
v/c Ratio	0.78	1.17	0.11	0.84	1.18	0.01	1.46	0.09	0.36	0.88	0.26	
Uniform Delay, d1	67.5	28.3	12.5	66.9	27.8	11.3	54.6	38.4	41.4	68.1	61.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	103.9	84.1	0.1	94.4	88.3	0.0	222.2	0.1	0.5	236.6	1.2	
Delay (s)	171.5	112.4	12.6	161.3	116.0	11.3	276.8	38.5	41.9	304.6	62.4	
Level of Service	F	F	B	F	F	B	F	D	D	F	E	
Approach Delay (s)		107.4			116.2			199.5			84.1	
Approach LOS		F			F			F			F	

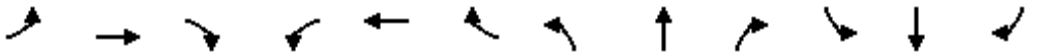
Intersection Summary			
HCM 2000 Control Delay	123.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	136.9	Sum of lost time (s)	17.8
Intersection Capacity Utilization	110.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1027	121	101	1379	997	1013
Future Volume (vph)	1027	121	101	1379	997	1013
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	0.97	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3400	1568	3400	3505	3505	1568
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3400	1568	3400	3505	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1027	121	101	1379	997	1013
RTOR Reduction (vph)	0	81	0	0	0	552
Lane Group Flow (vph)	1027	40	101	1379	997	461
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	19.5	19.5	3.1	31.0	23.9	23.9
Effective Green, g (s)	19.5	19.5	3.1	31.0	23.9	23.9
Actuated g/C Ratio	0.33	0.33	0.05	0.53	0.41	0.41
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1133	522	180	1857	1431	640
v/s Ratio Prot	c0.30		0.03	c0.39	0.28	
v/s Ratio Perm		0.03				0.29
v/c Ratio	0.91	0.08	0.56	0.74	0.70	0.72
Uniform Delay, d1	18.6	13.3	27.0	10.7	14.3	14.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.4	0.1	4.0	1.6	1.5	3.9
Delay (s)	29.0	13.4	31.0	12.3	15.8	18.4
Level of Service	C	B	C	B	B	B
Approach Delay (s)	27.4			13.6	17.1	
Approach LOS	C			B	B	

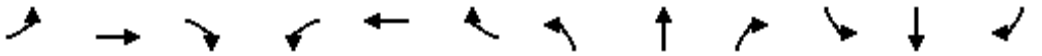
Intersection Summary			
HCM 2000 Control Delay	18.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	58.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



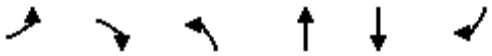
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	633	371	167	648	19	678	48	73	28	144	39
Future Volume (vph)	21	633	371	167	648	19	678	48	73	28	144	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	3.9	3.9	5.5	4.0	4.0	4.3	4.3		5.1	5.1	5.1
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.91		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1568	3400	3505	1568	3367	3157		1752	3505	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	3505	1568	3400	3505	1568	3367	3157		1752	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	21	633	371	167	648	19	678	48	73	28	144	39
RTOR Reduction (vph)	0	0	243	0	0	11	0	54	0	0	0	36
Lane Group Flow (vph)	21	633	128	167	648	8	678	67	0	28	144	3
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	3%	3%	3%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		8	8		4	4	
Permitted Phases			6			2						4
Actuated Green, G (s)	1.3	27.8	27.8	6.3	32.7	32.7	21.0	21.0		6.7	6.7	6.7
Effective Green, g (s)	1.3	27.8	27.8	6.3	32.7	32.7	21.0	21.0		6.7	6.7	6.7
Actuated g/C Ratio	0.02	0.34	0.34	0.08	0.41	0.41	0.26	0.26		0.08	0.08	0.08
Clearance Time (s)	5.5	3.9	3.9	5.5	4.0	4.0	4.3	4.3		5.1	5.1	5.1
Vehicle Extension (s)	1.0	4.9	4.9	1.0	4.1	4.1	2.0	2.0		1.0	1.0	1.0
Lane Grp Cap (vph)	28	1208	540	265	1422	636	877	822		145	291	130
v/s Ratio Prot	0.01	c0.18		c0.05	c0.18		c0.20	0.02		0.02	c0.04	
v/s Ratio Perm			0.08			0.00						0.00
v/c Ratio	0.75	0.52	0.24	0.63	0.46	0.01	0.77	0.08		0.19	0.49	0.02
Uniform Delay, d1	39.5	21.1	18.8	36.0	17.5	14.3	27.6	22.5		34.4	35.3	33.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	65.7	0.8	0.5	3.6	0.3	0.0	3.9	0.0		0.2	0.5	0.0
Delay (s)	105.2	21.9	19.3	39.6	17.8	14.3	31.5	22.5		34.7	35.8	34.0
Level of Service	F	C	B	D	B	B	C	C		C	D	C
Approach Delay (s)		22.6			22.1			30.1			35.3	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	25.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	80.6	Sum of lost time (s)	22.9
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	661	0	1768	0	0	0	0	1829	1424	0	1398	287
Future Volume (vph)	661	0	1768	0	0	0	0	1829	1424	0	1398	287
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4		6.4					5.1	4.0		4.6	4.0
Lane Util. Factor	0.97		0.88					0.91	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3367		2733					4988	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3367		2733					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	661	0	1768	0	0	0	0	1829	1424	0	1398	287
RTOR Reduction (vph)	0	0	8	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	661	0	1760	0	0	0	0	1829	1424	0	1398	287
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	72.6		72.6					45.9	130.0		46.4	130.0
Effective Green, g (s)	72.6		72.6					45.9	130.0		46.4	130.0
Actuated g/C Ratio	0.56		0.56					0.35	1.00		0.36	1.00
Clearance Time (s)	6.4		6.4					5.1			4.6	
Vehicle Extension (s)	1.0		1.0					1.0			1.0	
Lane Grp Cap (vph)	1880		1526					1761	1553		1780	1553
v/s Ratio Prot								c0.37			0.28	
v/s Ratio Perm	0.20		c0.64						0.92			0.18
v/c Ratio	0.35		1.15					1.04	0.92		0.79	0.18
Uniform Delay, d1	15.8		28.7					42.0	0.0		37.4	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0		77.0					32.2	10.1		2.2	0.3
Delay (s)	15.8		105.7					74.3	10.1		39.5	0.3
Level of Service	B		F					E	B		D	A
Approach Delay (s)		81.2			0.0			46.2			32.8	
Approach LOS		F			A			D			C	

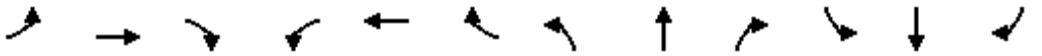
Intersection Summary			
HCM 2000 Control Delay	54.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	98.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	967	23	53	969	338	1003
Future Volume (vph)	967	23	53	969	338	1003
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1752	1568	1752	1845	3505	1568
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1752	1568	1752	1845	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	967	23	53	969	338	1003
RTOR Reduction (vph)	0	7	0	0	0	597
Lane Group Flow (vph)	967	16	53	969	338	406
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	61.0	61.0	4.8	61.8	53.0	53.0
Effective Green, g (s)	61.0	61.0	4.8	61.8	53.0	53.0
Actuated g/C Ratio	0.47	0.47	0.04	0.47	0.41	0.41
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	817	731	64	871	1420	635
v/s Ratio Prot	c0.55		0.03	c0.53	0.10	
v/s Ratio Perm		0.01				0.26
v/c Ratio	1.18	0.02	0.83	1.11	0.24	0.64
Uniform Delay, d1	34.9	18.8	62.6	34.5	25.6	31.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	95.0	0.0	56.0	66.2	0.1	2.2
Delay (s)	129.9	18.8	118.6	100.7	25.7	33.4
Level of Service	F	B	F	F	C	C
Approach Delay (s)	127.3			101.7	31.5	
Approach LOS	F			F	C	

Intersection Summary			
HCM 2000 Control Delay	81.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	130.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	111.2%	ICU Level of Service	H
Analysis Period (min)	15		

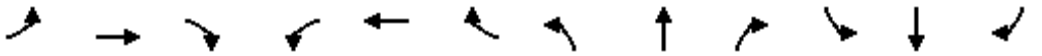
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	373	2	16	8	1	1	39	637	2	0	237	212
Future Volume (vph)	373	2	16	8	1	1	39	637	2	0	237	212
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	0.95			0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.93		1.00	1.00			1.00	0.85
Flt Protected	0.95	0.95	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1665	1670	1568	1752	1706		1752	3503			3505	1568
Flt Permitted	0.95	0.95	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (perm)	1665	1670	1568	1752	1706		1752	3503			3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	373	2	16	8	1	1	39	637	2	0	237	212
RTOR Reduction (vph)	0	0	12	0	1	0	0	0	0	0	0	143
Lane Group Flow (vph)	186	189	4	8	1	0	39	639	0	0	237	69
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	10.2	10.2	10.2	0.9	0.9		1.3	19.1			13.8	13.8
Effective Green, g (s)	10.2	10.2	10.2	0.9	0.9		1.3	19.1			13.8	13.8
Actuated g/C Ratio	0.24	0.24	0.24	0.02	0.02		0.03	0.45			0.33	0.33
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	402	403	378	37	36		53	1585			1146	512
v/s Ratio Prot	0.11	c0.11		c0.00	0.00		0.02	c0.18			0.07	
v/s Ratio Perm			0.00									0.04
v/c Ratio	0.46	0.47	0.01	0.22	0.03		0.74	0.40			0.21	0.14
Uniform Delay, d1	13.7	13.7	12.2	20.3	20.2		20.3	7.7			10.2	10.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.8	0.9	0.0	2.9	0.3		41.0	0.2			0.1	0.1
Delay (s)	14.5	14.5	12.2	23.2	20.5		61.2	7.9			10.3	10.1
Level of Service	B	B	B	C	C		E	A			B	B
Approach Delay (s)		14.4			22.7			11.0			10.2	
Approach LOS		B			C			B			B	

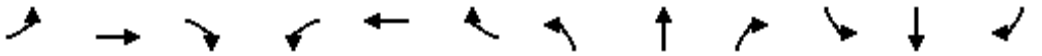
Intersection Summary			
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	42.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	48.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



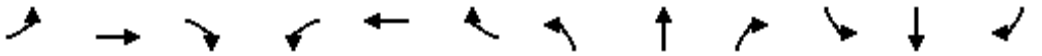
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	1153	0	412	0	1196	481	0	1043	367
Future Volume (vph)	0	0	0	1153	0	412	0	1196	481	0	1043	367
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.9	4.9			4.8	4.0		4.8	4.0
Lane Util. Factor				0.95	0.95			0.91	1.00		0.91	1.00
Frt				1.00	0.92			1.00	0.85		1.00	0.85
Flt Protected				0.95	0.98			1.00	1.00		1.00	1.00
Satd. Flow (prot)				1649	1559			4988	1553		4988	1553
Flt Permitted				0.95	0.98			1.00	1.00		1.00	1.00
Satd. Flow (perm)				1649	1559			4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	1153	0	412	0	1196	481	0	1043	367
RTOR Reduction (vph)	0	0	0	0	15	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	807	743	0	0	1196	481	0	1043	367
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type				Perm	NA			NA	Free		NA	Free
Protected Phases					8			2			6	
Permitted Phases				8					Free			Free
Actuated Green, G (s)				30.1	30.1			16.1	55.9		16.1	55.9
Effective Green, g (s)				30.1	30.1			16.1	55.9		16.1	55.9
Actuated g/C Ratio				0.54	0.54			0.29	1.00		0.29	1.00
Clearance Time (s)				4.9	4.9			4.8			4.8	
Vehicle Extension (s)				1.0	1.0			1.0			1.0	
Lane Grp Cap (vph)				887	839			1436	1553		1436	1553
v/s Ratio Prot								c0.24			0.21	
v/s Ratio Perm				c0.49	0.48				0.31			0.24
v/c Ratio				0.91	0.89			0.83	0.31		0.73	0.24
Uniform Delay, d1				11.7	11.4			18.6	0.0		17.9	0.0
Progression Factor				1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2				12.8	10.7			4.1	0.5		1.6	0.4
Delay (s)				24.4	22.1			22.8	0.5		19.5	0.4
Level of Service				C	C			C	A		B	A
Approach Delay (s)		0.0			23.3			16.4			14.5	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	55.9	Sum of lost time (s)	9.7
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



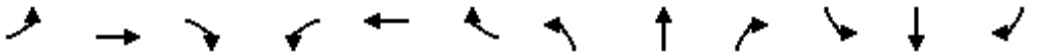
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	393	0	1105	0	0	0	0	1335	609	0	1804	344
Future Volume (vph)	393	0	1105	0	0	0	0	1335	609	0	1804	344
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	5.1					4.9	4.0		4.8	4.0
Lane Util. Factor	0.95	0.91	0.95					0.91	1.00		0.91	1.00
Frt	1.00	0.86	0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	1649	1425	1475					4988	1553		4988	1553
Flt Permitted	0.95	1.00	1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	1649	1425	1475					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	393	0	1105	0	0	0	0	1335	609	0	1804	344
RTOR Reduction (vph)	0	21	21	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	354	548	554	0	0	0	0	1335	609	0	1804	344
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA	Perm					NA	Free		NA	Free
Protected Phases		4						2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	23.7	23.7	23.7					23.9	57.6		24.0	57.6
Effective Green, g (s)	23.7	23.7	23.7					23.9	57.6		24.0	57.6
Actuated g/C Ratio	0.41	0.41	0.41					0.41	1.00		0.42	1.00
Clearance Time (s)	5.1	5.1	5.1					4.9			4.8	
Vehicle Extension (s)	1.0	1.0	1.0					1.0			1.0	
Lane Grp Cap (vph)	678	586	606					2069	1553		2078	1553
v/s Ratio Prot								0.27			c0.36	
v/s Ratio Perm	0.21	0.38	0.38						0.39			0.22
v/c Ratio	0.52	0.94	0.91					0.65	0.39		0.87	0.22
Uniform Delay, d1	12.7	16.2	16.0					13.5	0.0		15.4	0.0
Progression Factor	1.00	1.00	1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.3	22.2	18.1					0.5	0.7		4.0	0.3
Delay (s)	13.0	38.4	34.1					14.0	0.7		19.4	0.3
Level of Service	B	D	C					B	A		B	A
Approach Delay (s)		30.8			0.0			9.8			16.3	
Approach LOS		C			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	57.6	Sum of lost time (s)	10.0
Intersection Capacity Utilization	88.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



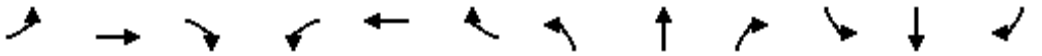
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	1303	0	212	0	850	971	0	1029	1378
Future Volume (vph)	0	0	0	1303	0	212	0	850	971	0	1029	1378
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.8		6.8		4.6	4.0		4.6	4.0
Lane Util. Factor				0.97		1.00		0.91	1.00		0.91	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3400		1568		5036	1568		5036	1568
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3400		1568		5036	1568		5036	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	1303	0	212	0	850	971	0	1029	1378
RTOR Reduction (vph)	0	0	0	0	0	16	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	1303	0	196	0	850	971	0	1029	1378
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				Perm		Perm		NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases				8		8			Free			Free
Actuated Green, G (s)				21.9		21.9		13.9	47.2		13.9	47.2
Effective Green, g (s)				21.9		21.9		13.9	47.2		13.9	47.2
Actuated g/C Ratio				0.46		0.46		0.29	1.00		0.29	1.00
Clearance Time (s)				6.8		6.8		4.6			4.6	
Vehicle Extension (s)				1.0		1.0		1.0			1.0	
Lane Grp Cap (vph)				1577		727		1483	1568		1483	1568
v/s Ratio Prot								0.17			0.20	
v/s Ratio Perm				0.38		0.13			0.62			c0.88
v/c Ratio				0.83		0.27		0.57	0.62		0.69	0.88
Uniform Delay, d1				11.0		7.8		14.1	0.0		14.8	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				3.5		0.1		0.3	1.8		1.2	7.3
Delay (s)				14.5		7.8		14.5	1.8		15.9	7.3
Level of Service				B		A		B	A		B	A
Approach Delay (s)		0.0			13.6			7.7			11.0	
Approach LOS		A			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	10.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	47.2	Sum of lost time (s)	11.4
Intersection Capacity Utilization	64.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



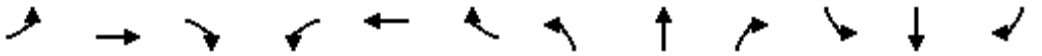
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	171	883	1656	0	0	87	0	3310	9	0	2159	184
Future Volume (vph)	171	883	1656	0	0	87	0	3310	9	0	2159	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0		4.0			4.0	4.0
Lane Util. Factor	0.91	0.86	0.91			0.88		0.86			0.91	1.00
Frt	1.00	0.93	0.85			0.85		1.00			1.00	0.85
Flt Protected	0.95	1.00	1.00			1.00		1.00			1.00	1.00
Satd. Flow (prot)	1595	2943	1427			2733		6343			5036	1568
Flt Permitted	0.95	1.00	1.00			1.00		1.00			1.00	1.00
Satd. Flow (perm)	1595	2943	1427			2733		6343			5036	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	171	883	1656	0	0	87	0	3310	9	0	2159	184
RTOR Reduction (vph)	0	1	19	0	0	85	0	0	0	0	0	45
Lane Group Flow (vph)	154	1727	809	0	0	2	0	3319	0	0	2159	139
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Turn Type	Split	NA	Perm			Prot		NA			NA	custom
Protected Phases	4	4				1		2			6	
Permitted Phases			4									2
Actuated Green, G (s)	69.0	69.0	69.0			4.0		65.0			73.0	65.0
Effective Green, g (s)	69.0	69.0	69.0			4.0		65.0			73.0	65.0
Actuated g/C Ratio	0.46	0.46	0.46			0.03		0.43			0.49	0.43
Clearance Time (s)	4.0	4.0	4.0			4.0		4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	733	1353	656			72		2748			2450	679
v/s Ratio Prot	0.10	c0.59				0.00		c0.52			c0.43	
v/s Ratio Perm			0.57									0.09
v/c Ratio	0.21	1.28	1.23			0.03		1.21			0.88	0.21
Uniform Delay, d1	24.2	40.5	40.5			71.1		42.5			34.6	26.4
Progression Factor	1.00	1.00	1.00			1.00		1.00			1.00	1.00
Incremental Delay, d2	0.1	130.2	117.6			0.2		97.2			4.1	0.2
Delay (s)	24.4	170.7	158.1			71.3		139.7			38.7	26.6
Level of Service	C	F	F			E		F			D	C
Approach Delay (s)		158.6			71.3			139.7			37.7	
Approach LOS		F			E			F			D	

Intersection Summary			
HCM 2000 Control Delay	116.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	116.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	204	0	515	0	2845	254	0	1938	2219
Future Volume (vph)	0	0	0	204	0	515	0	2845	254	0	1938	2219
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.5		3.5		4.8	4.0		5.1	4.0
Lane Util. Factor				0.97		0.88		0.91	1.00		0.91	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3303		2682		4988	1553		4988	1553
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3303		2682		4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	204	0	515	0	2845	254	0	1938	2219
RTOR Reduction (vph)	0	0	0	0	0	30	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	204	0	485	0	2845	254	0	1938	2219
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	4%	4%	4%	4%	4%	4%
Turn Type				Perm		Perm		NA	Free		NA	Free
Protected Phases								6			2	
Permitted Phases				8		8			Free			Free
Actuated Green, G (s)				11.9		11.9		37.8	58.0		37.5	58.0
Effective Green, g (s)				11.9		11.9		37.8	58.0		37.5	58.0
Actuated g/C Ratio				0.21		0.21		0.65	1.00		0.65	1.00
Clearance Time (s)				3.5		3.5		4.8			5.1	
Vehicle Extension (s)				1.0		1.0		1.0			1.0	
Lane Grp Cap (vph)				677		550		3250	1553		3225	1553
v/s Ratio Prot								0.57			0.39	
v/s Ratio Perm				0.06		0.18			0.16			c1.43
v/c Ratio				0.30		0.88		0.88	0.16		0.60	1.43
Uniform Delay, d1				19.5		22.4		8.2	0.0		5.9	29.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				0.1		14.9		2.8	0.2		0.2	196.8
Delay (s)				19.6		37.3		11.0	0.2		6.1	225.8
Level of Service				B		D		B	A		A	F
Approach Delay (s)		0.0			32.3			10.1			123.4	
Approach LOS		A			C			B			F	

Intersection Summary			
HCM 2000 Control Delay	71.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.68		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	8.6
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



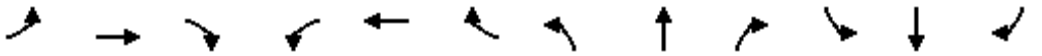
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	936	0	727	0	0	0	0	2171	401	0	1789	351
Future Volume (vph)	936	0	727	0	0	0	0	2171	401	0	1789	351
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		3.5					4.8	4.0		5.1	4.0
Lane Util. Factor	0.94		0.88					0.86	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	4894		2733					6285	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	4894		2733					6285	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	936	0	727	0	0	0	0	2171	401	0	1789	351
RTOR Reduction (vph)	0	0	32	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	936	0	695	0	0	0	0	2171	401	0	1789	351
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								6			2	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	13.9		13.9					22.2	44.4		21.9	44.4
Effective Green, g (s)	13.9		13.9					22.2	44.4		21.9	44.4
Actuated g/C Ratio	0.31		0.31					0.50	1.00		0.49	1.00
Clearance Time (s)	3.5		3.5					4.8			5.1	
Vehicle Extension (s)	1.0		1.0					1.0			1.0	
Lane Grp Cap (vph)	1532		855					3142	1553		2460	1553
v/s Ratio Prot								0.35			c0.36	
v/s Ratio Perm	0.19		c0.25						0.26			0.23
v/c Ratio	0.61		0.81					0.69	0.26		0.73	0.23
Uniform Delay, d1	13.0		14.1					8.5	0.0		8.9	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.5		5.7					0.5	0.4		0.9	0.3
Delay (s)	13.5		19.7					9.0	0.4		9.8	0.3
Level of Service	B		B					A	A		A	A
Approach Delay (s)		16.2			0.0			7.7			8.3	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	44.4	Sum of lost time (s)	8.6
Intersection Capacity Utilization	67.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



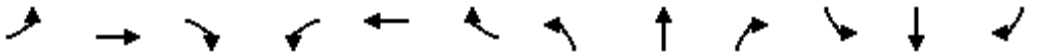
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	462	501	2340	141	77	1132
Future Volume (vph)	462	501	2340	141	77	1132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.0	5.0	5.5	5.0
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3400	1568	4988	1553	3367	3471
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3400	1568	4988	1553	3367	3471
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	462	501	2340	141	77	1132
RTOR Reduction (vph)	0	284	0	41	0	0
Lane Group Flow (vph)	462	217	2340	100	77	1132
Heavy Vehicles (%)	3%	3%	4%	4%	4%	4%
Turn Type	Prot	Prot	NA	Perm	Prot	NA
Protected Phases	4	4	6		5	2
Permitted Phases				6		
Actuated Green, G (s)	12.8	12.8	41.8	41.8	4.3	51.6
Effective Green, g (s)	12.8	12.8	41.8	41.8	4.3	51.6
Actuated g/C Ratio	0.17	0.17	0.56	0.56	0.06	0.69
Clearance Time (s)	5.5	5.5	5.0	5.0	5.5	5.0
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lane Grp Cap (vph)	581	267	2783	866	193	2391
v/s Ratio Prot	0.14	c0.14	c0.47		0.02	c0.33
v/s Ratio Perm				0.06		
v/c Ratio	0.80	0.81	0.84	0.12	0.40	0.47
Uniform Delay, d1	29.8	29.9	13.8	7.8	34.1	5.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.9	16.0	2.4	0.0	0.5	0.1
Delay (s)	36.7	45.9	16.1	7.8	34.5	5.4
Level of Service	D	D	B	A	C	A
Approach Delay (s)	41.5		15.7			7.3
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	18.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	74.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



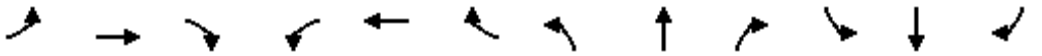
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1183	701	7	0	1122	15	8	30	5	7	6	541
Future Volume (vph)	1183	701	7	0	1122	15	8	30	5	7	6	541
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.9	6.9		6.0			6.1			6.2	5.5
Lane Util. Factor	1.00	0.95	1.00		0.95			1.00			1.00	1.00
Frt	1.00	1.00	0.85		1.00			0.98			1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00			0.99			0.97	1.00
Satd. Flow (prot)	1703	3406	1524		3431			1799			1779	1553
Flt Permitted	0.95	1.00	1.00		1.00			0.99			0.97	1.00
Satd. Flow (perm)	1703	3406	1524		3431			1799			1779	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1183	701	7	0	1122	15	8	30	5	7	6	541
RTOR Reduction (vph)	0	0	1	0	1	0	0	3	0	0	0	37
Lane Group Flow (vph)	1183	701	6	0	1136	0	0	40	0	0	13	504
Heavy Vehicles (%)	6%	6%	6%	5%	5%	5%	3%	3%	3%	4%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	pm+ov
Protected Phases	1	6		5	2		8	8		4	4	1
Permitted Phases			6									4
Actuated Green, G (s)	62.6	106.0	106.0		38.8			3.0			2.1	64.7
Effective Green, g (s)	62.6	106.0	106.0		38.8			3.0			2.1	64.7
Actuated g/C Ratio	0.48	0.81	0.81		0.30			0.02			0.02	0.50
Clearance Time (s)	5.5	6.9	6.9		6.0			6.1			6.2	5.5
Vehicle Extension (s)	1.0	1.0	1.0		1.0			1.0			1.0	1.0
Lane Grp Cap (vph)	818	2770	1239		1021			41			28	771
v/s Ratio Prot	c0.69	0.21			c0.33			c0.02			0.01	c0.31
v/s Ratio Perm			0.00									0.01
v/c Ratio	1.45	0.25	0.00		1.11			0.98			0.46	0.65
Uniform Delay, d1	33.9	2.9	2.3		45.8			63.6			63.5	24.5
Progression Factor	1.00	1.00	1.00		1.00			1.00			1.00	1.00
Incremental Delay, d2	207.7	0.0	0.0		64.5			130.1			4.4	1.5
Delay (s)	241.5	2.9	2.3		110.3			193.8			67.9	26.0
Level of Service	F	A	A		F			F			E	C
Approach Delay (s)		152.2			110.3			193.8			27.0	
Approach LOS		F			F			F			C	

Intersection Summary			
HCM 2000 Control Delay	120.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	130.3	Sum of lost time (s)	24.7
Intersection Capacity Utilization	120.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	293	55	183	865	426	3321	0	0	4898	104
Future Volume (vph)	0	0	293	55	183	865	426	3321	0	0	4898	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.6		6.2	6.2	4.6	5.0			5.3	5.3
Lane Util. Factor			1.00		1.00	0.88	0.97	0.91			0.86	1.00
Frt			0.86		1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected			1.00		0.99	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)			1596		1772	2682	3303	4893			6166	1524
Flt Permitted			1.00		0.99	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)			1596		1772	2682	3303	4893			6166	1524
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	293	55	183	865	426	3321	0	0	4898	104
RTOR Reduction (vph)	0	0	174	0	0	40	0	0	0	0	0	25
Lane Group Flow (vph)	0	0	119	0	238	825	426	3321	0	0	4898	79
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type			Over	Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases			1	4	4		1	6			2	
Permitted Phases						4						2
Actuated Green, G (s)			20.0		29.8	29.8	20.0	109.0			84.1	84.1
Effective Green, g (s)			20.0		29.8	29.8	20.0	109.0			84.1	84.1
Actuated g/C Ratio			0.13		0.20	0.20	0.13	0.73			0.56	0.56
Clearance Time (s)			4.6		6.2	6.2	4.6	5.0			5.3	5.3
Vehicle Extension (s)			3.0		3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)			212		352	532	440	3555			3457	854
v/s Ratio Prot			0.07		0.13		0.13	c0.68			c0.79	
v/s Ratio Perm						c0.31						0.05
v/c Ratio			0.56		0.68	1.55	0.97	0.93			1.42	0.09
Uniform Delay, d1			60.9		55.6	60.1	64.7	17.4			33.0	15.3
Progression Factor			1.00		1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2			3.4		5.1	257.0	34.3	5.4			189.3	0.0
Delay (s)			64.2		60.7	317.1	99.0	22.8			222.3	15.3
Level of Service			E		E	F	F	C			F	B
Approach Delay (s)		64.2			261.8			31.5			218.0	
Approach LOS		E			F			C			F	

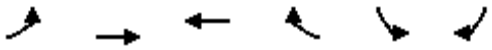
Intersection Summary			
HCM 2000 Control Delay	149.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.1
Intersection Capacity Utilization	115.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1983	0	147	0	0	0	0	1896	43	0	1775	1032
Future Volume (vph)	1983	0	147	0	0	0	0	1896	43	0	1775	1032
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0			4.0	4.0
Lane Util. Factor	0.94		0.88					0.91			0.91	1.00
Frt	1.00		0.85					1.00			1.00	0.85
Flt Protected	0.95		1.00					1.00			1.00	1.00
Satd. Flow (prot)	4942		2760					5019			5036	1568
Flt Permitted	0.95		1.00					1.00			1.00	1.00
Satd. Flow (perm)	4942		2760					5019			5036	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1983	0	147	0	0	0	0	1896	43	0	1775	1032
RTOR Reduction (vph)	0	0	11	0	0	0	0	4	0	0	0	0
Lane Group Flow (vph)	1983	0	136	0	0	0	0	1935	0	0	1775	1032
Turn Type	Prot		Perm					NA			NA	Free
Protected Phases	4							2			6	
Permitted Phases			4									Free
Actuated Green, G (s)	24.0		24.0					23.0			23.0	55.0
Effective Green, g (s)	24.0		24.0					23.0			23.0	55.0
Actuated g/C Ratio	0.44		0.44					0.42			0.42	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	2156		1204					2098			2105	1568
v/s Ratio Prot	c0.40							c0.39			0.35	
v/s Ratio Perm			0.05									0.66
v/c Ratio	0.92		0.11					0.92			0.84	0.66
Uniform Delay, d1	14.6		9.2					15.2			14.4	0.0
Progression Factor	1.00		1.00					1.00			1.00	1.00
Incremental Delay, d2	6.9		0.0					7.3			3.3	2.2
Delay (s)	21.5		9.2					22.5			17.7	2.2
Level of Service	C		A					C			B	A
Approach Delay (s)		20.6			0.0			22.5			12.0	
Approach LOS		C			A			C			B	

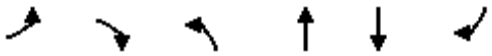
Intersection Summary			
HCM 2000 Control Delay	17.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1098	1576	1586	200	22	764
Future Volume (vph)	1098	1576	1586	200	22	764
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	0.88
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3242	3343	3343	1495	3400	2760
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3242	3343	3343	1495	3400	2760
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1098	1576	1586	200	22	764
RTOR Reduction (vph)	0	0	0	41	0	710
Lane Group Flow (vph)	1098	1576	1586	159	22	54
Heavy Vehicles (%)	8%	8%	8%	8%	3%	3%
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	46.0	115.1	65.1	65.1	9.3	9.3
Effective Green, g (s)	46.0	115.1	65.1	65.1	9.3	9.3
Actuated g/C Ratio	0.35	0.87	0.49	0.49	0.07	0.07
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1126	2906	1643	735	238	193
v/s Ratio Prot	c0.34	0.47	c0.47		0.01	
v/s Ratio Perm				0.11		c0.02
v/c Ratio	0.98	0.54	0.97	0.22	0.09	0.28
Uniform Delay, d1	42.6	2.1	32.6	19.1	57.6	58.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	20.8	0.2	14.7	0.1	0.2	0.8
Delay (s)	63.5	2.3	47.3	19.3	57.8	59.2
Level of Service	E	A	D	B	E	E
Approach Delay (s)		27.4	44.1		59.1	
Approach LOS		C	D		E	

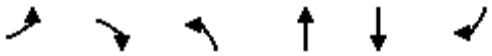
Intersection Summary			
HCM 2000 Control Delay	37.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	132.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	605	10	65	2093	1312	1018
Future Volume (vph)	605	10	65	2093	1312	1018
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3400	1568	1752	3505	3505	1568
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3400	1568	1752	3505	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	605	10	65	2093	1312	1018
RTOR Reduction (vph)	0	7	0	0	0	63
Lane Group Flow (vph)	605	3	65	2093	1312	955
Turn Type	Prot	pm+ov	Prot	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4				6
Actuated Green, G (s)	15.6	18.8	3.2	41.9	34.7	50.3
Effective Green, g (s)	15.6	18.8	3.2	41.9	34.7	50.3
Actuated g/C Ratio	0.24	0.29	0.05	0.64	0.53	0.77
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	809	545	85	2242	1856	1299
v/s Ratio Prot	0.18	0.00	0.04	c0.60	0.37	c0.17
v/s Ratio Perm		0.00				0.43
v/c Ratio	0.75	0.01	0.76	0.93	0.71	0.73
Uniform Delay, d1	23.1	16.7	30.8	10.6	11.6	4.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.8	0.0	32.8	7.9	1.3	2.2
Delay (s)	26.9	16.7	63.6	18.5	12.8	6.2
Level of Service	C	B	E	B	B	A
Approach Delay (s)	26.8			19.8	10.0	
Approach LOS	C			B	A	

Intersection Summary			
HCM 2000 Control Delay	16.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	65.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		

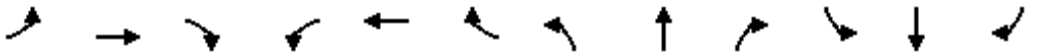
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	426	636	1023	1722	1118	203
Future Volume (vph)	426	636	1023	1722	1118	203
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.97	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1752	1568	3400	3505	3505	1568
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1752	1568	3400	3505	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	426	636	1023	1722	1118	203
RTOR Reduction (vph)	0	401	0	0	0	138
Lane Group Flow (vph)	426	235	1023	1722	1118	65
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	22.0	22.0	27.0	60.0	29.0	29.0
Effective Green, g (s)	22.0	22.0	27.0	60.0	29.0	29.0
Actuated g/C Ratio	0.24	0.24	0.30	0.67	0.32	0.32
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	428	383	1020	2336	1129	505
v/s Ratio Prot	c0.24		c0.30	0.49	c0.32	
v/s Ratio Perm		0.15				0.04
v/c Ratio	1.00	0.61	1.00	0.74	0.99	0.13
Uniform Delay, d1	33.9	30.2	31.5	9.8	30.4	21.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	42.0	2.9	28.9	1.2	24.3	0.1
Delay (s)	76.0	33.1	60.4	11.1	54.7	21.7
Level of Service	E	C	E	B	D	C
Approach Delay (s)	50.3			29.5	49.6	
Approach LOS	D			C	D	

Intersection Summary			
HCM 2000 Control Delay	39.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.7%	ICU Level of Service	F
Analysis Period (min)	15		

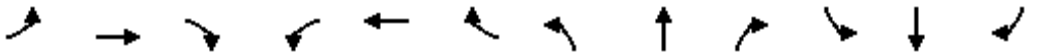
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	638	0	964	0	0	0	0	3883	609	0	1790	1584
Future Volume (vph)	638	0	964	0	0	0	0	3883	609	0	1790	1584
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	4.0		4.0	4.0
Lane Util. Factor	0.97		0.88					0.86	1.00		0.86	0.86
Frt	1.00		0.85					1.00	0.85		0.95	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3400		2760					6346	1568		4540	1348
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3400		2760					6346	1568		4540	1348
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	638	0	964	0	0	0	0	3883	609	0	1790	1584
RTOR Reduction (vph)	0	0	25	0	0	0	0	0	0	0	66	0
Lane Group Flow (vph)	638	0	939	0	0	0	0	3883	609	0	2516	792
Turn Type	Prot		Perm					NA	Free		NA	Free
Protected Phases	4							2			6	
Permitted Phases			4						Free			Free
Actuated Green, G (s)	38.0		38.0					74.0	120.0		74.0	120.0
Effective Green, g (s)	38.0		38.0					74.0	120.0		74.0	120.0
Actuated g/C Ratio	0.32		0.32					0.62	1.00		0.62	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	1076		874					3913	1568		2799	1348
v/s Ratio Prot	0.19							c0.61			0.55	
v/s Ratio Perm			c0.34						0.39			0.59
v/c Ratio	0.59		1.07					0.99	0.39		0.90	0.59
Uniform Delay, d1	34.5		41.0					22.7	0.0		19.8	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.9		52.3					12.6	0.7		4.3	1.9
Delay (s)	35.4		93.3					35.3	0.7		24.1	1.9
Level of Service	D		F					D	A		C	A
Approach Delay (s)		70.3			0.0			30.6			18.9	
Approach LOS		E			A			C			B	

Intersection Summary			
HCM 2000 Control Delay	33.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	501	0	1185	0	1998	2519	0	4233	1038
Future Volume (vph)	0	0	0	501	0	1185	0	1998	2519	0	4233	1038
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0		4.0		4.0	4.0		4.0	4.0
Lane Util. Factor				0.97		0.76		0.86	0.86		0.81	0.81
Frt				1.00		0.85		0.94	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3400		3575		4483	1348		5953	1270
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3400		3575		4483	1348		5953	1270
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	501	0	1185	0	1998	2519	0	4233	1038
RTOR Reduction (vph)	0	0	0	0	0	27	0	76	0	0	2	0
Lane Group Flow (vph)	0	0	0	501	0	1158	0	3182	1259	0	4345	924
Turn Type				Prot		Perm		NA	Free		NA	Free
Protected Phases				8				2			6	
Permitted Phases						8			Free			Free
Actuated Green, G (s)				44.0		44.0		98.0	150.0		98.0	150.0
Effective Green, g (s)				44.0		44.0		98.0	150.0		98.0	150.0
Actuated g/C Ratio				0.29		0.29		0.65	1.00		0.65	1.00
Clearance Time (s)				4.0		4.0		4.0			4.0	
Vehicle Extension (s)				3.0		3.0		3.0			3.0	
Lane Grp Cap (vph)				997		1048		2928	1348		3889	1270
v/s Ratio Prot				0.15				0.71			c0.73	
v/s Ratio Perm						c0.32			0.93			0.73
v/c Ratio				0.50		1.11		1.20dr	0.93		1.12	0.73
Uniform Delay, d1				43.9		53.0		26.0	0.0		26.0	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				0.4		61.2		45.6	13.1		56.8	3.7
Delay (s)				44.3		114.2		71.6	13.1		82.8	3.7
Level of Service				D		F		E	B		F	A
Approach Delay (s)		0.0			93.5			55.3			69.0	
Approach LOS		A			F			E			E	

Intersection Summary			
HCM 2000 Control Delay	67.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.7%	ICU Level of Service	F
Analysis Period (min)	15		

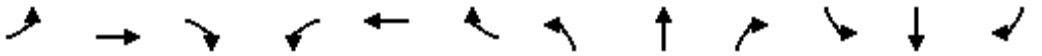
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	774	469	375	957	461	317
Future Volume (vph)	774	469	375	957	461	317
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3154	1411	1577	3154	3060	1411
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3154	1411	1577	3154	3060	1411
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	774	469	375	957	461	317
RTOR Reduction (vph)	0	242	0	0	0	246
Lane Group Flow (vph)	774	227	375	957	461	71
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	19.9	19.9	19.2	43.1	14.7	14.7
Effective Green, g (s)	19.9	19.9	19.2	43.1	14.7	14.7
Actuated g/C Ratio	0.30	0.30	0.29	0.66	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	953	426	460	2065	683	315
v/s Ratio Prot	c0.25		c0.24	0.30	c0.15	
v/s Ratio Perm		0.16				0.05
v/c Ratio	0.81	0.53	0.82	0.46	0.67	0.22
Uniform Delay, d1	21.2	19.1	21.7	5.6	23.4	20.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.3	1.3	10.7	0.2	2.6	0.4
Delay (s)	26.6	20.4	32.3	5.8	26.0	21.3
Level of Service	C	C	C	A	C	C
Approach Delay (s)	24.2			13.3	24.1	
Approach LOS	C			B	C	

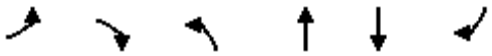
Intersection Summary			
HCM 2000 Control Delay	19.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	65.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	219	492	0	1	450	207	1	1	0	54	2	455
Future Volume (vph)	219	492	0	1	450	207	1	1	0	54	2	455
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00		0.95	0.95	1.00
Frt	1.00	1.00		1.00	0.95			1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98		0.95	0.96	1.00
Satd. Flow (prot)	1736	3471		1736	3307			1800		1665	1675	1568
Flt Permitted	0.95	1.00		0.95	1.00			0.98		0.95	0.96	1.00
Satd. Flow (perm)	1736	3471		1736	3307			1800		1665	1675	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	219	492	0	1	450	207	1	1	0	54	2	455
RTOR Reduction (vph)	0	0	0	0	63	0	0	0	0	0	0	388
Lane Group Flow (vph)	219	492	0	1	594	0	0	2	0	28	28	67
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases												6
Actuated Green, G (s)	10.8	28.1		0.7	18.0			5.7		8.7	8.7	8.7
Effective Green, g (s)	10.8	28.1		0.7	18.0			5.7		8.7	8.7	8.7
Actuated g/C Ratio	0.18	0.47		0.01	0.30			0.10		0.15	0.15	0.15
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	316	1647		20	1005			173		244	246	230
v/s Ratio Prot	c0.13	0.14		0.00	c0.18			c0.00		0.02	0.02	
v/s Ratio Perm												c0.04
v/c Ratio	0.69	0.30		0.05	0.59			0.01		0.11	0.11	0.29
Uniform Delay, d1	22.6	9.5		28.9	17.5			24.2		21.9	21.9	22.5
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2	6.4	0.1		1.0	0.9			0.0		0.2	0.2	0.7
Delay (s)	29.1	9.6		30.0	18.4			24.2		22.1	22.1	23.2
Level of Service	C	A		C	B			C		C	C	C
Approach Delay (s)		15.6			18.4			24.2			23.1	
Approach LOS		B			B			C			C	

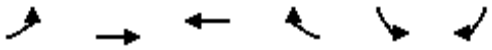
Intersection Summary			
HCM 2000 Control Delay	18.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	59.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	507	27	21	1789	1648	392
Future Volume (vph)	507	27	21	1789	1648	392
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1568	1752	3505	3404	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1752	1568	1752	3505	3404	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	507	27	21	1789	1648	392
RTOR Reduction (vph)	0	17	0	0	17	0
Lane Group Flow (vph)	507	10	21	1789	2023	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	33.0	33.0	1.5	76.6	71.1	
Effective Green, g (s)	33.0	33.0	1.5	76.6	71.1	
Actuated g/C Ratio	0.28	0.28	0.01	0.65	0.60	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	491	440	22	2283	2058	
v/s Ratio Prot	c0.29		0.01	c0.51	c0.59	
v/s Ratio Perm		0.01				
v/c Ratio	1.03	0.02	0.95	0.78	0.98	
Uniform Delay, d1	42.3	30.6	58.0	14.6	22.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	49.3	0.0	169.9	1.8	15.9	
Delay (s)	91.6	30.6	227.9	16.4	38.6	
Level of Service	F	C	F	B	D	
Approach Delay (s)	88.5			18.9	38.6	
Approach LOS	F			B	D	

Intersection Summary			
HCM 2000 Control Delay	36.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	117.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	583	1392	2113	1736	0
Future Volume (vph)	0	583	1392	2113	1736	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95	0.95	1.00	0.97	
Frt		1.00	1.00	0.85	1.00	
Flt Protected		1.00	1.00	1.00	0.95	
Satd. Flow (prot)		3505	3505	1568	3400	
Flt Permitted		1.00	1.00	1.00	0.95	
Satd. Flow (perm)		3505	3505	1568	3400	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	583	1392	2113	1736	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	583	1392	2113	1736	0
Turn Type	Prot	NA	NA	custom	Prot	
Protected Phases	4	5	5	2	6	
Permitted Phases						
Actuated Green, G (s)		46.0	46.0	130.0	76.0	
Effective Green, g (s)		46.0	46.0	130.0	76.0	
Actuated g/C Ratio		0.35	0.35	1.00	0.58	
Clearance Time (s)		4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1240	1240	1568	1987	
v/s Ratio Prot		0.17	0.40	c1.35	0.51	
v/s Ratio Perm						
v/c Ratio		0.47	1.12	1.35	0.87	
Uniform Delay, d1		32.6	42.0	65.0	22.9	
Progression Factor		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.3	66.2	160.7	4.6	
Delay (s)		32.8	108.2	225.7	27.5	
Level of Service		C	F	F	C	
Approach Delay (s)		32.8	179.1		27.5	
Approach LOS		C	F		C	

Intersection Summary			
HCM 2000 Control Delay	119.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.48		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	134.2%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0
Turn Type			Prot		Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases						2
Actuated Green, G (s)						
Effective Green, g (s)						
Actuated g/C Ratio						
Clearance Time (s)						
Vehicle Extension (s)						
Lane Grp Cap (vph)						
v/s Ratio Prot						
v/s Ratio Perm						
v/c Ratio						
Uniform Delay, d1						
Progression Factor						
Incremental Delay, d2						
Delay (s)						
Level of Service						
Approach Delay (s)	0.0			0.0	0.0	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	0.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.00		
Actuated Cycle Length (s)	24.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		

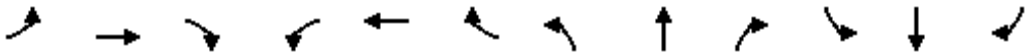
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	2236	0	1651	0
Future Volume (vph)	0	0	2236	0	1651	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	4.0	4.0	
Lane Util. Factor			0.95	0.95	0.97	
Frt			1.00	1.00	1.00	
Flt Protected			0.95	0.95	0.95	
Satd. Flow (prot)			1665	1665	3400	
Flt Permitted			0.95	0.95	0.95	
Satd. Flow (perm)			1665	1665	3400	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	2236	0	1651	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	1118	1118	1651	0
Turn Type			Split	NA	Prot	
Protected Phases			4	4	2	
Permitted Phases						
Actuated Green, G (s)			81.0	81.0	61.0	
Effective Green, g (s)			81.0	81.0	61.0	
Actuated g/C Ratio			0.54	0.54	0.41	
Clearance Time (s)			4.0	4.0	4.0	
Vehicle Extension (s)			3.0	3.0	3.0	
Lane Grp Cap (vph)			899	899	1382	
v/s Ratio Prot			c0.67	0.67	c0.49	
v/s Ratio Perm						
v/c Ratio			1.24	1.24	1.19	
Uniform Delay, d1			34.5	34.5	44.5	
Progression Factor			1.00	1.00	1.00	
Incremental Delay, d2			119.0	119.0	95.0	
Delay (s)			153.5	153.5	139.5	
Level of Service			F	F	F	
Approach Delay (s)	0.0			153.5	139.5	
Approach LOS	A			F	F	

Intersection Summary			
HCM 2000 Control Delay	147.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	115.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	398	0	0	0	0	1651	2106	0	2236	0
Future Volume (vph)	0	0	398	0	0	0	0	1651	2106	0	2236	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0					4.0	4.0		4.0	
Lane Util. Factor		0.95	0.95					0.91	0.91		0.95	
Frt		0.85	0.85					0.95	0.85		1.00	
Flt Protected		1.00	1.00					1.00	1.00		1.00	
Satd. Flow (prot)		1490	1490					3176	1427		3505	
Flt Permitted		1.00	1.00					1.00	1.00		1.00	
Satd. Flow (perm)		1490	1490					3176	1427		3505	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	398	0	0	0	0	1651	2106	0	2236	0
RTOR Reduction (vph)	0	32	0	0	0	0	0	36	182	0	0	0
Lane Group Flow (vph)	0	167	199	0	0	0	0	2542	997	0	2236	0
Turn Type		NA	Free					NA	Perm	Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases			Free						2			
Actuated Green, G (s)		16.0	143.6					119.6	119.6		119.6	
Effective Green, g (s)		16.0	143.6					119.6	119.6		119.6	
Actuated g/C Ratio		0.11	1.00					0.83	0.83		0.83	
Clearance Time (s)		4.0						4.0	4.0		4.0	
Vehicle Extension (s)		3.0						3.0	3.0		3.0	
Lane Grp Cap (vph)		166	1490					2645	1188		2919	
v/s Ratio Prot		c0.11						c0.80			0.64	
v/s Ratio Perm			0.13						0.70			
v/c Ratio		1.01	0.13					0.96	0.84		0.77	
Uniform Delay, d1		63.8	0.0					10.1	6.7		5.5	
Progression Factor		1.00	1.00					1.00	1.00		1.00	
Incremental Delay, d2		71.4	0.2					10.0	5.4		1.2	
Delay (s)		135.2	0.2					20.1	12.0		6.8	
Level of Service		F	A					C	B		A	
Approach Delay (s)		67.7			0.0			17.5			6.8	
Approach LOS		E			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	16.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	143.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	115.7%	ICU Level of Service	H
Analysis Period (min)	15		

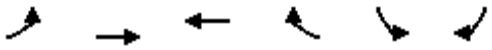
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	361	298	3683	166	7	2757
Future Volume (vph)	361	298	3683	166	7	2757
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.91
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3400	1568	5036	1568	3400	5036
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3400	1568	5036	1568	3400	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	361	298	3683	166	7	2757
RTOR Reduction (vph)	0	33	0	24	0	0
Lane Group Flow (vph)	361	265	3683	142	7	2757
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Actuated Green, G (s)	24.0	24.0	114.2	114.2	0.8	119.0
Effective Green, g (s)	24.0	24.0	114.2	114.2	0.8	119.0
Actuated g/C Ratio	0.16	0.16	0.76	0.76	0.01	0.79
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	540	249	3808	1185	18	3968
v/s Ratio Prot	0.11		c0.73		0.00	c0.55
v/s Ratio Perm		c0.17		0.09		
v/c Ratio	0.67	1.07	0.97	0.12	0.39	0.69
Uniform Delay, d1	59.8	63.5	16.7	4.9	74.9	7.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.1	75.3	8.3	0.0	13.4	0.5
Delay (s)	62.9	138.8	25.0	5.0	88.2	8.0
Level of Service	E	F	C	A	F	A
Approach Delay (s)	97.2		24.2			8.2
Approach LOS	F		C			A

Intersection Summary			
HCM 2000 Control Delay	24.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	151.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	253	1393	2076	88	134	413
Future Volume (vph)	253	1393	2076	88	134	413
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1752	3505	3505	1568	1752	1568
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1752	3505	3505	1568	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	253	1393	2076	88	134	413
RTOR Reduction (vph)	0	0	0	26	0	184
Lane Group Flow (vph)	253	1393	2076	62	134	229
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	14.0	76.0	58.0	58.0	15.6	15.6
Effective Green, g (s)	14.0	76.0	58.0	58.0	15.6	15.6
Actuated g/C Ratio	0.14	0.76	0.58	0.58	0.16	0.16
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	246	2674	2041	913	274	245
v/s Ratio Prot	c0.14	0.40	c0.59		0.08	
v/s Ratio Perm				0.04		c0.15
v/c Ratio	1.03	0.52	1.02	0.07	0.49	0.94
Uniform Delay, d1	42.8	4.6	20.8	9.0	38.4	41.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	64.9	0.2	24.3	0.0	1.4	39.8
Delay (s)	107.7	4.8	45.1	9.1	39.7	81.3
Level of Service	F	A	D	A	D	F
Approach Delay (s)		20.6	43.7		71.1	
Approach LOS		C	D		E	

Intersection Summary			
HCM 2000 Control Delay	38.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	99.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.6%	ICU Level of Service	E
Analysis Period (min)	15		

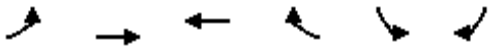
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	594	81	245	1177	132	45
Future Volume (vph)	594	81	245	1177	132	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	0.97	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3505	1568	3400	3505	1752	1568
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3505	1568	3400	3505	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	594	81	245	1177	132	45
RTOR Reduction (vph)	0	52	0	0	0	35
Lane Group Flow (vph)	594	29	245	1177	132	10
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	14.2	14.2	4.5	22.7	8.4	8.4
Effective Green, g (s)	14.2	14.2	4.5	22.7	8.4	8.4
Actuated g/C Ratio	0.36	0.36	0.12	0.58	0.21	0.21
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1272	569	391	2034	376	336
v/s Ratio Prot	0.17		0.07	c0.34	c0.08	
v/s Ratio Perm		0.02				0.01
v/c Ratio	0.47	0.05	0.63	0.58	0.35	0.03
Uniform Delay, d1	9.5	8.1	16.5	5.2	13.0	12.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.0	3.1	0.4	0.6	0.0
Delay (s)	9.8	8.1	19.6	5.6	13.6	12.2
Level of Service	A	A	B	A	B	B
Approach Delay (s)	9.6			8.0	13.2	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	39.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		

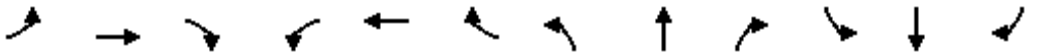
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	165	198	462	14	53	384
Future Volume (vph)	165	198	462	14	53	384
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	
Frt		1.00	1.00		0.88	
Flt Protected		0.98	1.00		0.99	
Satd. Flow (prot)		1804	1837		1616	
Flt Permitted		0.63	1.00		0.99	
Satd. Flow (perm)		1154	1837		1616	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	165	198	462	14	53	384
RTOR Reduction (vph)	0	0	3	0	250	0
Lane Group Flow (vph)	0	363	473	0	187	0
Turn Type	Perm	NA	NA		Prot	
Protected Phases		4	8		6	
Permitted Phases	4					
Actuated Green, G (s)		15.4	15.4		8.9	
Effective Green, g (s)		15.4	15.4		8.9	
Actuated g/C Ratio		0.48	0.48		0.28	
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		550	875		445	
v/s Ratio Prot			0.26		c0.12	
v/s Ratio Perm		c0.31				
v/c Ratio		0.66	0.54		0.42	
Uniform Delay, d1		6.5	6.0		9.6	
Progression Factor		1.00	1.00		1.00	
Incremental Delay, d2		3.0	0.7		0.6	
Delay (s)		9.4	6.6		10.2	
Level of Service		A	A		B	
Approach Delay (s)		9.4	6.6		10.2	
Approach LOS		A	A		B	

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	32.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		

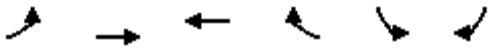
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	363	75	244	69	97	103	628	1616	188	264	1764	281
Future Volume (vph)	363	75	244	69	97	103	628	1616	188	264	1764	281
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1845	1568	3400	3505	1568	3400	3505	1568	3400	3505	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1752	1845	1568	3400	3505	1568	3400	3505	1568	3400	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	363	75	244	69	97	103	628	1616	188	264	1764	281
RTOR Reduction (vph)	0	0	189	0	0	96	0	0	45	0	0	66
Lane Group Flow (vph)	363	75	55	69	97	7	628	1616	143	264	1764	215
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	27.0	32.4	32.4	4.8	10.2	10.2	24.0	77.3	77.3	13.7	67.0	67.0
Effective Green, g (s)	27.0	32.4	32.4	4.8	10.2	10.2	24.0	77.3	77.3	13.7	67.0	67.0
Actuated g/C Ratio	0.19	0.22	0.22	0.03	0.07	0.07	0.17	0.54	0.54	0.10	0.46	0.46
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	328	414	352	113	247	110	565	1878	840	323	1628	728
v/s Ratio Prot	c0.21	0.04		0.02	c0.03		c0.18	0.46		0.08	c0.50	
v/s Ratio Perm			0.03			0.00			0.09			0.14
v/c Ratio	1.11	0.18	0.16	0.61	0.39	0.07	1.11	0.86	0.17	0.82	1.08	0.29
Uniform Delay, d1	58.6	45.2	44.9	68.8	64.0	62.6	60.1	28.8	17.1	64.0	38.6	23.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	81.5	0.2	0.2	9.4	1.0	0.3	72.2	4.3	0.1	14.7	48.7	0.2
Delay (s)	140.1	45.4	45.1	78.2	65.1	62.8	132.3	33.1	17.2	78.7	87.3	24.2
Level of Service	F	D	D	E	E	E	F	C	B	E	F	C
Approach Delay (s)		95.7			67.6			57.5			78.6	
Approach LOS		F			E			E			E	

Intersection Summary			
HCM 2000 Control Delay	71.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	144.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	103.5%	ICU Level of Service	G
Analysis Period (min)	15		

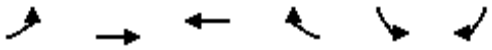
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	456	814	1307	358	21	155
Future Volume (vph)	456	814	1307	358	21	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.97		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3400	3505	3392		1752	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3400	3505	3392		1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	456	814	1307	358	21	155
RTOR Reduction (vph)	0	0	29	0	0	138
Lane Group Flow (vph)	456	814	1636	0	21	17
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	11.0	51.0	36.0		7.1	7.1
Effective Green, g (s)	11.0	51.0	36.0		7.1	7.1
Actuated g/C Ratio	0.17	0.77	0.54		0.11	0.11
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	565	2704	1847		188	168
v/s Ratio Prot	c0.13	0.23	c0.48		c0.01	
v/s Ratio Perm						0.01
v/c Ratio	0.81	0.30	0.89		0.11	0.10
Uniform Delay, d1	26.5	2.2	13.2		26.7	26.6
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	8.3	0.1	5.5		0.3	0.3
Delay (s)	34.8	2.3	18.8		26.9	26.9
Level of Service	C	A	B		C	C
Approach Delay (s)		14.0	18.8		26.9	
Approach LOS		B	B		C	

Intersection Summary			
HCM 2000 Control Delay	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	66.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	169	886	1483	885	301	88
Future Volume (vph)	169	886	1483	885	301	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1752	3505	3505	1568	1752	1568
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1752	3505	3505	1568	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	169	886	1483	885	301	88
RTOR Reduction (vph)	0	0	0	435	0	68
Lane Group Flow (vph)	169	886	1483	450	301	20
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	7.0	40.1	29.1	29.1	14.5	14.5
Effective Green, g (s)	7.0	40.1	29.1	29.1	14.5	14.5
Actuated g/C Ratio	0.11	0.64	0.46	0.46	0.23	0.23
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	195	2245	1629	728	405	363
v/s Ratio Prot	c0.10	0.25	c0.42		c0.17	
v/s Ratio Perm				0.29		0.01
v/c Ratio	0.87	0.39	0.91	0.62	0.74	0.06
Uniform Delay, d1	27.3	5.4	15.5	12.6	22.3	18.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	30.8	0.1	8.0	1.6	7.2	0.1
Delay (s)	58.1	5.5	23.6	14.1	29.5	18.8
Level of Service	E	A	C	B	C	B
Approach Delay (s)		14.0	20.0		27.1	
Approach LOS		B	C		C	

Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	62.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		

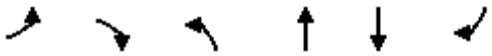
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2605	18	20	2420	87	61
Future Volume (vph)	2605	18	20	2420	87	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3501		1752	3505	1752	1568
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3501		1752	3505	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2605	18	20	2420	87	61
RTOR Reduction (vph)	0	0	0	0	0	56
Lane Group Flow (vph)	2623	0	20	2420	87	5
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases						2
Actuated Green, G (s)	112.8		3.4	120.2	12.1	12.1
Effective Green, g (s)	112.8		3.4	120.2	12.1	12.1
Actuated g/C Ratio	0.80		0.02	0.86	0.09	0.09
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2814		42	3002	151	135
v/s Ratio Prot	c0.75		0.01	c0.69	c0.05	
v/s Ratio Perm						0.00
v/c Ratio	0.93		0.48	0.81	0.58	0.04
Uniform Delay, d1	10.8		67.6	4.7	61.6	58.8
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	6.4		8.3	1.7	5.2	0.1
Delay (s)	17.2		75.9	6.3	66.9	58.9
Level of Service	B		E	A	E	E
Approach Delay (s)	17.2			6.9	63.6	
Approach LOS	B			A	E	

Intersection Summary			
HCM 2000 Control Delay	13.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	140.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	27	38	75	1835	1569	96
Future Volume (vph)	27	38	75	1835	1569	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1568	1752	1845	3475	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1752	1568	1752	1845	3475	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	27	38	75	1835	1569	96
RTOR Reduction (vph)	0	36	0	0	2	0
Lane Group Flow (vph)	27	2	75	1835	1663	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	6.5	6.5	10.7	127.2	112.5	
Effective Green, g (s)	6.5	6.5	10.7	127.2	112.5	
Actuated g/C Ratio	0.05	0.05	0.08	0.90	0.79	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	80	71	132	1656	2758	
v/s Ratio Prot	c0.02		0.04	c0.99	0.48	
v/s Ratio Perm		0.00				
v/c Ratio	0.34	0.02	0.57	1.11	0.60	
Uniform Delay, d1	65.5	64.6	63.3	7.2	5.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.5	0.1	5.5	58.0	0.4	
Delay (s)	68.0	64.7	68.8	65.2	6.1	
Level of Service	E	E	E	E	A	
Approach Delay (s)	66.1			65.4	6.1	
Approach LOS	E			E	A	

Intersection Summary			
HCM 2000 Control Delay	38.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	141.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	106.6%	ICU Level of Service	G
Analysis Period (min)	15		

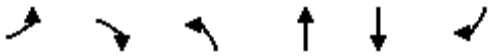
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	144	458	2274	42	237	2067
Future Volume (vph)	144	458	2274	42	237	2067
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.91		0.97	0.91
Frt	1.00	0.85	1.00		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	1568	5022		3400	5036
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	1568	5022		3400	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	144	458	2274	42	237	2067
RTOR Reduction (vph)	0	203	2	0	0	0
Lane Group Flow (vph)	144	255	2314	0	237	2067
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Actuated Green, G (s)	14.2	14.2	41.1		10.3	55.4
Effective Green, g (s)	14.2	14.2	41.1		10.3	55.4
Actuated g/C Ratio	0.18	0.18	0.53		0.13	0.71
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	320	286	2659		451	3595
v/s Ratio Prot	0.08		c0.46		0.07	c0.41
v/s Ratio Perm		c0.16				
v/c Ratio	0.45	0.89	0.87		0.53	0.57
Uniform Delay, d1	28.2	30.9	15.9		31.4	5.4
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.0	27.1	3.4		1.1	0.2
Delay (s)	29.2	58.1	19.3		32.5	5.6
Level of Service	C	E	B		C	A
Approach Delay (s)	51.2		19.3			8.4
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	18.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	77.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	521	9	221	1449	823	611
Future Volume (vph)	521	9	221	1449	823	611
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	0.94	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1568	1752	3505	3281	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1752	1568	1752	3505	3281	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	521	9	221	1449	823	611
RTOR Reduction (vph)	0	3	0	0	167	0
Lane Group Flow (vph)	521	6	221	1449	1267	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	24.0	24.0	11.0	48.0	33.0	
Effective Green, g (s)	24.0	24.0	11.0	48.0	33.0	
Actuated g/C Ratio	0.30	0.30	0.14	0.60	0.41	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	525	470	240	2103	1353	
v/s Ratio Prot	c0.30		c0.13	0.41	c0.39	
v/s Ratio Perm		0.00				
v/c Ratio	0.99	0.01	0.92	0.69	0.94	
Uniform Delay, d1	27.9	19.7	34.1	10.9	22.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	37.1	0.0	37.2	1.0	12.2	
Delay (s)	65.0	19.7	71.3	11.9	34.7	
Level of Service	E	B	E	B	C	
Approach Delay (s)	64.3			19.7	34.7	
Approach LOS	E			B	C	

Intersection Summary			
HCM 2000 Control Delay	32.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	106	2975	16	170	1257
Future Volume (vph)	0	106	2975	16	170	1257
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	0.91		1.00	0.91
Frt		0.85	1.00		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		1568	5032		1752	5036
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		1568	5032		1752	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	106	2975	16	170	1257
RTOR Reduction (vph)	0	100	0	0	0	0
Lane Group Flow (vph)	0	6	2991	0	170	1257
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		6		5	2
Permitted Phases		8				
Actuated Green, G (s)		4.8	55.9		9.0	68.9
Effective Green, g (s)		4.8	55.9		9.0	68.9
Actuated g/C Ratio		0.06	0.68		0.11	0.84
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		92	3442		192	4247
v/s Ratio Prot			c0.59		c0.10	0.25
v/s Ratio Perm		c0.00				
v/c Ratio		0.07	0.87		0.89	0.30
Uniform Delay, d1		36.3	10.0		35.8	1.3
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.3	2.6		34.9	0.0
Delay (s)		36.6	12.6		70.7	1.4
Level of Service		D	B		E	A
Approach Delay (s)	36.6		12.6			9.6
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	81.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	57	0	2970	132	79	1547
Future Volume (vph)	57	0	2970	132	79	1547
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0	4.0
Lane Util. Factor	1.00		0.91		1.00	0.91
Frt	1.00		0.99		1.00	1.00
Flt Protected	0.95		1.00		0.95	1.00
Satd. Flow (prot)	1752		5004		1752	5036
Flt Permitted	0.95		1.00		0.95	1.00
Satd. Flow (perm)	1752		5004		1752	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	57	0	2970	132	79	1547
RTOR Reduction (vph)	0	0	4	0	0	0
Lane Group Flow (vph)	57	0	3098	0	79	1547
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Actuated Green, G (s)	7.1		64.7		5.0	73.7
Effective Green, g (s)	7.1		64.7		5.0	73.7
Actuated g/C Ratio	0.08		0.73		0.06	0.83
Clearance Time (s)	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	140		3645		98	4179
v/s Ratio Prot	c0.03		c0.62		c0.05	0.31
v/s Ratio Perm						
v/c Ratio	0.41		0.85		0.81	0.37
Uniform Delay, d1	38.8		8.6		41.4	1.9
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	1.9		2.0		36.6	0.1
Delay (s)	40.8		10.6		78.0	1.9
Level of Service	D		B		E	A
Approach Delay (s)	40.8		10.6			5.6
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	9.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	88.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		

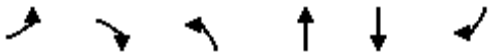
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	365	408	2767	435	710	734
Future Volume (vph)	365	408	2767	435	710	734
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.91		1.00	0.91
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	1568	4933		1752	5036
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	1568	4933		1752	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	365	408	2767	435	710	734
RTOR Reduction (vph)	0	108	14	0	0	0
Lane Group Flow (vph)	365	300	3188	0	710	734
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		3				
Actuated Green, G (s)	23.0	23.0	72.0		43.0	119.0
Effective Green, g (s)	23.0	23.0	72.0		43.0	119.0
Actuated g/C Ratio	0.15	0.15	0.48		0.29	0.79
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	268	240	2367		502	3995
v/s Ratio Prot	c0.21		c0.65		c0.41	0.15
v/s Ratio Perm		0.19				
v/c Ratio	1.36	1.25	1.35		1.41	0.18
Uniform Delay, d1	63.5	63.5	39.0		53.5	3.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	185.1	142.9	159.0		198.0	0.0
Delay (s)	248.6	206.4	198.0		251.5	3.8
Level of Service	F	F	F		F	A
Approach Delay (s)	226.4		198.0			125.6
Approach LOS	F		F			F

Intersection Summary			
HCM 2000 Control Delay	182.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.37		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	132.7%	ICU Level of Service	H
Analysis Period (min)	15		

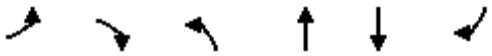
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	124	86	70	2871	920	82
Future Volume (vph)	124	86	70	2871	920	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1568	1752	5036	4974	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1752	1568	1752	5036	4974	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	124	86	70	2871	920	82
RTOR Reduction (vph)	0	74	0	0	12	0
Lane Group Flow (vph)	124	12	70	2871	990	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	8.1	8.1	3.7	43.3	35.6	
Effective Green, g (s)	8.1	8.1	3.7	43.3	35.6	
Actuated g/C Ratio	0.14	0.14	0.06	0.73	0.60	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	238	213	109	3671	2981	
v/s Ratio Prot	c0.07		0.04	c0.57	0.20	
v/s Ratio Perm		0.01				
v/c Ratio	0.52	0.06	0.64	0.78	0.33	
Uniform Delay, d1	23.8	22.3	27.2	5.1	6.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.1	0.1	12.2	1.1	0.1	
Delay (s)	25.9	22.4	39.4	6.2	6.0	
Level of Service	C	C	D	A	A	
Approach Delay (s)	24.5			7.0	6.0	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	7.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	59.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		

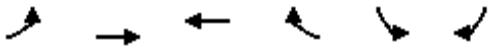
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	126	200	561	1398	789	348
Future Volume (vph)	126	200	561	1398	789	348
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	0.95	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1568	1752	3505	3344	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1752	1568	1752	3505	3344	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	126	200	561	1398	789	348
RTOR Reduction (vph)	0	173	0	0	54	0
Lane Group Flow (vph)	126	27	561	1398	1083	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	11.1	11.1	29.6	64.4	30.8	
Effective Green, g (s)	11.1	11.1	29.6	64.4	30.8	
Actuated g/C Ratio	0.13	0.13	0.35	0.77	0.37	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	232	208	621	2703	1233	
v/s Ratio Prot	c0.07		c0.32	0.40	c0.32	
v/s Ratio Perm		0.02				
v/c Ratio	0.54	0.13	0.90	0.52	0.88	
Uniform Delay, d1	33.8	31.9	25.6	3.6	24.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.6	0.3	16.5	0.2	7.3	
Delay (s)	36.4	32.2	42.1	3.8	31.9	
Level of Service	D	C	D	A	C	
Approach Delay (s)	33.8			14.8	31.9	
Approach LOS	C			B	C	

Intersection Summary			
HCM 2000 Control Delay	22.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	83.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		

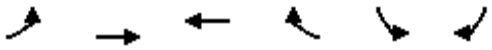
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	959	1243	2651	116	82	574
Future Volume (vph)	959	1243	2651	116	82	574
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	0.95	0.91		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3400	3505	5004		1752	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3400	3505	5004		1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	959	1243	2651	116	82	574
RTOR Reduction (vph)	0	0	3	0	0	314
Lane Group Flow (vph)	959	1243	2764	0	82	260
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	39.0	117.0	74.0		25.0	25.0
Effective Green, g (s)	39.0	117.0	74.0		25.0	25.0
Actuated g/C Ratio	0.26	0.78	0.49		0.17	0.17
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	884	2733	2468		292	261
v/s Ratio Prot	c0.28	0.35	c0.55		0.05	
v/s Ratio Perm						c0.17
v/c Ratio	1.08	0.45	1.12		0.28	1.00
Uniform Delay, d1	55.5	5.6	38.0		54.6	62.4
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	55.9	0.1	60.1		0.5	54.1
Delay (s)	111.4	5.7	98.1		55.2	116.6
Level of Service	F	A	F		E	F
Approach Delay (s)		51.8	98.1		108.9	
Approach LOS		D	F		F	

Intersection Summary			
HCM 2000 Control Delay	81.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.0%	ICU Level of Service	F
Analysis Period (min)	15		

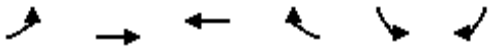
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	334	991	2604	39	153	175
Future Volume (vph)	334	991	2604	39	153	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3400	3505	3505	1568	3400	1568
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3400	3505	3505	1568	3400	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	334	991	2604	39	153	175
RTOR Reduction (vph)	0	0	0	6	0	129
Lane Group Flow (vph)	334	991	2604	33	153	46
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	15.0	127.0	108.0	108.0	11.8	11.8
Effective Green, g (s)	15.0	127.0	108.0	108.0	11.8	11.8
Actuated g/C Ratio	0.10	0.87	0.74	0.74	0.08	0.08
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	347	3032	2578	1153	273	126
v/s Ratio Prot	c0.10	0.28	c0.74		c0.05	
v/s Ratio Perm				0.02		0.03
v/c Ratio	0.96	0.33	1.01	0.03	0.56	0.37
Uniform Delay, d1	65.6	1.9	19.4	5.2	65.0	64.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	38.2	0.1	20.2	0.0	2.6	1.8
Delay (s)	103.8	1.9	39.6	5.2	67.6	65.8
Level of Service	F	A	D	A	E	E
Approach Delay (s)		27.6	39.1		66.6	
Approach LOS		C	D		E	

Intersection Summary			
HCM 2000 Control Delay	37.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	146.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	107	1036	2332	9	39	222
Future Volume (vph)	107	1036	2332	9	39	222
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3503		1752	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3503		1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	107	1036	2332	9	39	222
RTOR Reduction (vph)	0	0	0	0	0	79
Lane Group Flow (vph)	107	1036	2341	0	39	143
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	6.0	86.1	76.1		13.3	13.3
Effective Green, g (s)	6.0	86.1	76.1		13.3	13.3
Actuated g/C Ratio	0.06	0.80	0.71		0.12	0.12
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	97	2809	2482		216	194
v/s Ratio Prot	c0.06	0.30	c0.67		0.02	
v/s Ratio Perm						c0.09
v/c Ratio	1.10	0.37	0.94		0.18	0.74
Uniform Delay, d1	50.7	3.0	13.7		42.2	45.4
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	121.9	0.1	8.2		0.4	13.6
Delay (s)	172.6	3.1	22.0		42.6	59.0
Level of Service	F	A	C		D	E
Approach Delay (s)		19.0	22.0		56.5	
Approach LOS		B	C		E	

Intersection Summary			
HCM 2000 Control Delay	23.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	107.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	827	154	337	1274	159	380
Future Volume (vph)	827	154	337	1274	159	380
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3505	1568	3400	3505	3400	1568
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3505	1568	3400	3505	3400	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	827	154	337	1274	159	380
RTOR Reduction (vph)	0	98	0	0	0	291
Lane Group Flow (vph)	827	56	337	1274	159	89
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	16.3	16.3	7.9	28.2	8.7	8.7
Effective Green, g (s)	16.3	16.3	7.9	28.2	8.7	8.7
Actuated g/C Ratio	0.36	0.36	0.18	0.63	0.19	0.19
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1272	569	598	2201	658	303
v/s Ratio Prot	0.24		0.10	c0.36	0.05	
v/s Ratio Perm		0.04				c0.06
v/c Ratio	0.65	0.10	0.56	0.58	0.24	0.29
Uniform Delay, d1	11.9	9.4	16.9	4.9	15.3	15.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.2	0.1	1.2	0.4	0.2	0.5
Delay (s)	13.1	9.5	18.1	5.3	15.5	16.0
Level of Service	B	A	B	A	B	B
Approach Delay (s)	12.6			7.9	15.9	
Approach LOS	B			A	B	

Intersection Summary			
HCM 2000 Control Delay	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	44.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		

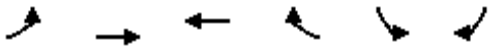
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1207	0	293	1611	0	114
Future Volume (vph)	1207	0	293	1611	0	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0		4.0
Lane Util. Factor	0.95		1.00	0.95		1.00
Frt	1.00		1.00	1.00		0.85
Flt Protected	1.00		0.95	1.00		1.00
Satd. Flow (prot)	3505		1752	3505		1568
Flt Permitted	1.00		0.22	1.00		1.00
Satd. Flow (perm)	3505		408	3505		1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1207	0	293	1611	0	114
RTOR Reduction (vph)	0	0	0	0	0	106
Lane Group Flow (vph)	1207	0	293	1611	0	8
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	76.0		76.0	76.0		6.4
Effective Green, g (s)	76.0		76.0	76.0		6.4
Actuated g/C Ratio	0.84		0.84	0.84		0.07
Clearance Time (s)	4.0		4.0	4.0		4.0
Vehicle Extension (s)	3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	2946		343	2946		111
v/s Ratio Prot	0.34			0.46		
v/s Ratio Perm			c0.72			c0.01
v/c Ratio	0.41		0.85	0.55		0.07
Uniform Delay, d1	1.7		4.1	2.1		39.2
Progression Factor	1.00		1.00	1.00		1.00
Incremental Delay, d2	0.1		18.3	0.2		0.3
Delay (s)	1.8		22.3	2.3		39.5
Level of Service	A		C	A		D
Approach Delay (s)	1.8			5.4	39.5	
Approach LOS	A			A	D	

Intersection Summary			
HCM 2000 Control Delay	5.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	90.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	176	881	2198	44	227	160
Future Volume (vph)	176	881	2198	44	227	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3495		1752	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3495		1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	176	881	2198	44	227	160
RTOR Reduction (vph)	0	0	1	0	0	122
Lane Group Flow (vph)	176	881	2241	0	227	38
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	10.0	86.0	72.0		15.8	15.8
Effective Green, g (s)	10.0	86.0	72.0		15.8	15.8
Actuated g/C Ratio	0.09	0.78	0.66		0.14	0.14
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	159	2745	2291		252	225
v/s Ratio Prot	c0.10	0.25	c0.64		c0.13	
v/s Ratio Perm						0.02
v/c Ratio	1.11	0.32	0.98		0.90	0.17
Uniform Delay, d1	49.9	3.4	18.1		46.2	41.2
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	102.9	0.1	13.9		31.8	0.4
Delay (s)	152.8	3.5	32.0		78.0	41.6
Level of Service	F	A	C		E	D
Approach Delay (s)		28.4	32.0		63.0	
Approach LOS		C	C		E	

Intersection Summary			
HCM 2000 Control Delay	34.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	109.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	659	221	182	829	840	199	1837	190	505	814	71
Future Volume (veh/h)	39	659	221	182	829	840	199	1837	190	505	814	71
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1827	1827	1827	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	39	659	221	182	829	840	199	1837	190	505	814	71
Adj No. of Lanes	1	2	0	1	1	1	1	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	4	4	4	4	4	4
Cap, veh/h	63	708	237	204	650	553	224	1397	144	337	1840	573
Arrive On Green	0.04	0.27	0.27	0.12	0.36	0.36	0.13	0.30	0.30	0.19	0.37	0.37
Sat Flow, veh/h	1757	2580	865	1740	1827	1553	1740	4596	473	1740	4988	1553
Grp Volume(v), veh/h	39	448	432	182	829	840	199	1327	700	505	814	71
Grp Sat Flow(s),veh/h/ln	1757	1752	1692	1740	1827	1553	1740	1663	1743	1740	1663	1553
Q Serve(g_s), s	3.2	36.0	36.0	14.9	51.5	31.6	16.3	44.0	44.0	28.0	17.8	4.4
Cycle Q Clear(g_c), s	3.2	36.0	36.0	14.9	51.5	31.6	16.3	44.0	44.0	28.0	17.8	4.4
Prop In Lane	1.00		0.51	1.00		1.00	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	63	481	465	204	650	553	224	1011	530	337	1840	573
V/C Ratio(X)	0.62	0.93	0.93	0.89	1.27	1.52	0.89	1.31	1.32	1.50	0.44	0.12
Avail Cap(c_a), veh/h	194	533	514	216	650	553	325	1011	530	337	1840	573
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.8	51.1	51.1	63.0	46.6	17.6	62.0	50.4	50.4	58.4	34.4	30.2
Incr Delay (d2), s/veh	9.4	22.0	22.6	32.6	135.5	243.1	18.4	147.6	157.4	240.0	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	20.3	19.7	9.0	50.3	50.9	9.0	40.8	44.2	35.8	8.2	1.9
LnGrp Delay(d),s/veh	78.2	73.1	73.8	95.6	182.1	260.7	80.4	197.9	207.7	298.4	34.6	30.3
LnGrp LOS	E	E	E	F	F	F	F	F	F	F	C	C
Approach Vol, veh/h		919			1851			2226			1390	
Approach Delay, s/veh		73.6			209.2			190.5			130.2	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	32.0	48.0	21.0	43.7	22.6	57.4	9.2	55.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	28.0	44.0	18.0	44.0	27.0	45.0	16.0	46.0
Max Q Clear Time (g_c+I1), s	30.0	46.0	16.9	38.0	18.3	19.8	5.2	53.5
Green Ext Time (p_c), s	0.0	0.0	0.1	1.7	0.3	8.6	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	166.0
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	398	727	21	30	613	561	68	1451	70	313	526	210
Future Volume (veh/h)	398	727	21	30	613	561	68	1451	70	313	526	210
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	398	727	21	30	613	561	68	1451	70	313	526	210
Adj No. of Lanes	1	2	0	1	2	1	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	340	1409	41	38	818	366	106	1326	64	248	1511	676
Arrive On Green	0.19	0.41	0.41	0.02	0.23	0.23	0.03	0.39	0.39	0.07	0.44	0.44
Sat Flow, veh/h	1757	3479	100	1757	3505	1568	3375	3372	162	3375	3471	1553
Grp Volume(v), veh/h	398	366	382	30	613	561	68	745	776	313	526	210
Grp Sat Flow(s),veh/h/ln	1757	1752	1827	1757	1752	1568	1688	1736	1798	1688	1736	1553
Q Serve(g_s), s	29.0	23.6	23.6	2.5	24.4	35.0	3.0	59.0	59.0	11.0	15.1	13.2
Cycle Q Clear(g_c), s	29.0	23.6	23.6	2.5	24.4	35.0	3.0	59.0	59.0	11.0	15.1	13.2
Prop In Lane	1.00		0.05	1.00		1.00	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	340	710	740	38	818	366	106	683	707	248	1511	676
V/C Ratio(X)	1.17	0.52	0.52	0.79	0.75	1.53	0.64	1.09	1.10	1.26	0.35	0.31
Avail Cap(c_a), veh/h	340	710	740	70	818	366	135	683	707	248	1511	676
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.5	33.6	33.6	73.0	53.4	57.5	71.8	45.5	45.5	69.5	28.2	27.7
Incr Delay (d2), s/veh	104.1	0.6	0.6	29.2	3.9	253.4	6.5	62.0	63.4	147.1	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	23.9	11.5	12.0	1.5	12.3	40.9	1.5	40.0	41.7	10.2	7.3	5.7
LnGrp Delay(d),s/veh	164.6	34.2	34.2	102.2	57.3	310.9	78.3	107.5	108.9	216.6	28.3	27.9
LnGrp LOS	F	C	C	F	E	F	E	F	F	F	C	C
Approach Vol, veh/h		1146			1204			1589			1049	
Approach Delay, s/veh		79.5			176.6			107.0			84.4	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	63.0	7.2	64.8	8.7	69.3	33.0	39.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	11.0	59.0	6.0	58.0	6.0	64.0	29.0	35.0
Max Q Clear Time (g_c+I1), s	13.0	61.0	4.5	25.6	5.0	17.1	31.0	37.0
Green Ext Time (p_c), s	0.0	0.0	0.0	15.0	0.0	26.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	112.7
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	1438	100	264	1569	132	72	633	190	73	515	2
Future Volume (veh/h)	11	1438	100	264	1569	132	72	633	190	73	515	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1900	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	11	1438	100	264	1569	132	72	633	190	73	515	2
Adj No. of Lanes	1	2	2	1	2	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	18	1367	1077	286	1776	148	92	700	313	93	717	3
Arrive On Green	0.01	0.40	0.40	0.17	0.56	0.56	0.05	0.20	0.20	0.05	0.20	0.20
Sat Flow, veh/h	1707	3406	2682	1707	3183	266	1757	3505	1568	1757	3581	14
Grp Volume(v), veh/h	11	1438	100	264	834	867	72	633	190	73	252	265
Grp Sat Flow(s),veh/h/ln	1707	1703	1341	1707	1703	1746	1757	1752	1568	1757	1752	1842
Q Serve(g_s), s	0.6	36.0	2.1	13.7	38.0	39.1	3.6	15.8	9.9	3.7	12.0	12.0
Cycle Q Clear(g_c), s	0.6	36.0	2.1	13.7	38.0	39.1	3.6	15.8	9.9	3.7	12.0	12.0
Prop In Lane	1.00		1.00	1.00		0.15	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	18	1367	1077	286	950	974	92	700	313	93	351	369
V/C Ratio(X)	0.60	1.05	0.09	0.92	0.88	0.89	0.78	0.90	0.61	0.78	0.72	0.72
Avail Cap(c_a), veh/h	76	1367	1077	286	950	974	118	704	315	98	351	369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.2	26.8	16.7	36.8	17.1	17.4	42.0	35.0	32.7	41.9	33.5	33.5
Incr Delay (d2), s/veh	28.0	39.1	0.0	34.0	9.3	10.3	22.4	15.2	3.3	31.6	6.9	6.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	24.1	0.8	9.1	20.1	21.3	2.3	9.1	4.5	2.6	6.5	6.8
LnGrp Delay(d),s/veh	72.1	66.0	16.7	70.8	26.5	27.7	64.4	50.2	36.0	73.5	40.4	40.1
LnGrp LOS	E	F	B	E	C	C	E	D	D	E	D	D
Approach Vol, veh/h		1549			1965			895			590	
Approach Delay, s/veh		62.8			33.0			48.3			44.3	
Approach LOS		E			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	21.9	19.0	40.0	8.7	22.0	5.0	54.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	18.0	15.0	36.0	6.0	17.0	4.0	47.0
Max Q Clear Time (g_c+I1), s	5.7	17.8	15.7	38.0	5.6	14.0	2.6	41.1
Green Ext Time (p_c), s	0.0	0.1	0.0	0.0	0.0	2.0	0.0	5.7

Intersection Summary	
HCM 2010 Ctrl Delay	46.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	658	269	146	988	125	451	432	135	37	511	33
Future Volume (veh/h)	36	658	269	146	988	125	451	432	135	37	511	33
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	36	658	269	146	988	125	451	432	135	37	511	33
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	47	919	411	179	1056	134	483	1479	662	48	612	274
Arrive On Green	0.03	0.26	0.26	0.10	0.34	0.34	0.27	0.42	0.42	0.03	0.17	0.17
Sat Flow, veh/h	1757	3505	1568	1757	3131	396	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	36	658	269	146	553	560	451	432	135	37	511	33
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1775	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	1.7	14.6	13.1	7.0	26.2	26.2	21.5	7.0	4.7	1.8	12.1	1.5
Cycle Q Clear(g_c), s	1.7	14.6	13.1	7.0	26.2	26.2	21.5	7.0	4.7	1.8	12.1	1.5
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	47	919	411	179	591	598	483	1479	662	48	612	274
V/C Ratio(X)	0.76	0.72	0.65	0.82	0.94	0.94	0.93	0.29	0.20	0.77	0.84	0.12
Avail Cap(c_a), veh/h	82	940	420	205	592	600	492	1479	662	123	695	311
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.5	28.7	28.2	37.7	27.5	27.5	30.3	16.3	15.7	41.4	34.2	29.9
Incr Delay (d2), s/veh	22.0	2.6	3.5	19.7	22.3	22.3	24.9	0.1	0.2	22.4	7.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	7.4	6.0	4.3	16.3	16.5	13.7	3.4	2.0	1.2	6.5	0.7
LnGrp Delay(d),s/veh	63.5	31.3	31.7	57.5	49.8	49.8	55.3	16.4	15.8	63.8	42.1	30.0
LnGrp LOS	E	C	C	E	D	D	E	B	B	E	D	C
Approach Vol, veh/h		963			1259			1018			581	
Approach Delay, s/veh		32.6			50.7			33.6			42.8	
Approach LOS		C			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	40.2	12.7	26.5	27.6	19.0	6.3	32.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	35.0	10.0	23.0	24.0	17.0	4.0	29.0
Max Q Clear Time (g_c+I1), s	3.8	9.0	9.0	16.6	23.5	14.1	3.7	28.2
Green Ext Time (p_c), s	0.0	7.8	0.0	5.2	0.1	0.9	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	40.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	728	88	88	835	295	47	890	203	189	361	29
Future Volume (veh/h)	84	728	88	88	835	295	47	890	203	189	361	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	84	728	88	88	835	295	47	890	203	189	361	29
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	107	932	417	112	942	422	64	992	444	207	1278	572
Arrive On Green	0.06	0.27	0.27	0.06	0.27	0.27	0.04	0.28	0.28	0.12	0.36	0.36
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	84	728	88	88	835	295	47	890	203	189	361	29
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1568	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	2.8	11.4	2.6	2.9	13.6	10.1	1.6	14.5	6.3	6.3	4.3	0.7
Cycle Q Clear(g_c), s	2.8	11.4	2.6	2.9	13.6	10.1	1.6	14.5	6.3	6.3	4.3	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	107	932	417	112	942	422	64	992	444	207	1278	572
V/C Ratio(X)	0.79	0.78	0.21	0.79	0.89	0.70	0.74	0.90	0.46	0.91	0.28	0.05
Avail Cap(c_a), veh/h	118	945	423	118	945	423	148	1004	449	207	1278	572
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.5	20.2	16.9	27.4	20.8	19.5	28.3	20.4	17.5	25.9	13.4	12.2
Incr Delay (d2), s/veh	26.8	4.2	0.2	27.7	10.2	5.1	15.1	10.6	0.7	39.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	6.0	1.1	2.3	7.8	4.9	1.0	8.4	2.8	5.3	2.1	0.3
LnGrp Delay(d),s/veh	54.3	24.4	17.2	55.0	31.0	24.6	43.4	31.1	18.3	64.9	13.5	12.2
LnGrp LOS	D	C	B	E	C	C	D	C	B	E	B	B
Approach Vol, veh/h		900			1218			1140			579	
Approach Delay, s/veh		26.5			31.2			29.3			30.2	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	20.8	7.8	19.8	6.2	25.6	7.6	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	17.0	4.0	16.0	5.0	19.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	8.3	16.5	4.9	13.4	3.6	6.3	4.8	15.6
Green Ext Time (p_c), s	0.0	0.3	0.0	2.2	0.0	7.4	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	29.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	330	489	131	236	492	716	64	3446	456	591	2992	532
Future Volume (veh/h)	330	489	131	236	492	716	64	3446	456	591	2992	532
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	330	489	131	236	492	716	64	3446	456	591	2992	532
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	192	885	396	192	885	547	78	2290	713	325	2654	826
Arrive On Green	0.06	0.25	0.25	0.06	0.25	0.25	0.02	0.46	0.46	0.10	0.53	0.53
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	330	489	131	236	492	716	64	3446	456	591	2992	532
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	8.5	18.2	10.3	8.5	18.4	38.0	2.8	69.1	33.8	14.5	80.1	36.7
Cycle Q Clear(g_c), s	8.5	18.2	10.3	8.5	18.4	38.0	2.8	69.1	33.8	14.5	80.1	36.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	192	885	396	192	885	547	78	2290	713	325	2654	826
V/C Ratio(X)	1.71	0.55	0.33	1.23	0.56	1.31	0.82	1.50	0.64	1.82	1.13	0.64
Avail Cap(c_a), veh/h	192	885	396	192	885	547	78	2290	713	325	2654	826
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.0	48.9	45.9	71.0	48.9	49.0	73.2	40.7	31.2	68.0	35.2	25.0
Incr Delay (d2), s/veh	342.5	0.4	0.2	138.9	0.5	151.8	43.8	229.5	1.5	379.7	62.7	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.1	8.9	4.5	7.7	8.9	45.7	1.8	80.3	14.8	23.9	52.0	16.0
LnGrp Delay(d),s/veh	413.5	49.3	46.1	209.9	49.4	200.8	116.9	270.2	32.7	447.7	97.9	26.4
LnGrp LOS	F	D	D	F	D	F	F	F	C	F	F	C
Approach Vol, veh/h		950			1444			3966			4115	
Approach Delay, s/veh		175.4			150.7			240.4			138.9	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	84.9	14.0	42.6	20.0	73.9	14.0	42.6
Change Period (Y+Rc), s	5.5	4.8	5.5	* 4.6	5.5	* 4.8	5.5	4.6
Max Green Setting (Gmax), s	3.5	79.9	8.5	* 38	14.5	* 69	8.5	37.7
Max Q Clear Time (g_c+I1), s	4.8	82.1	10.5	40.0	16.5	71.1	10.5	20.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1

Intersection Summary	
HCM 2010 Ctrl Delay	182.3
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	2	9	0	97	0	3365	150	31	2693	6
Future Volume (veh/h)	10	0	2	9	0	97	0	3365	150	31	2693	6
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	10	0	2	9	0	97	0	3365	150	31	2693	6
Adj No. of Lanes	0	1	0	1	0	2	1	3	1	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	12	0	2	83	0	148	2	3621	1128	38	4087	9
Arrive On Green	0.01	0.00	0.01	0.05	0.00	0.05	0.00	0.73	0.73	0.02	0.80	0.80
Sat Flow, veh/h	1435	0	287	1757	0	3136	1740	4988	1553	1740	5138	11
Grp Volume(v), veh/h	12	0	0	9	0	97	0	3365	150	31	1742	957
Grp Sat Flow(s),veh/h/ln	1722	0	0	1757	0	1568	1740	1663	1553	1740	1663	1825
Q Serve(g_s), s	0.7	0.0	0.0	0.5	0.0	3.3	0.0	61.1	3.1	1.9	24.2	24.2
Cycle Q Clear(g_c), s	0.7	0.0	0.0	0.5	0.0	3.3	0.0	61.1	3.1	1.9	24.2	24.2
Prop In Lane	0.83		0.17	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	14	0	0	83	0	148	2	3621	1128	38	2645	1452
V/C Ratio(X)	0.83	0.00	0.00	0.11	0.00	0.65	0.00	0.93	0.13	0.81	0.66	0.66
Avail Cap(c_a), veh/h	48	0	0	196	0	350	49	3762	1171	49	2645	1452
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.2	0.0	0.0	49.0	0.0	50.3	0.0	12.4	4.5	52.4	4.7	4.7
Incr Delay (d2), s/veh	33.6	0.0	0.0	0.2	0.0	1.8	0.0	5.3	0.2	44.6	1.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	0.3	0.0	1.5	0.0	29.2	1.4	1.4	11.3	12.7
LnGrp Delay(d),s/veh	86.8	0.0	0.0	49.2	0.0	52.2	0.0	17.6	4.6	97.0	5.8	6.6
LnGrp LOS	F			D		D		B	A	F	A	A
Approach Vol, veh/h		12			106			3515			2730	
Approach Delay, s/veh		86.8			51.9			17.1			7.1	
Approach LOS		F			D			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	90.5		6.4	7.5	83.1		10.6
Change Period (Y+Rc), s	* 4.6	5.0		5.5	* 5.1	* 5		5.5
Max Green Setting (Gmax), s	* 3	81.4		3.0	* 3	* 81		12.0
Max Q Clear Time (g_c+I1), s	0.0	26.2		2.7	3.9	63.1		5.3
Green Ext Time (p_c), s	0.0	54.9		0.0	0.0	15.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.5
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	329	23	149	410	832	34	2829	206	422	2387	0
Future Volume (veh/h)	0	329	23	149	410	832	34	2829	206	422	2387	0
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1845	1845	1845	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	0	329	23	149	410	832	34	2829	206	422	2387	0
Adj No. of Lanes	2	2	1	2	2	1	2	3	0	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	2	512	229	136	796	573	60	2448	174	468	3171	0
Arrive On Green	0.00	0.15	0.15	0.04	0.23	0.23	0.02	0.51	0.51	0.14	0.64	0.00
Sat Flow, veh/h	3375	3471	1553	3408	3505	1568	3375	4754	338	3375	5152	0
Grp Volume(v), veh/h	0	329	23	149	410	832	34	1959	1076	422	2387	0
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1704	1752	1568	1688	1663	1767	1688	1663	0
Q Serve(g_s), s	0.0	12.3	1.8	5.5	14.2	31.4	1.4	71.2	71.2	17.0	46.2	0.0
Cycle Q Clear(g_c), s	0.0	12.3	1.8	5.5	14.2	31.4	1.4	71.2	71.2	17.0	46.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		0.00
Lane Grp Cap(c), veh/h	2	512	229	136	796	573	60	1712	910	468	3171	0
V/C Ratio(X)	0.00	0.64	0.10	1.10	0.52	1.45	0.56	1.14	1.18	0.90	0.75	0.00
Avail Cap(c_a), veh/h	73	728	326	136	796	573	103	1712	910	549	3225	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	55.5	51.0	66.4	46.8	43.9	67.4	33.5	33.5	58.6	17.6	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.1	106.3	0.3	212.5	3.1	72.3	93.5	15.1	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.0	0.8	4.6	6.9	55.6	0.7	49.8	58.3	9.0	21.3	0.0
LnGrp Delay(d),s/veh	0.0	56.0	51.1	172.7	47.0	256.3	70.4	105.8	127.0	73.7	18.5	0.0
LnGrp LOS		E	D	F	D	F	E	F	F	E	B	
Approach Vol, veh/h		352			1391			3069			2809	
Approach Delay, s/veh		55.7			185.7			112.9			26.8	
Approach LOS		E			F			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	93.2	0.0	37.1	24.7	76.5	11.0	26.1
Change Period (Y+Rc), s	5.5	5.3	5.5	* 5.7	5.5	* 5.3	5.5	* 5.7
Max Green Setting (Gmax), s	4.2	89.4	3.0	* 31	22.5	* 71	5.5	* 29
Max Q Clear Time (g_c+I1), s	3.4	48.2	0.0	33.4	19.0	73.2	7.5	14.3
Green Ext Time (p_c), s	0.0	35.2	0.0	0.0	0.2	0.0	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	91.8
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	46	103	2896	24	61	2548
Future Volume (veh/h)	46	103	2896	24	61	2548
Number	3	18	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1827	1900	1827	1827
Adj Flow Rate, veh/h	46	103	2896	24	61	2548
Adj No. of Lanes	1	1	3	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	4	4	4	4
Cap, veh/h	102	91	3589	30	77	2807
Arrive On Green	0.06	0.06	0.70	0.70	0.04	0.81
Sat Flow, veh/h	1757	1568	5267	42	1740	3563
Grp Volume(v), veh/h	46	103	1885	1035	61	2548
Grp Sat Flow(s),veh/h/ln	1757	1568	1663	1819	1740	1736
Q Serve(g_s), s	2.0	4.5	30.0	30.3	2.7	40.8
Cycle Q Clear(g_c), s	2.0	4.5	30.0	30.3	2.7	40.8
Prop In Lane	1.00	1.00		0.02	1.00	
Lane Grp Cap(c), veh/h	102	91	2339	1280	77	2807
V/C Ratio(X)	0.45	1.13	0.81	0.81	0.79	0.91
Avail Cap(c_a), veh/h	102	91	2339	1280	360	2928
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	36.4	7.9	7.9	36.6	5.3
Incr Delay (d2), s/veh	1.1	133.0	2.0	3.7	6.6	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	5.3	14.0	16.3	1.4	20.1
LnGrp Delay(d),s/veh	36.3	169.4	9.9	11.6	43.1	9.7
LnGrp LOS	D	F	A	B	D	A
Approach Vol, veh/h	149		2920			2609
Approach Delay, s/veh	128.3		10.5			10.5
Approach LOS	F		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		67.3			8.1	59.2		10.0
Change Period (Y+Rc), s		4.8			* 4.7	4.8		5.5
Max Green Setting (Gmax), s		65.2			* 16	53.4		4.5
Max Q Clear Time (g_c+I1), s		42.8			4.7	32.3		6.5
Green Ext Time (p_c), s		19.6			0.0	19.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.6
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	1488	677	98	1960	977	763	1984	74	1096	1563	188
Future Volume (veh/h)	85	1488	677	98	1960	977	763	1984	74	1096	1563	188
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	85	1488	677	98	1960	977	763	1984	74	1096	1563	188
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	4	4	4	4	4	4
Cap, veh/h	68	1334	597	80	1357	607	402	1380	430	569	1620	504
Arrive On Green	0.02	0.39	0.39	0.02	0.40	0.40	0.12	0.28	0.28	0.17	0.32	0.32
Sat Flow, veh/h	3312	3406	1524	3312	3406	1524	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	85	1488	677	98	1960	977	763	1984	74	1096	1563	188
Grp Sat Flow(s),veh/h/ln	1656	1703	1524	1656	1703	1524	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	3.0	56.9	56.9	3.5	57.9	57.9	17.3	40.2	5.3	24.5	44.8	13.5
Cycle Q Clear(g_c), s	3.0	56.9	56.9	3.5	57.9	57.9	17.3	40.2	5.3	24.5	44.8	13.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	68	1334	597	80	1357	607	402	1380	430	569	1620	504
V/C Ratio(X)	1.24	1.12	1.13	1.23	1.44	1.61	1.90	1.44	0.17	1.93	0.96	0.37
Avail Cap(c_a), veh/h	68	1334	597	80	1357	607	402	1380	430	569	1620	504
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.2	44.2	44.2	70.9	43.7	43.7	64.0	52.5	39.9	60.4	48.2	37.7
Incr Delay (d2), s/veh	187.8	62.9	79.9	174.4	204.1	281.8	413.6	201.2	0.1	423.0	14.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	38.3	37.2	3.5	65.6	71.9	31.1	44.1	2.3	44.8	22.8	5.8
LnGrp Delay(d),s/veh	259.0	107.1	124.1	245.3	247.8	325.5	477.6	253.8	40.0	483.4	63.0	37.8
LnGrp LOS	F	F	F	F	F	F	F	F	D	F	E	D
Approach Vol, veh/h		2250			3035			2821			2847	
Approach Delay, s/veh		117.9			272.7			308.7			223.2	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	63.3	22.0	52.0	9.0	62.3	29.0	45.0
Change Period (Y+Rc), s	5.0	* 5.4	* 4.7	4.8	5.5	* 5.4	4.5	4.8
Max Green Setting (Gmax), s	3.0	* 58	* 17	47.2	3.5	* 57	24.5	40.2
Max Q Clear Time (g_c+I1), s	5.0	59.9	19.3	46.8	5.5	58.9	26.5	42.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		237.3
HCM 2010 LOS		F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	612	57	401	826	273	325	2116	555	131	1767	432
Future Volume (veh/h)	108	612	57	401	826	273	325	2116	555	131	1767	432
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1845	1845	1827	1827
Adj Flow Rate, veh/h	108	612	57	401	826	273	325	2116	555	131	1767	432
Adj No. of Lanes	1	1	1	2	2	1	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	3	3	4	4
Cap, veh/h	130	523	445	336	1073	480	278	2038	641	109	1575	490
Arrive On Green	0.07	0.28	0.28	0.10	0.31	0.31	0.16	0.41	0.41	0.06	0.32	0.32
Sat Flow, veh/h	1757	1845	1568	3408	3505	1568	1740	4988	1568	1757	4988	1553
Grp Volume(v), veh/h	108	612	57	401	826	273	325	2116	555	131	1767	432
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1752	1568	1740	1663	1568	1757	1663	1553
Q Serve(g_s), s	8.5	39.7	3.8	13.8	30.0	20.5	22.4	57.2	45.4	8.7	44.2	36.9
Cycle Q Clear(g_c), s	8.5	39.7	3.8	13.8	30.0	20.5	22.4	57.2	45.4	8.7	44.2	36.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	130	523	445	336	1073	480	278	2038	641	109	1575	490
V/C Ratio(X)	0.83	1.17	0.13	1.19	0.77	0.57	1.17	1.04	0.87	1.20	1.12	0.88
Avail Cap(c_a), veh/h	152	523	445	336	1073	480	278	2038	641	109	1575	490
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.0	50.1	37.3	63.1	44.1	40.8	58.8	41.4	37.9	65.7	47.9	45.4
Incr Delay (d2), s/veh	24.4	95.5	0.0	112.7	3.1	1.0	107.1	30.7	11.5	149.5	64.0	16.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	34.1	1.6	11.7	14.9	9.0	19.0	32.0	21.6	8.7	29.6	18.0
LnGrp Delay(d),s/veh	88.3	145.6	37.3	175.8	47.2	41.8	165.9	72.1	49.4	215.2	111.9	61.7
LnGrp LOS	F	F	D	F	D	D	F	F	D	F	F	E
Approach Vol, veh/h		777			1500			2996			2330	
Approach Delay, s/veh		129.7			80.6			78.1			108.4	
Approach LOS		F			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.0	49.0	15.8	48.2	14.0	62.0	19.0	45.0
Change Period (Y+Rc), s	* 4.6	4.8	5.5	* 5.3	* 5.3	4.8	* 5.2	* 5.3
Max Green Setting (Gmax), s	* 22	44.2	12.1	* 42	* 8.7	57.2	* 14	* 40
Max Q Clear Time (g_c+I1), s	24.4	46.2	10.5	32.0	10.7	59.2	15.8	41.7
Green Ext Time (p_c), s	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	93.1
HCM 2010 LOS	F

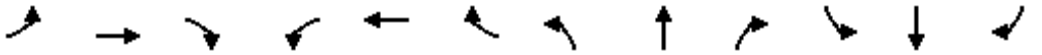
Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	268	852	84	107	1081	816	274	2146	382	839	1016	376
Future Volume (veh/h)	268	852	84	107	1081	816	274	2146	382	839	1016	376
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1845	1845	1827	1827
Adj Flow Rate, veh/h	268	852	84	107	1081	816	274	2146	382	839	1016	376
Adj No. of Lanes	2	1	1	1	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	3	3	4	4
Cap, veh/h	204	627	533	82	1145	512	323	1662	523	591	2050	638
Arrive On Green	0.06	0.34	0.34	0.05	0.33	0.33	0.10	0.33	0.33	0.17	0.41	0.41
Sat Flow, veh/h	3408	1845	1568	1757	3505	1568	3375	4988	1568	3408	4988	1553
Grp Volume(v), veh/h	268	852	84	107	1081	816	274	2146	382	839	1016	376
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1757	1752	1568	1688	1663	1568	1704	1663	1553
Q Serve(g_s), s	9.0	51.0	5.6	7.0	45.0	49.0	12.0	50.0	32.2	26.0	22.6	28.2
Cycle Q Clear(g_c), s	9.0	51.0	5.6	7.0	45.0	49.0	12.0	50.0	32.2	26.0	22.6	28.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	204	627	533	82	1145	512	323	1663	523	591	2050	638
V/C Ratio(X)	1.31	1.36	0.16	1.31	0.94	1.59	0.85	1.29	0.73	1.42	0.50	0.59
Avail Cap(c_a), veh/h	204	627	533	82	1145	512	405	1663	523	591	2050	638
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.5	49.5	34.5	71.5	49.2	50.5	66.8	50.0	44.1	62.0	32.7	34.3
Incr Delay (d2), s/veh	170.2	171.5	0.1	201.3	15.1	276.0	13.0	135.5	5.2	198.9	0.2	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	55.8	2.4	8.0	24.2	60.5	6.2	43.8	14.7	28.5	10.4	12.3
LnGrp Delay(d),s/veh	240.7	221.0	34.7	272.8	64.3	326.5	79.7	185.5	49.3	260.9	32.9	35.8
LnGrp LOS	F	F	C	F	E	F	E	F	D	F	C	D
Approach Vol, veh/h		1204			2004			2802			2231	
Approach Delay, s/veh		212.4			182.2			156.6			119.1	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.3	65.7	13.0	53.0	30.0	54.0	11.0	55.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	18.0	58.0	9.0	49.0	26.0	50.0	7.0	51.0
Max Q Clear Time (g_c+I1), s	14.0	30.2	11.0	51.0	28.0	52.0	9.0	53.0
Green Ext Time (p_c), s	0.4	26.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	160.8
HCM 2010 LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1342	414	134	13	510	7	933	2195	129	9	816	800
Future Volume (veh/h)	1342	414	134	13	510	7	933	2195	129	9	816	800
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	1342	414	134	13	510	7	933	2195	129	9	816	800
Adj No. of Lanes	1	2	1	1	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	694	1748	782	15	391	175	497	1707	531	21	1023	319
Arrive On Green	0.40	0.50	0.50	0.01	0.11	0.11	0.15	0.34	0.34	0.01	0.21	0.21
Sat Flow, veh/h	1740	3471	1553	1740	3471	1553	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	1342	414	134	13	510	7	933	2195	129	9	816	800
Grp Sat Flow(s),veh/h/ln	1740	1736	1553	1740	1736	1553	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	59.9	10.1	7.0	1.1	16.9	0.6	22.1	51.4	8.9	0.4	23.3	30.8
Cycle Q Clear(g_c), s	59.9	10.1	7.0	1.1	16.9	0.6	22.1	51.4	8.9	0.4	23.3	30.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	694	1748	782	15	391	175	497	1707	531	21	1023	319
V/C Ratio(X)	1.93	0.24	0.17	0.86	1.30	0.04	1.88	1.29	0.24	0.43	0.80	2.51
Avail Cap(c_a), veh/h	694	1748	782	58	391	175	497	1707	531	67	1023	319
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	21.0	20.2	74.3	66.6	59.4	64.0	49.4	35.4	74.3	56.7	59.7
Incr Delay (d2), s/veh	425.0	0.3	0.5	36.8	154.7	0.4	402.4	133.4	1.1	5.0	6.5	689.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	110.7	4.9	3.1	0.7	16.5	0.3	38.1	44.6	4.0	0.2	11.3	74.2
LnGrp Delay(d),s/veh	470.1	21.3	20.7	111.1	221.3	59.8	466.4	182.7	36.5	79.3	63.1	748.7
LnGrp LOS	F	C	C	F	F	E	F	F	D	E	E	F
Approach Vol, veh/h		1890			530			3257			1625	
Approach Delay, s/veh		340.0			216.5			258.2			400.7	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.0	36.0	65.0	22.1	6.4	56.6	6.3	80.8
Change Period (Y+Rc), s	* 4.9	* 5.2	* 5.1	* 5.2	5.5	* 5.2	5.0	* 5.2
Max Green Setting (Gmax), s	* 22	* 31	* 60	* 17	3.0	* 50	5.0	* 72
Max Q Clear Time (g_c+I1), s	24.1	32.8	61.9	18.9	2.4	53.4	3.1	12.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.5

Intersection Summary	
HCM 2010 Ctrl Delay	308.0
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	619	371	109	916	237	494	2754	201	31	1007	89
Future Volume (veh/h)	87	619	371	109	916	237	494	2754	201	31	1007	89
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	87	619	371	109	916	237	494	2754	201	31	1007	89
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	104	819	367	156	872	390	543	2691	838	56	1970	613
Arrive On Green	0.03	0.23	0.23	0.05	0.25	0.25	0.16	0.54	0.54	0.02	0.40	0.40
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	87	619	371	109	916	237	494	2754	201	31	1007	89
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	3.4	22.1	31.4	4.2	33.4	18.0	19.3	72.4	9.2	1.2	20.5	4.9
Cycle Q Clear(g_c), s	3.4	22.1	31.4	4.2	33.4	18.0	19.3	72.4	9.2	1.2	20.5	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	104	819	367	156	872	390	543	2691	838	56	1970	613
V/C Ratio(X)	0.84	0.76	1.01	0.70	1.05	0.61	0.91	1.02	0.24	0.56	0.51	0.15
Avail Cap(c_a), veh/h	104	819	367	168	872	390	712	2691	838	75	1970	613
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.7	47.8	51.4	63.1	50.4	44.6	55.4	30.9	16.3	65.5	30.8	26.1
Incr Delay (d2), s/veh	39.8	6.4	50.1	9.0	44.5	5.3	11.4	23.6	0.5	3.2	0.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	11.4	18.7	2.2	21.5	8.3	9.8	39.0	4.1	0.6	9.5	2.2
LnGrp Delay(d),s/veh	104.6	54.3	101.6	72.2	94.9	49.9	66.8	54.5	16.8	68.7	31.4	26.4
LnGrp LOS	F	D	F	E	F	D	E	F	B	E	C	C
Approach Vol, veh/h		1077			1262			3449			1127	
Approach Delay, s/veh		74.6			84.5			54.1			32.1	
Approach LOS		E			F			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.1	58.5	9.6	39.0	7.7	77.9	11.6	37.0
Change Period (Y+Rc), s	5.5	* 5.5	5.5	5.6	5.5	* 5.5	5.5	* 5.6
Max Green Setting (Gmax), s	28.3	* 47	4.1	33.4	3.0	* 72	6.6	* 31
Max Q Clear Time (g_c+I1), s	21.3	22.5	5.4	35.4	3.2	74.4	6.2	33.4
Green Ext Time (p_c), s	0.3	24.6	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	59.3
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	1018	21	153	1269	80	238	394	208	28	148	6
Future Volume (veh/h)	115	1018	21	153	1269	80	238	394	208	28	148	6
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	115	1018	21	153	1269	80	238	394	208	28	148	6
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	145	1375	28	189	1395	88	276	516	439	33	261	222
Arrive On Green	0.08	0.39	0.39	0.11	0.42	0.42	0.16	0.28	0.28	0.02	0.14	0.14
Sat Flow, veh/h	1757	3512	72	1757	3349	211	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	115	508	531	153	663	686	238	394	208	28	148	6
Grp Sat Flow(s),veh/h/ln	1757	1752	1832	1757	1752	1807	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	5.1	19.7	19.7	6.7	28.1	28.2	10.5	15.5	8.7	1.3	5.9	0.3
Cycle Q Clear(g_c), s	5.1	19.7	19.7	6.7	28.1	28.2	10.5	15.5	8.7	1.3	5.9	0.3
Prop In Lane	1.00		0.04	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	145	686	717	189	730	753	276	516	439	33	261	222
V/C Ratio(X)	0.79	0.74	0.74	0.81	0.91	0.91	0.86	0.76	0.47	0.84	0.57	0.03
Avail Cap(c_a), veh/h	155	686	717	244	753	777	289	699	594	67	466	396
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	20.6	20.6	34.5	21.7	21.7	32.5	26.1	23.7	38.7	31.7	29.3
Incr Delay (d2), s/veh	22.8	4.3	4.1	14.4	14.6	14.6	21.9	3.4	0.8	40.0	1.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	10.3	10.7	4.0	16.4	17.0	6.7	8.4	3.9	1.0	3.1	0.1
LnGrp Delay(d),s/veh	58.5	24.9	24.7	48.9	36.3	36.3	54.4	29.5	24.5	78.7	33.6	29.3
LnGrp LOS	E	C	C	D	D	D	D	C	C	E	C	C
Approach Vol, veh/h		1154			1502			840			182	
Approach Delay, s/veh		28.2			37.6			35.3			40.4	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	26.1	12.5	35.0	16.4	15.2	10.5	37.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	30.0	11.0	30.0	13.0	20.0	7.0	34.0
Max Q Clear Time (g_c+I1), s	3.3	17.5	8.7	21.7	12.5	7.9	7.1	30.2
Green Ext Time (p_c), s	0.0	3.3	0.1	7.3	0.0	3.3	0.0	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	34.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	1326	686	5	1390	461	608	422	107	253	235	76
Future Volume (veh/h)	69	1326	686	5	1390	461	608	422	107	253	235	76
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	69	1326	686	5	1390	461	608	422	107	253	235	76
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	47	1113	530	7	1205	382	480	480	408	258	246	209
Arrive On Green	0.03	0.48	0.48	0.00	0.46	0.46	0.27	0.26	0.26	0.15	0.13	0.13
Sat Flow, veh/h	1757	2306	1098	1757	2619	831	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	69	980	1032	5	909	942	608	422	107	253	235	76
Grp Sat Flow(s),veh/h/ln	1757	1752	1651	1757	1752	1698	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	4.0	72.4	72.4	0.4	69.0	69.0	41.0	32.9	8.1	21.5	19.0	6.6
Cycle Q Clear(g_c), s	4.0	72.4	72.4	0.4	69.0	69.0	41.0	32.9	8.1	21.5	19.0	6.6
Prop In Lane	1.00		0.66	1.00		0.49	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	47	846	797	7	806	781	480	480	408	258	246	209
V/C Ratio(X)	1.47	1.16	1.29	0.76	1.13	1.21	1.27	0.88	0.26	0.98	0.96	0.36
Avail Cap(c_a), veh/h	47	846	797	35	806	781	480	480	408	258	246	209
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.0	38.8	38.8	74.6	40.5	40.5	54.5	53.3	44.1	63.8	64.6	59.2
Incr Delay (d2), s/veh	298.2	84.4	141.7	97.0	73.0	104.6	135.5	17.0	0.3	50.8	45.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	54.9	64.4	0.4	49.7	55.0	38.0	19.0	3.6	14.1	12.7	2.9
LnGrp Delay(d),s/veh	371.2	123.2	180.4	171.7	113.5	145.1	190.0	70.2	44.4	114.6	109.6	60.3
LnGrp LOS	F	F	F	F	F	F	F	E	D	F	F	E
Approach Vol, veh/h		2081			1856			1137			564	
Approach Delay, s/veh		159.8			129.7			131.9			105.2	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	43.0	4.6	76.4	45.0	24.0	8.0	73.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	22.0	39.0	3.0	70.0	41.0	20.0	4.0	69.0
Max Q Clear Time (g_c+I1), s	23.5	34.9	2.4	74.4	43.0	21.0	6.0	71.0
Green Ext Time (p_c), s	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	138.8
HCM 2010 LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	176	371	5	73	489	0	10	139	75	11	30	30
Future Volume (veh/h)	176	371	5	73	489	0	10	139	75	11	30	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1900	1845	1900	1900	1845	1900
Adj Flow Rate, veh/h	176	371	5	73	489	0	10	139	75	11	30	30
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	3	3	3	3	3	3
Cap, veh/h	226	1964	26	520	1081	0	119	225	117	148	171	143
Arrive On Green	0.13	0.56	0.56	0.31	0.31	0.00	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1740	3507	47	983	3563	0	36	1114	579	120	843	704
Grp Volume(v), veh/h	176	183	193	73	489	0	224	0	0	71	0	0
Grp Sat Flow(s),veh/h/ln	1740	1736	1819	983	1736	0	1728	0	0	1666	0	0
Q Serve(g_s), s	3.3	1.8	1.8	1.9	3.8	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.3	1.8	1.8	1.9	3.8	0.0	4.0	0.0	0.0	1.2	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.00	0.04		0.33	0.15		0.42
Lane Grp Cap(c), veh/h	226	972	1019	520	1081	0	461	0	0	461	0	0
V/C Ratio(X)	0.78	0.19	0.19	0.14	0.45	0.00	0.49	0.00	0.00	0.15	0.00	0.00
Avail Cap(c_a), veh/h	413	1546	1620	739	1855	0	725	0	0	704	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.2	3.6	3.6	8.6	9.3	0.0	12.3	0.0	0.0	11.2	0.0	0.0
Incr Delay (d2), s/veh	5.7	0.1	0.1	0.1	0.3	0.0	0.8	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.8	0.9	0.5	1.8	0.0	2.0	0.0	0.0	0.6	0.0	0.0
LnGrp Delay(d),s/veh	19.9	3.7	3.7	8.7	9.6	0.0	13.1	0.0	0.0	11.3	0.0	0.0
LnGrp LOS	B	A	A	A	A		B			B		
Approach Vol, veh/h		552			562			224			71	
Approach Delay, s/veh		8.9			9.5			13.1			11.3	
Approach LOS		A			A			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		10.8		22.9		10.8	8.4	14.5
Change Period (Y+Rc), s		4.0		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		12.0		30.0		12.0	8.0	18.0
Max Q Clear Time (g_c+I1), s		6.0		3.8		3.2	5.3	5.8
Green Ext Time (p_c), s		0.8		6.5		1.1	0.1	4.7

Intersection Summary	
HCM 2010 Ctrl Delay	9.9
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	884	101	176	1036	384	110	614	197	293	400	80
Future Volume (veh/h)	58	884	101	176	1036	384	110	614	197	293	400	80
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	58	884	101	176	1036	384	110	614	197	293	400	80
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	56	1019	116	176	976	357	131	548	466	264	688	585
Arrive On Green	0.03	0.32	0.32	0.10	0.39	0.39	0.07	0.30	0.30	0.15	0.37	0.37
Sat Flow, veh/h	1757	3171	362	1757	2515	920	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	58	489	496	176	718	702	110	614	197	293	400	80
Grp Sat Flow(s),veh/h/ln	1757	1752	1781	1757	1752	1682	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	4.8	39.4	39.4	15.0	58.2	58.2	9.3	44.6	15.1	22.5	26.0	5.1
Cycle Q Clear(g_c), s	4.8	39.4	39.4	15.0	58.2	58.2	9.3	44.6	15.1	22.5	26.0	5.1
Prop In Lane	1.00		0.20	1.00		0.55	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	56	563	572	176	680	653	131	548	466	264	688	585
V/C Ratio(X)	1.03	0.87	0.87	1.00	1.06	1.08	0.84	1.12	0.42	1.11	0.58	0.14
Avail Cap(c_a), veh/h	56	565	575	176	680	653	206	548	466	264	688	585
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.6	47.9	47.9	67.5	45.9	45.9	68.5	52.7	42.4	63.8	37.7	31.1
Incr Delay (d2), s/veh	129.3	12.9	12.7	68.4	50.2	57.4	9.1	75.6	0.2	88.8	0.8	0.0
Initial Q Delay(d3),s/veh	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	21.0	21.3	10.6	37.6	37.4	4.9	34.2	6.6	17.4	13.4	2.2
LnGrp Delay(d),s/veh	202.4	60.8	60.6	135.9	96.1	103.3	77.6	128.3	42.6	152.6	38.5	31.1
LnGrp LOS	F	E	E	F	F	F	E	F	D	F	D	C
Approach Vol, veh/h		1043			1596			921			773	
Approach Delay, s/veh		68.6			103.6			103.9			81.0	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	63.0	16.7	60.3	20.0	53.0	28.0	49.0
Change Period (Y+Rc), s	* 5.2	4.8	5.5	* 4.4	5.0	* 4.8	5.5	* 4.4
Max Green Setting (Gmax), s	* 4.8	58.2	17.6	* 50	15.0	* 48	22.5	* 45
Max Q Clear Time (g_c+I1), s	6.8	60.2	11.3	28.0	17.0	41.4	24.5	46.6
Green Ext Time (p_c), s	0.0	0.0	0.0	2.5	0.0	4.1	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	91.2
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	373	1980	182	246	2151	3	109	1802	305	3	1650	155
Future Volume (veh/h)	373	1980	182	246	2151	3	109	1802	305	3	1650	155
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1792	1845	1845	1792	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	373	1980	182	246	2151	3	109	1802	305	3	1650	155
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	6	3	3	6	3	3	3	3	3	3	3
Cap, veh/h	295	1859	596	227	1762	564	91	1557	697	8	1472	659
Arrive On Green	0.09	0.38	0.38	0.07	0.36	0.36	0.03	0.44	0.44	0.00	0.42	0.42
Sat Flow, veh/h	3408	4893	1568	3408	4893	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	373	1980	182	246	2151	3	109	1802	305	3	1650	155
Grp Sat Flow(s),veh/h/ln	1704	1631	1568	1704	1631	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	13.0	57.0	12.2	10.0	54.0	0.2	4.0	66.6	20.1	0.1	63.0	9.5
Cycle Q Clear(g_c), s	13.0	57.0	12.2	10.0	54.0	0.2	4.0	66.6	20.1	0.1	63.0	9.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	295	1859	596	227	1762	564	91	1557	697	8	1472	659
V/C Ratio(X)	1.26	1.06	0.31	1.08	1.22	0.01	1.20	1.16	0.44	0.37	1.12	0.24
Avail Cap(c_a), veh/h	295	1859	596	227	1762	564	91	1557	697	91	1472	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.5	46.5	32.6	70.0	48.0	30.8	73.0	41.7	28.8	74.7	43.5	28.0
Incr Delay (d2), s/veh	142.5	40.6	0.3	83.5	104.8	0.0	157.5	78.4	0.4	26.6	64.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.0	32.6	5.4	7.3	41.4	0.1	3.9	49.2	8.8	0.1	43.6	4.2
LnGrp Delay(d),s/veh	211.0	87.1	32.9	153.5	152.8	30.8	230.5	120.1	29.2	101.3	107.5	28.2
LnGrp LOS	F	F	C	F	F	C	F	F	C	F	F	C
Approach Vol, veh/h		2535			2400			2216			1808	
Approach Delay, s/veh		101.4			152.7			113.0			100.7	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.4	70.6	14.0	61.0	8.0	67.0	17.0	58.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	63.0	10.0	57.0	4.0	63.0	13.0	54.0
Max Q Clear Time (g_c+I1), s	2.1	68.6	12.0	59.0	6.0	65.0	15.0	56.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	117.9
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	524	1035	93	731	1021	255	245	1568	441	115	1159	234
Future Volume (veh/h)	524	1035	93	731	1021	255	245	1568	441	115	1159	234
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1900	1845	1845
Adj Flow Rate, veh/h	524	1035	93	731	1021	255	245	1568	441	115	1159	234
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	223	607	55	305	649	162	682	701	314	55	557	523
Arrive On Green	0.13	0.19	0.19	0.17	0.23	0.23	0.20	0.20	0.20	0.33	0.33	0.33
Sat Flow, veh/h	1757	3253	292	1757	2783	692	3408	3505	1568	166	1671	1568
Grp Volume(v), veh/h	524	557	571	731	641	635	245	1568	441	1274	0	234
Grp Sat Flow(s),veh/h/ln	1757	1752	1793	1757	1752	1723	1704	1752	1568	1836	0	1568
Q Serve(g_s), s	19.0	28.0	28.0	26.0	35.0	35.0	9.3	30.0	30.0	50.0	0.0	17.5
Cycle Q Clear(g_c), s	19.0	28.0	28.0	26.0	35.0	35.0	9.3	30.0	30.0	50.0	0.0	17.5
Prop In Lane	1.00		0.16	1.00		0.40	1.00		1.00	0.09		1.00
Lane Grp Cap(c), veh/h	223	327	335	305	409	402	682	701	314	612	0	523
V/C Ratio(X)	2.35	1.70	1.70	2.40	1.57	1.58	0.36	2.24	1.41	2.08	0.00	0.45
Avail Cap(c_a), veh/h	223	327	335	305	409	402	682	701	314	612	0	523
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	65.5	61.0	61.0	62.0	57.5	57.5	51.7	60.0	60.0	50.0	0.0	39.2
Incr Delay (d2), s/veh	623.4	329.5	329.7	640.2	267.5	272.2	0.3	561.2	200.9	492.2	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	47.7	43.5	44.5	66.8	47.3	47.0	4.4	69.1	30.5	109.0	0.0	7.7
LnGrp Delay(d),s/veh	688.9	390.5	390.7	702.2	325.0	329.7	52.0	621.2	260.9	542.2	0.0	39.8
LnGrp LOS	F	F	F	F	F	F	D	F	F	F		D
Approach Vol, veh/h		1652			2007			2254			1508	
Approach Delay, s/veh		485.2			463.9			488.8			464.2	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		34.0	30.0	32.0		54.0	23.0	39.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		30.0	26.0	28.0		50.0	19.0	35.0
Max Q Clear Time (g_c+I1), s		32.0	28.0	30.0		52.0	21.0	37.0
Green Ext Time (p_c), s		0.0	0.0	0.0		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	476.3
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1164	0	631	0	1168	1322	0	524	396
Future Volume (veh/h)	0	0	0	1164	0	631	0	1168	1322	0	524	396
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1827	0	1827	0	1827	1827	0	1827	1827
Adj Flow Rate, veh/h				1164	0	631	0	1168	0	0	524	0
Adj No. of Lanes				2	0	2	0	3	1	0	3	1
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				4	0	4	0	4	4	0	4	4
Cap, veh/h				1355	0	1097	0	1815	565	0	1815	565
Arrive On Green				0.40	0.00	0.40	0.00	0.36	0.00	0.00	0.36	0.00
Sat Flow, veh/h				3375	0	2733	0	5152	1553	0	5152	1553
Grp Volume(v), veh/h				1164	0	631	0	1168	0	0	524	0
Grp Sat Flow(s),veh/h/ln				1688	0	1367	0	1663	1553	0	1663	1553
Q Serve(g_s), s				13.0	0.0	7.4	0.0	8.0	0.0	0.0	3.1	0.0
Cycle Q Clear(g_c), s				13.0	0.0	7.4	0.0	8.0	0.0	0.0	3.1	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1355	0	1097	0	1815	565	0	1815	565
V/C Ratio(X)				0.86	0.00	0.58	0.00	0.64	0.00	0.00	0.29	0.00
Avail Cap(c_a), veh/h				2155	0	1745	0	3076	958	0	2883	898
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				11.3	0.0	9.6	0.0	10.9	0.0	0.0	9.3	0.0
Incr Delay (d2), s/veh				1.2	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.2	0.0	2.7	0.0	3.7	0.0	0.0	1.4	0.0
LnGrp Delay(d),s/veh				12.5	0.0	9.8	0.0	11.1	0.0	0.0	9.4	0.0
LnGrp LOS				B		A		B			A	
Approach Vol, veh/h					1795			1168			524	
Approach Delay, s/veh					11.6			11.1			9.4	
Approach LOS					B			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		20.1		21.2		20.1		
Change Period (Y+Rc), s		5.1		4.6		* 5.1		
Max Green Setting (Gmax), s		23.9		26.4		* 26		
Max Q Clear Time (g_c+I1), s		5.1		15.0		10.0		
Green Ext Time (p_c), s		5.3		1.6		5.0		

Intersection Summary	
HCM 2010 Ctrl Delay	11.1
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	40	32	307	30	388	57	2863	368	680	1890	59
Future Volume (veh/h)	76	40	32	307	30	388	57	2863	368	680	1890	59
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	76	40	32	307	30	388	57	2863	368	680	1890	59
Adj No. of Lanes	1	1	0	2	1	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	64	35	28	545	295	251	72	2437	759	574	3080	96
Arrive On Green	0.04	0.04	0.04	0.16	0.16	0.16	0.04	0.49	0.49	0.17	0.62	0.62
Sat Flow, veh/h	1757	950	760	3408	1845	1568	1740	4988	1553	3375	4970	155
Grp Volume(v), veh/h	76	0	72	307	30	388	57	2863	368	680	1264	685
Grp Sat Flow(s),veh/h/ln	1757	0	1711	1704	1845	1568	1740	1663	1553	1688	1663	1800
Q Serve(g_s), s	5.5	0.0	5.5	12.5	2.1	24.0	4.9	73.3	23.8	25.5	35.0	35.1
Cycle Q Clear(g_c), s	5.5	0.0	5.5	12.5	2.1	24.0	4.9	73.3	23.8	25.5	35.0	35.1
Prop In Lane	1.00		0.44	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	64	0	63	545	295	251	72	2437	759	574	2061	1115
V/C Ratio(X)	1.18	0.00	1.15	0.56	0.10	1.55	0.79	1.17	0.48	1.19	0.61	0.61
Avail Cap(c_a), veh/h	64	0	63	545	295	251	123	2437	759	574	2061	1115
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.3	0.0	72.3	58.2	53.8	63.0	71.2	38.3	25.7	62.3	17.5	17.5
Incr Delay (d2), s/veh	168.8	0.0	159.5	0.8	0.1	264.8	6.9	83.3	0.2	100.0	0.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.0	5.4	5.9	1.1	28.8	2.5	52.4	10.3	19.8	16.1	17.5
LnGrp Delay(d),s/veh	241.1	0.0	231.9	59.0	53.9	327.8	78.1	121.7	25.9	162.2	17.9	18.3
LnGrp LOS	F		F	E	D	F	E	F	C	F	B	B
Approach Vol, veh/h		148			725			3288			2629	
Approach Delay, s/veh		236.6			202.6			110.2			55.3	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.3	98.2		11.0	31.0	78.5		29.5
Change Period (Y+Rc), s	* 5.1	* 5.2		5.5	5.5	* 5.2		5.5
Max Green Setting (Gmax), s	* 11	* 89		5.5	25.5	* 73		24.0
Max Q Clear Time (g_c+I1), s	6.9	37.1		7.5	27.5	75.3		26.0
Green Ext Time (p_c), s	0.0	38.5		0.0	0.0	0.0		0.0

Intersection Summary			
HCM 2010 Ctrl Delay		101.6	
HCM 2010 LOS		F	

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	224	1179	429	252	1471	826	359	2029	361	577	839	158
Future Volume (veh/h)	224	1179	429	252	1471	826	359	2029	361	577	839	158
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	224	1179	429	252	1471	826	359	2029	361	577	839	158
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	170	1100	492	249	1181	529	403	1705	531	415	1723	537
Arrive On Green	0.05	0.31	0.31	0.07	0.34	0.34	0.12	0.34	0.34	0.12	0.35	0.35
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	224	1179	429	252	1471	826	359	2029	361	577	839	158
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	7.5	47.2	38.9	11.0	50.7	50.7	15.8	51.4	30.0	18.5	19.9	11.2
Cycle Q Clear(g_c), s	7.5	47.2	38.9	11.0	50.7	50.7	15.8	51.4	30.0	18.5	19.9	11.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	170	1100	492	249	1181	529	403	1705	531	415	1723	537
V/C Ratio(X)	1.32	1.07	0.87	1.01	1.25	1.56	0.89	1.19	0.68	1.39	0.49	0.29
Avail Cap(c_a), veh/h	170	1100	492	249	1181	529	532	1705	531	415	1723	537
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.4	51.6	48.7	69.7	49.8	49.9	65.3	49.5	42.5	65.9	38.7	35.9
Incr Delay (d2), s/veh	178.3	48.6	15.1	59.8	117.5	262.4	11.9	91.8	2.9	189.7	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	30.2	18.9	7.2	43.7	60.5	8.0	38.0	13.3	19.5	9.2	4.8
LnGrp Delay(d),s/veh	249.8	100.2	63.8	129.6	167.4	312.2	77.2	141.3	45.4	255.6	38.8	36.0
LnGrp LOS	F	F	E	F	F	F	E	F	D	F	D	D
Approach Vol, veh/h		1832			2549			2749			1574	
Approach Delay, s/veh		110.0			210.6			120.3			118.0	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.4	57.6	13.0	56.4	24.0	57.0	16.5	52.9
Change Period (Y+Rc), s	5.5	* 5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	23.7	* 46	7.5	* 51	18.5	* 51	11.0	* 47
Max Q Clear Time (g_c+I1), s	17.8	21.9	9.5	52.7	20.5	53.4	13.0	49.2
Green Ext Time (p_c), s	0.2	12.7	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	144.2
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	350	1491	494	163	2278	530	71	2559	158	521	865	90
Future Volume (veh/h)	350	1491	494	163	2278	530	71	2559	158	521	865	90
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1845	1845	1792	1792	1845	1845	1845	1827	1845	1827
Adj Flow Rate, veh/h	350	1491	494	163	2278	530	71	2559	158	521	865	0
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	3	3	6	6	3	3	3	4	3	4
Cap, veh/h	258	1679	538	207	1612	502	110	1810	563	338	2137	659
Arrive On Green	0.08	0.34	0.34	0.06	0.33	0.33	0.03	0.36	0.36	0.10	0.42	0.00
Sat Flow, veh/h	3312	4893	1568	3408	4893	1524	3408	5036	1568	3375	5036	1553
Grp Volume(v), veh/h	350	1491	494	163	2278	530	71	2559	158	521	865	0
Grp Sat Flow(s),veh/h/ln	1656	1631	1568	1704	1631	1524	1704	1679	1568	1688	1679	1553
Q Serve(g_s), s	11.7	43.2	45.3	7.1	49.4	49.4	3.1	53.9	10.8	15.0	17.9	0.0
Cycle Q Clear(g_c), s	11.7	43.2	45.3	7.1	49.4	49.4	3.1	53.9	10.8	15.0	17.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	1679	538	207	1612	502	110	1810	563	338	2137	659
V/C Ratio(X)	1.35	0.89	0.92	0.79	1.41	1.06	0.65	1.41	0.28	1.54	0.40	0.00
Avail Cap(c_a), veh/h	258	1679	538	232	1612	502	204	1810	563	338	2137	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	69.1	46.5	47.2	69.5	50.3	50.3	71.7	48.1	34.2	67.5	30.0	0.0
Incr Delay (d2), s/veh	182.9	6.0	20.5	14.8	189.8	55.9	2.4	189.7	0.3	258.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.9	20.4	22.6	3.8	50.6	28.5	1.5	56.8	4.7	19.1	8.3	0.0
LnGrp Delay(d),s/veh	252.1	52.5	67.7	84.3	240.1	106.2	74.1	237.8	34.5	326.4	30.0	0.0
LnGrp LOS	F	D	E	F	F	F	E	F	C	F	C	
Approach Vol, veh/h		2335			2971			2788			1386	
Approach Delay, s/veh		85.7			207.7			222.1			141.4	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.2	68.8	16.0	55.0	20.0	59.0	13.9	57.1
Change Period (Y+Rc), s	* 5.4	5.1	* 4.3	5.6	5.0	5.1	* 4.8	* 5.6
Max Green Setting (Gmax), s	* 9	59.5	* 12	49.4	15.0	53.9	* 10	* 51
Max Q Clear Time (g_c+I1), s	5.1	19.9	13.7	51.4	17.0	55.9	9.1	47.3
Green Ext Time (p_c), s	0.0	35.1	0.0	0.0	0.0	0.0	0.1	3.3

Intersection Summary	
HCM 2010 Ctrl Delay	172.2
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	753	154	443	1112	52	424	2790	175	38	945	77
Future Volume (veh/h)	102	753	154	443	1112	52	424	2790	175	38	945	77
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	102	753	154	443	1112	52	424	2790	175	38	945	77
Adj No. of Lanes	2	1	0	2	2	1	1	3	0	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	147	488	100	286	1293	579	374	2066	127	66	1169	364
Arrive On Green	0.04	0.33	0.33	0.08	0.37	0.37	0.21	0.43	0.43	0.02	0.23	0.23
Sat Flow, veh/h	3408	1487	304	3408	3505	1568	1757	4851	298	3408	5036	1568
Grp Volume(v), veh/h	102	0	907	443	1112	52	424	1914	1051	38	945	77
Grp Sat Flow(s),veh/h/ln	1704	0	1791	1704	1752	1568	1757	1679	1792	1704	1679	1568
Q Serve(g_s), s	4.4	0.0	48.8	12.5	43.6	3.2	31.7	63.3	63.3	1.6	26.4	5.9
Cycle Q Clear(g_c), s	4.4	0.0	48.8	12.5	43.6	3.2	31.7	63.3	63.3	1.6	26.4	5.9
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	147	0	588	286	1293	579	374	1430	763	66	1169	364
V/C Ratio(X)	0.69	0.00	1.54	1.55	0.86	0.09	1.13	1.34	1.38	0.57	0.81	0.21
Avail Cap(c_a), veh/h	291	0	588	286	1293	579	374	1430	763	103	1212	377
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.2	0.0	50.0	68.1	43.4	30.6	58.5	42.7	42.7	72.3	54.0	46.1
Incr Delay (d2), s/veh	5.7	0.0	252.9	262.5	6.1	0.1	87.5	157.2	178.2	7.6	3.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	65.3	16.3	22.2	1.4	24.4	60.4	68.9	0.8	12.7	2.6
LnGrp Delay(d),s/veh	75.9	0.0	302.9	330.7	49.4	30.7	146.0	199.8	220.9	79.9	57.7	46.2
LnGrp LOS	E		F	F	D	C	F	F	F	E	E	D
Approach Vol, veh/h		1009			1607			3389			1060	
Approach Delay, s/veh		279.9			126.3			199.6			57.6	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	37.2	39.5	18.0	54.0	8.4	68.3	11.9	60.1
Change Period (Y+Rc), s	5.5	5.0	5.5	* 5.2	5.5	5.0	5.5	* 5.2
Max Green Setting (Gmax), s	31.7	35.8	12.5	* 49	4.5	63.0	12.7	* 49
Max Q Clear Time (g_c+I1), s	33.7	28.4	14.5	50.8	3.6	65.3	6.4	45.6
Green Ext Time (p_c), s	0.0	6.1	0.0	0.0	0.0	0.0	0.1	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	173.1
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	665	799	268	156	941	220	392	2588	124	75	870	283
Future Volume (veh/h)	665	799	268	156	941	220	392	2588	124	75	870	283
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1831	1900	1845	1802	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	665	799	268	156	941	220	392	2588	124	75	870	283
Adj No. of Lanes	2	2	0	2	2	0	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	4	4	3	6	6	3	3	3	3	3	3
Cap, veh/h	534	934	313	200	735	172	449	2095	652	68	1532	477
Arrive On Green	0.16	0.36	0.36	0.06	0.27	0.27	0.13	0.42	0.42	0.02	0.30	0.30
Sat Flow, veh/h	3408	2561	859	3408	2757	644	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	665	543	524	156	584	577	392	2588	124	75	870	283
Grp Sat Flow(s),veh/h/ln	1704	1740	1680	1704	1712	1689	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	23.5	43.2	43.3	6.8	40.0	40.0	16.9	62.4	7.5	3.0	21.8	23.0
Cycle Q Clear(g_c), s	23.5	43.2	43.3	6.8	40.0	40.0	16.9	62.4	7.5	3.0	21.8	23.0
Prop In Lane	1.00		0.51	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	534	634	612	200	457	450	449	2095	652	68	1532	477
V/C Ratio(X)	1.25	0.86	0.86	0.78	1.28	1.28	0.87	1.24	0.19	1.10	0.57	0.59
Avail Cap(c_a), veh/h	534	634	612	229	457	450	591	2095	652	68	1532	477
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.3	44.0	44.0	69.6	55.0	55.0	63.9	43.8	27.8	73.5	43.9	44.3
Incr Delay (d2), s/veh	125.5	10.6	11.0	13.8	141.5	143.0	10.9	110.2	0.1	139.1	0.5	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.4	22.7	22.0	3.6	36.8	36.5	8.7	50.3	3.3	2.7	10.1	10.2
LnGrp Delay(d),s/veh	188.7	54.6	55.0	83.4	196.5	198.0	74.8	154.0	27.9	213.5	44.4	46.3
LnGrp LOS	F	D	E	F	F	F	E	F	C	F	D	D
Approach Vol, veh/h		1732			1317			3104			1228	
Approach Delay, s/veh		106.2			183.7			139.0			55.2	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	67.5	29.0	45.0	25.3	50.7	14.3	59.7
Change Period (Y+Rc), s	5.5	* 5.1	5.5	* 5	5.5	* 5.1	5.5	* 5
Max Green Setting (Gmax), s	3.0	* 62	23.5	* 40	26.0	* 39	10.1	* 53
Max Q Clear Time (g_c+I1), s	5.0	64.4	25.5	42.0	18.9	25.0	8.8	45.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.9	14.1	0.1	4.2

Intersection Summary	
HCM 2010 Ctrl Delay	125.3
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

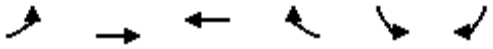
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	471	514	148	58	467	551	155	2263	462	194	1126	229
Future Volume (veh/h)	471	514	148	58	467	551	155	2263	462	194	1126	229
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1845	1827	1845	1845	1845
Adj Flow Rate, veh/h	471	514	148	58	467	551	155	2263	462	194	1126	229
Adj No. of Lanes	2	2	1	1	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	3	4	3	3	3
Cap, veh/h	399	1019	456	74	757	339	210	2179	672	174	2115	658
Arrive On Green	0.12	0.29	0.29	0.04	0.22	0.22	0.06	0.43	0.43	0.05	0.42	0.42
Sat Flow, veh/h	3408	3505	1568	1757	3505	1568	3375	5036	1553	3408	5036	1568
Grp Volume(v), veh/h	471	514	148	58	467	551	155	2263	462	194	1126	229
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1757	1752	1568	1688	1679	1553	1704	1679	1568
Q Serve(g_s), s	13.5	14.1	8.5	3.8	13.9	24.9	5.2	49.9	27.7	5.9	19.3	11.4
Cycle Q Clear(g_c), s	13.5	14.1	8.5	3.8	13.9	24.9	5.2	49.9	27.7	5.9	19.3	11.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	399	1019	456	74	757	339	210	2179	672	174	2115	658
V/C Ratio(X)	1.18	0.50	0.32	0.78	0.62	1.63	0.74	1.04	0.69	1.11	0.53	0.35
Avail Cap(c_a), veh/h	399	1019	456	96	757	339	296	2179	672	174	2115	658
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.9	34.0	32.0	54.7	40.9	45.2	53.1	32.7	26.4	54.7	25.0	22.7
Incr Delay (d2), s/veh	104.1	0.2	0.2	19.7	1.1	295.4	2.9	30.1	2.9	101.5	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.1	6.8	3.7	2.2	6.9	38.5	2.5	29.1	12.4	5.2	8.9	5.0
LnGrp Delay(d),s/veh	155.0	34.1	32.2	74.3	42.0	340.6	56.0	62.8	29.3	156.2	25.2	23.0
LnGrp LOS	F	C	C	E	D	F	E	F	C	F	C	C
Approach Vol, veh/h		1133			1076			2880			1549	
Approach Delay, s/veh		84.1			196.7			57.1			41.3	
Approach LOS		F			F			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	55.0	19.0	30.3	12.5	53.5	10.4	38.9
Change Period (Y+Rc), s	* 5.1	5.1	5.5	* 5.4	* 5.3	5.1	5.5	* 5.4
Max Green Setting (Gmax), s	* 5.9	49.9	13.5	* 25	* 10	45.5	6.3	* 32
Max Q Clear Time (g_c+I1), s	7.9	51.9	15.5	26.9	7.2	21.3	5.8	16.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	23.4	0.0	2.9

Intersection Summary	
HCM 2010 Ctrl Delay	80.6
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	309	1368	2592	849	562	193
Future Volume (veh/h)	309	1368	2592	849	562	193
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845
Adj Flow Rate, veh/h	309	1368	2592	849	562	193
Adj No. of Lanes	1	3	3	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	234	3458	2031	602	457	408
Arrive On Green	0.13	0.69	0.53	0.53	0.26	0.26
Sat Flow, veh/h	1757	5202	4023	1143	1757	1568
Grp Volume(v), veh/h	309	1368	2221	1220	562	193
Grp Sat Flow(s),veh/h/ln	1757	1679	1679	1643	1757	1568
Q Serve(g_s), s	20.0	17.5	79.0	79.0	39.0	15.6
Cycle Q Clear(g_c), s	20.0	17.5	79.0	79.0	39.0	15.6
Prop In Lane	1.00			0.70	1.00	1.00
Lane Grp Cap(c), veh/h	234	3458	1768	865	457	408
V/C Ratio(X)	1.32	0.40	1.26	1.41	1.23	0.47
Avail Cap(c_a), veh/h	234	3458	1768	865	457	408
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.0	10.1	35.5	35.5	55.5	46.8
Incr Delay (d2), s/veh	170.4	0.1	120.0	191.5	121.6	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.8	8.1	65.8	81.6	34.3	14.0
LnGrp Delay(d),s/veh	235.4	10.2	155.5	227.0	177.1	47.7
LnGrp LOS	F	B	F	F	F	D
Approach Vol, veh/h		1677	3441		755	
Approach Delay, s/veh		51.7	180.8		144.0	
Approach LOS		D	F		F	

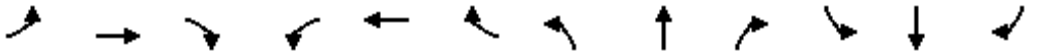
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				107.0		43.0	24.0	83.0
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				103.0		39.0	20.0	79.0
Max Q Clear Time (g_c+I1), s				19.5		41.0	22.0	81.0
Green Ext Time (p_c), s				82.1		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	139.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	938	15	70	1408	0	5	294	42	0	0	0
Future Volume (veh/h)	0	938	15	70	1408	0	5	294	42	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	0	938	15	70	1408	0	5	294	42	0	0	0
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	4	1641	26	86	2122	0	7	391	332	4	215	183
Arrive On Green	0.00	0.46	0.46	0.05	0.61	0.00	0.00	0.21	0.21	0.00	0.00	0.00
Sat Flow, veh/h	1757	3531	56	1757	3597	0	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	0	466	487	70	1408	0	5	294	42	0	0	0
Grp Sat Flow(s),veh/h/ln	1757	1752	1835	1757	1752	0	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	0.0	8.5	8.5	1.7	11.6	0.0	0.1	6.5	0.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	8.5	8.5	1.7	11.6	0.0	0.1	6.5	0.9	0.0	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	4	815	853	86	2122	0	7	391	332	4	215	183
V/C Ratio(X)	0.00	0.57	0.57	0.81	0.66	0.00	0.70	0.75	0.13	0.00	0.00	0.00
Avail Cap(c_a), veh/h	120	921	964	241	2122	0	120	548	466	80	506	430
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	8.5	8.5	20.6	5.7	0.0	21.8	16.2	14.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.6	16.3	0.8	0.0	81.0	3.7	0.2	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.2	4.3	1.2	5.7	0.0	0.2	3.7	0.4	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	9.2	9.2	36.9	6.5	0.0	102.8	19.9	14.1	0.0	0.0	0.0
LnGrp LOS		A	A	D	A		F	B	B			
Approach Vol, veh/h		953			1478			341			0	
Approach Delay, s/veh		9.2			7.9			20.4			0.0	
Approach LOS		A			A			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	13.3	6.1	24.3	4.2	9.1	0.0	30.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	2.0	13.0	6.0	23.0	3.0	12.0	3.0	26.0
Max Q Clear Time (g_c+I1), s	0.0	8.5	3.7	10.5	2.1	0.0	0.0	13.6
Green Ext Time (p_c), s	0.0	0.7	0.0	9.9	0.0	0.0	0.0	10.5

Intersection Summary	
HCM 2010 Ctrl Delay	9.9
HCM 2010 LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	171	981	84	886	1977	331	160	953	869	352	534	132
Future Volume (veh/h)	171	981	84	886	1977	331	160	953	869	352	534	132
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1792	1845	1845	1792	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	171	981	84	886	1977	331	160	953	869	352	534	132
Adj No. of Lanes	2	3	1	2	3	1	1	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	6	3	3	6	3	3	3	3	3	3	3
Cap, veh/h	91	868	278	409	1324	424	184	469	427	182	1667	746
Arrive On Green	0.03	0.18	0.18	0.12	0.27	0.27	0.10	0.53	0.53	0.05	0.48	0.48
Sat Flow, veh/h	3408	4893	1568	3408	4893	1568	1757	890	812	3408	3505	1568
Grp Volume(v), veh/h	171	981	84	886	1977	331	160	0	1822	352	534	132
Grp Sat Flow(s),veh/h/ln	1704	1631	1568	1704	1631	1568	1757	0	1701	1704	1752	1568
Q Serve(g_s), s	4.0	26.6	7.0	18.0	40.6	29.3	13.5	0.0	79.0	8.0	14.1	7.2
Cycle Q Clear(g_c), s	4.0	26.6	7.0	18.0	40.6	29.3	13.5	0.0	79.0	8.0	14.1	7.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.48	1.00		1.00
Lane Grp Cap(c), veh/h	91	868	278	409	1324	424	184	0	896	182	1667	746
V/C Ratio(X)	1.88	1.13	0.30	2.17	1.49	0.78	0.87	0.00	2.03	1.94	0.32	0.18
Avail Cap(c_a), veh/h	91	868	278	409	1324	424	269	0	896	182	1667	746
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.0	61.7	53.6	66.0	54.7	50.6	66.2	0.0	35.5	71.0	24.3	22.5
Incr Delay (d2), s/veh	435.2	73.1	0.9	532.9	225.7	9.5	18.4	0.0	468.9	441.0	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	17.8	3.1	38.7	46.0	13.8	7.5	0.0	153.6	14.9	6.8	3.2
LnGrp Delay(d),s/veh	508.2	134.8	54.5	598.9	280.4	60.1	84.5	0.0	504.4	512.0	24.5	22.6
LnGrp LOS	F	F	D	F	F	E	F		F	F	C	C
Approach Vol, veh/h		1236			3194			1982			1018	
Approach Delay, s/veh		181.0			345.9			470.5			192.8	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	33.0	19.7	75.3	8.0	47.0	12.0	83.0
Change Period (Y+Rc), s	4.0	6.4	4.0	4.0	4.0	6.4	4.0	4.0
Max Green Setting (Gmax), s	18.0	26.6	23.0	64.0	4.0	40.6	8.0	79.0
Max Q Clear Time (g_c+I1), s	20.0	28.6	15.5	16.1	6.0	42.6	10.0	81.0
Green Ext Time (p_c), s	0.0	0.0	0.2	46.7	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	330.8
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	594	29	179	626	12	29	828	162	5	286	13
Future Volume (veh/h)	104	594	29	179	626	12	29	828	162	5	286	13
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1759	1759	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	104	594	29	179	626	12	29	828	162	5	286	13
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	8	8	8	3	3	3	3	3	3
Cap, veh/h	126	533	26	172	590	11	37	691	135	9	779	35
Arrive On Green	0.07	0.31	0.31	0.10	0.34	0.34	0.02	0.46	0.46	0.01	0.45	0.45
Sat Flow, veh/h	1707	1695	83	1675	1720	33	1757	1500	293	1757	1751	80
Grp Volume(v), veh/h	104	0	623	179	0	638	29	0	990	5	0	299
Grp Sat Flow(s),veh/h/ln	1707	0	1778	1675	0	1753	1757	0	1793	1757	0	1831
Q Serve(g_s), s	8.2	0.0	43.0	14.0	0.0	46.9	2.2	0.0	63.0	0.4	0.0	14.8
Cycle Q Clear(g_c), s	8.2	0.0	43.0	14.0	0.0	46.9	2.2	0.0	63.0	0.4	0.0	14.8
Prop In Lane	1.00		0.05	1.00		0.02	1.00		0.16	1.00		0.04
Lane Grp Cap(c), veh/h	126	0	559	172	0	602	37	0	826	9	0	815
V/C Ratio(X)	0.83	0.00	1.11	1.04	0.00	1.06	0.79	0.00	1.20	0.56	0.00	0.37
Avail Cap(c_a), veh/h	175	0	559	172	0	602	180	0	826	180	0	844
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	62.4	0.0	46.8	61.3	0.0	44.9	66.6	0.0	36.8	67.8	0.0	25.2
Incr Delay (d2), s/veh	19.7	0.0	73.3	80.5	0.0	53.7	30.5	0.0	100.8	45.7	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	0.0	32.4	10.3	0.0	31.5	1.4	0.0	54.1	0.3	0.0	7.5
LnGrp Delay(d),s/veh	82.2	0.0	120.1	142.0	0.0	98.6	97.1	0.0	137.6	113.5	0.0	25.4
LnGrp LOS	F		F	F		F	F		F	F		C
Approach Vol, veh/h		727			817			1019			304	
Approach Delay, s/veh		114.7			108.1			136.5			26.9	
Approach LOS		F			F			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.7	67.0	18.0	47.0	6.8	64.8	14.1	50.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	14.0	63.0	14.0	43.0	14.0	63.0	14.0	43.0
Max Q Clear Time (g_c+I1), s	2.4	65.0	16.0	45.0	4.2	16.8	10.2	48.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	14.7	0.1	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		111.2
HCM 2010 LOS		F

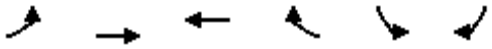
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	538	47	971	25	63	161	999	1153	13	105	1699	1114
Future Volume (veh/h)	538	47	971	25	63	161	999	1153	13	105	1699	1114
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1900	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	572	0	971	25	63	161	999	1153	13	105	1699	0
Adj No. of Lanes	2	0	1	0	1	1	1	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	712	0	318	19	48	57	549	2813	32	126	1536	478
Arrive On Green	0.20	0.00	0.20	0.04	0.04	0.04	0.32	0.55	0.55	0.07	0.31	0.00
Sat Flow, veh/h	3480	0	1553	517	1302	1568	1740	5084	57	1740	4988	1553
Grp Volume(v), veh/h	572	0	971	88	0	161	999	754	412	105	1699	0
Grp Sat Flow(s),veh/h/ln	1740	0	1553	1819	0	1568	1740	1663	1817	1740	1663	1553
Q Serve(g_s), s	23.5	0.0	30.7	5.5	0.0	5.5	47.3	19.7	19.7	8.9	46.2	0.0
Cycle Q Clear(g_c), s	23.5	0.0	30.7	5.5	0.0	5.5	47.3	19.7	19.7	8.9	46.2	0.0
Prop In Lane	1.00		1.00	0.28		1.00	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	712	0	318	67	0	57	549	1839	1005	126	1536	478
V/C Ratio(X)	0.80	0.00	3.06	1.32	0.00	2.80	1.82	0.41	0.41	0.84	1.11	0.00
Avail Cap(c_a), veh/h	712	0	318	67	0	57	549	1839	1005	194	1536	478
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.8	0.0	59.6	72.3	0.0	72.3	51.3	19.4	19.4	68.7	51.9	0.0
Incr Delay (d2), s/veh	6.1	0.0	933.2	217.5	0.0	856.3	376.5	0.1	0.1	10.2	57.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.9	0.0	95.6	6.8	0.0	16.1	80.1	9.0	9.9	4.7	29.4	0.0
LnGrp Delay(d),s/veh	62.9	0.0	992.8	289.7	0.0	928.5	427.9	19.4	19.5	78.9	109.7	0.0
LnGrp LOS	E		F	F		F	F	B	B	E	F	
Approach Vol, veh/h		1543			249			2165			1804	
Approach Delay, s/veh		648.1			702.8			207.9			107.9	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	52.0	51.0		11.0	15.2	87.8		36.0
Change Period (Y+Rc), s	* 4.7	4.8		5.5	* 4.4	* 4.8		5.3
Max Green Setting (Gmax), s	* 47	46.2		5.5	* 17	* 77		30.7
Max Q Clear Time (g_c+I1), s	49.3	48.2		7.5	10.9	21.7		32.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	13.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	315.9
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	374	1027	1445	741	156	38
Future Volume (veh/h)	374	1027	1445	741	156	38
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845
Adj Flow Rate, veh/h	374	1027	1445	741	156	38
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	296	2950	1492	705	179	160
Arrive On Green	0.17	0.84	0.65	0.65	0.10	0.10
Sat Flow, veh/h	1757	3597	2405	1092	1757	1568
Grp Volume(v), veh/h	374	1027	1065	1121	156	38
Grp Sat Flow(s),veh/h/ln	1757	1752	1752	1652	1757	1568
Q Serve(g_s), s	24.0	9.3	78.3	92.0	12.5	3.2
Cycle Q Clear(g_c), s	24.0	9.3	78.3	92.0	12.5	3.2
Prop In Lane	1.00			0.66	1.00	1.00
Lane Grp Cap(c), veh/h	296	2950	1131	1066	179	160
V/C Ratio(X)	1.26	0.35	0.94	1.05	0.87	0.24
Avail Cap(c_a), veh/h	296	2950	1131	1066	197	176
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.3	2.5	22.8	25.3	63.1	58.9
Incr Delay (d2), s/veh	143.2	0.1	14.9	42.1	29.9	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	23.3	4.5	42.2	53.9	7.6	2.9
LnGrp Delay(d),s/veh	202.5	2.6	37.7	67.4	93.0	59.7
LnGrp LOS	F	A	D	F	F	E
Approach Vol, veh/h		1401	2186		194	
Approach Delay, s/veh		55.9	52.9		86.4	
Approach LOS		E	D		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		124.0		18.5	28.0	96.0		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		120.0		16.0	24.0	92.0		
Max Q Clear Time (g_c+I1), s		11.3		14.5	26.0	94.0		
Green Ext Time (p_c), s		86.7		0.1	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	55.8
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	329	237	35	83	311	791	37	2208	98	517	2410	889
Future Volume (veh/h)	329	237	35	83	311	791	37	2208	98	517	2410	889
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	329	237	35	83	311	791	37	2208	98	517	2410	889
Adj No. of Lanes	2	3	0	2	1	2	2	3	0	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	306	1129	162	125	368	1052	65	2109	93	464	2739	853
Arrive On Green	0.09	0.25	0.25	0.04	0.20	0.20	0.02	0.43	0.43	0.14	0.54	0.54
Sat Flow, veh/h	3408	4452	637	3514	1845	3136	3408	4945	218	3408	5036	1568
Grp Volume(v), veh/h	329	177	95	83	311	791	37	1496	810	517	2410	889
Grp Sat Flow(s),veh/h/ln	1704	1679	1732	1757	1845	1568	1704	1679	1806	1704	1679	1568
Q Serve(g_s), s	13.5	6.2	6.5	3.5	24.4	30.0	1.6	64.2	64.2	20.5	63.0	81.9
Cycle Q Clear(g_c), s	13.5	6.2	6.5	3.5	24.4	30.0	1.6	64.2	64.2	20.5	63.0	81.9
Prop In Lane	1.00		0.37	1.00		1.00	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	306	851	439	125	368	1052	65	1432	770	464	2739	853
V/C Ratio(X)	1.08	0.21	0.22	0.66	0.85	0.75	0.57	1.04	1.05	1.11	0.88	1.04
Avail Cap(c_a), veh/h	306	851	439	175	368	1052	68	1432	770	464	2739	853
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.5	44.3	44.4	71.7	58.0	44.4	73.2	43.1	43.2	65.0	30.0	34.3
Incr Delay (d2), s/veh	73.2	0.0	0.1	2.3	15.7	2.7	5.9	36.3	46.9	76.5	3.5	42.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	2.9	3.1	1.7	14.0	15.0	0.8	36.8	41.9	14.5	29.9	45.3
LnGrp Delay(d),s/veh	141.7	44.3	44.5	73.9	73.7	47.2	79.1	79.4	90.0	141.5	33.5	76.8
LnGrp LOS	F	D	D	E	E	D	E	F	F	F	C	F
Approach Vol, veh/h		601			1185			2343			3816	
Approach Delay, s/veh		97.7			56.0			83.1			58.3	
Approach LOS		F			E			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	87.5	19.0	35.7	26.0	69.8	10.8	43.9
Change Period (Y+Rc), s	5.5	5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	3.0	81.4	13.5	* 30	20.5	* 64	7.5	* 36
Max Q Clear Time (g_c+I1), s	3.6	83.9	15.5	32.0	22.5	66.2	5.5	8.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	68.2
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	64	13	38	46	66	37	2207	63	133	1848	215
Future Volume (veh/h)	105	64	13	38	46	66	37	2207	63	133	1848	215
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	91	84	13	38	46	66	37	2207	63	133	1848	215
Adj No. of Lanes	1	1	0	1	1	1	1	3	0	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	131	116	18	109	114	97	46	2821	80	166	2871	332
Arrive On Green	0.07	0.07	0.07	0.06	0.06	0.06	0.03	0.56	0.56	0.09	0.63	0.63
Sat Flow, veh/h	1757	1561	242	1757	1845	1568	1757	5033	143	1757	4579	529
Grp Volume(v), veh/h	91	0	97	38	46	66	37	1470	800	133	1352	711
Grp Sat Flow(s),veh/h/ln	1757	0	1802	1757	1845	1568	1757	1679	1819	1757	1679	1751
Q Serve(g_s), s	4.9	0.0	5.2	2.0	2.3	4.0	2.1	33.5	33.8	7.3	24.6	25.0
Cycle Q Clear(g_c), s	4.9	0.0	5.2	2.0	2.3	4.0	2.1	33.5	33.8	7.3	24.6	25.0
Prop In Lane	1.00		0.13	1.00		1.00	1.00		0.08	1.00		0.30
Lane Grp Cap(c), veh/h	131	0	134	109	114	97	46	1882	1020	166	2105	1098
V/C Ratio(X)	0.69	0.00	0.72	0.35	0.40	0.68	0.80	0.78	0.78	0.80	0.64	0.65
Avail Cap(c_a), veh/h	504	0	517	486	511	434	108	2144	1162	214	2339	1220
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.2	0.0	44.3	44.0	44.2	45.0	47.4	16.8	16.9	43.4	11.4	11.5
Incr Delay (d2), s/veh	2.5	0.0	2.7	0.7	0.9	3.1	11.2	1.4	2.7	11.7	0.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	2.7	1.0	1.2	1.8	1.1	15.7	17.6	4.0	11.4	12.1
LnGrp Delay(d),s/veh	46.7	0.0	47.0	44.7	45.0	48.1	58.6	18.2	19.5	55.1	11.7	12.2
LnGrp LOS	D		D	D	D	D	E	B	B	E	B	B
Approach Vol, veh/h		188			150			2307			2196	
Approach Delay, s/veh		46.8			46.3			19.3			14.5	
Approach LOS		D			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.4	66.2		11.5	13.9	59.7		12.8
Change Period (Y+Rc), s	* 4.8	4.8		5.5	* 4.6	4.8		5.5
Max Green Setting (Gmax), s	* 6	68.2		27.1	* 12	62.5		28.1
Max Q Clear Time (g_c+I1), s	4.1	27.0		6.0	9.3	35.8		7.2
Green Ext Time (p_c), s	0.0	25.3		0.1	0.0	19.1		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	19.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

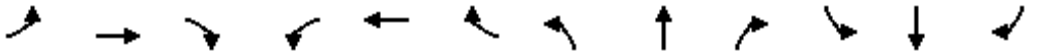
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	835	541	149	1322	838	544	1404	199	267	1188	180
Future Volume (veh/h)	53	835	541	149	1322	838	544	1404	199	267	1188	180
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	53	835	541	149	1322	838	544	1404	199	267	1188	180
Adj No. of Lanes	2	3	0	2	3	1	2	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	79	1178	550	199	1945	605	511	1640	511	316	1185	180
Arrive On Green	0.02	0.35	0.35	0.06	0.39	0.39	0.15	0.33	0.33	0.09	0.27	0.27
Sat Flow, veh/h	3408	3357	1568	3408	5036	1568	3408	5036	1568	3408	4415	669
Grp Volume(v), veh/h	53	835	541	149	1322	838	544	1404	199	267	903	465
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1679	1568	1704	1679	1727
Q Serve(g_s), s	2.0	27.9	44.4	5.6	28.4	50.2	19.5	33.9	12.7	10.0	34.9	34.9
Cycle Q Clear(g_c), s	2.0	27.9	44.4	5.6	28.4	50.2	19.5	33.9	12.7	10.0	34.9	34.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.39
Lane Grp Cap(c), veh/h	79	1178	550	199	1945	605	511	1640	511	316	901	464
V/C Ratio(X)	0.67	0.71	0.98	0.75	0.68	1.38	1.06	0.86	0.39	0.84	1.00	1.00
Avail Cap(c_a), veh/h	79	1178	550	236	1945	605	511	1640	511	354	901	464
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.0	36.4	41.8	60.3	33.2	39.9	55.3	41.0	33.9	58.0	47.5	47.6
Incr Delay (d2), s/veh	17.0	1.7	33.8	8.2	0.8	182.9	57.9	4.5	0.2	14.1	30.5	42.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	13.3	24.4	2.9	13.2	52.4	13.3	16.4	5.5	5.3	20.0	22.1
LnGrp Delay(d),s/veh	80.0	38.1	75.7	68.4	34.0	222.8	113.2	45.5	34.0	72.1	78.1	90.0
LnGrp LOS	E	D	E	E	C	F	F	D	C	E	F	F
Approach Vol, veh/h		1429			2309			2147			1635	
Approach Delay, s/veh		53.9			104.8			61.6			80.5	
Approach LOS		D			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	40.5	8.5	56.0	17.6	47.9	13.1	51.4
Change Period (Y+Rc), s	5.5	* 5.6	5.5	5.8	5.5	* 5.6	5.5	5.8
Max Green Setting (Gmax), s	19.5	* 35	3.0	50.2	13.5	* 41	9.0	44.2
Max Q Clear Time (g_c+I1), s	21.5	36.9	4.0	52.2	12.0	35.9	7.6	46.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	77.5
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



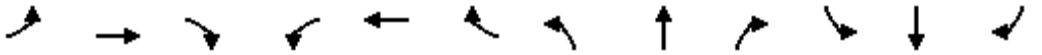
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	234	900	52	486	1987	757	92	660	221	463	493	107
Future Volume (veh/h)	234	900	52	486	1987	757	92	660	221	463	493	107
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	234	900	52	486	1987	757	92	660	221	463	493	107
Adj No. of Lanes	1	2	0	2	2	1	1	1	0	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	127	1035	60	502	1331	595	112	439	147	246	627	533
Arrive On Green	0.07	0.31	0.31	0.15	0.38	0.38	0.06	0.33	0.33	0.07	0.34	0.34
Sat Flow, veh/h	1757	3368	195	3408	3505	1568	1757	1323	443	3408	1845	1568
Grp Volume(v), veh/h	234	468	484	486	1987	757	92	0	881	463	493	107
Grp Sat Flow(s),veh/h/ln	1757	1752	1810	1704	1752	1568	1757	0	1766	1704	1845	1568
Q Serve(g_s), s	10.5	36.7	36.7	20.6	55.2	55.2	7.5	0.0	48.2	10.5	35.0	7.0
Cycle Q Clear(g_c), s	10.5	36.7	36.7	20.6	55.2	55.2	7.5	0.0	48.2	10.5	35.0	7.0
Prop In Lane	1.00		0.11	1.00		1.00	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	127	539	557	502	1331	595	112	0	586	246	627	533
V/C Ratio(X)	1.84	0.87	0.87	0.97	1.49	1.27	0.82	0.00	1.50	1.88	0.79	0.20
Avail Cap(c_a), veh/h	127	539	557	502	1331	595	132	0	586	246	627	533
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.5	47.6	47.6	61.7	45.1	45.1	67.2	0.0	48.6	67.5	43.2	34.0
Incr Delay (d2), s/veh	408.8	13.7	13.3	32.0	226.0	135.1	24.8	0.0	235.8	411.6	6.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.5	19.9	20.5	12.0	68.4	46.2	4.4	0.0	61.8	19.0	18.9	3.0
LnGrp Delay(d),s/veh	476.3	61.3	60.9	93.7	271.1	180.2	92.0	0.0	284.4	479.0	49.3	34.1
LnGrp LOS	F	E	E	F	F	F	F		F	F	D	C
Approach Vol, veh/h		1186			3230			973			1063	
Approach Delay, s/veh		143.0			223.1			266.2			234.9	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	60.1	14.8	54.5	26.5	49.6	16.0	53.3
Change Period (Y+Rc), s	5.5	* 4.9	5.5	* 5.1	* 5.1	* 4.9	5.5	* 5.1
Max Green Setting (Gmax), s	10.5	* 55	10.9	* 48	* 21	* 45	10.5	* 48
Max Q Clear Time (g_c+I1), s	12.5	57.2	9.5	37.0	22.6	38.7	12.5	50.2
Green Ext Time (p_c), s	0.0	0.0	0.0	1.3	0.0	4.7	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		216.8
HCM 2010 LOS		F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	307	978	35	74	1274	127	124	399	223	94	214	506
Future Volume (veh/h)	307	978	35	74	1274	127	124	399	223	94	214	506
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	307	978	35	74	1274	127	124	399	223	94	214	506
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	344	1540	689	155	1346	602	153	1020	457	153	1021	457
Arrive On Green	0.10	0.44	0.44	0.05	0.38	0.38	0.04	0.29	0.29	0.04	0.29	0.29
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	307	978	35	74	1274	127	124	399	223	94	214	506
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	7.9	19.4	1.1	1.9	31.4	4.8	3.2	8.1	10.5	2.4	4.1	26.0
Cycle Q Clear(g_c), s	7.9	19.4	1.1	1.9	31.4	4.8	3.2	8.1	10.5	2.4	4.1	26.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	344	1540	689	155	1346	602	153	1020	457	153	1021	457
V/C Ratio(X)	0.89	0.63	0.05	0.48	0.95	0.21	0.81	0.39	0.49	0.62	0.21	1.11
Avail Cap(c_a), veh/h	344	1540	689	573	1374	615	153	1020	457	191	1021	457
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.7	19.5	14.3	41.6	26.6	18.4	42.3	25.3	26.2	41.9	23.9	31.6
Incr Delay (d2), s/veh	24.3	0.9	0.0	2.3	13.5	0.2	27.2	0.2	0.8	4.0	0.1	74.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	9.6	0.5	0.9	17.6	2.1	2.1	4.0	4.6	1.2	2.0	20.7
LnGrp Delay(d),s/veh	64.0	20.3	14.4	43.9	40.1	18.6	69.5	25.6	27.0	45.9	24.0	106.6
LnGrp LOS	E	C	B	D	D	B	E	C	C	D	C	F
Approach Vol, veh/h		1320			1475			746			814	
Approach Delay, s/veh		30.3			38.4			33.3			77.9	
Approach LOS		C			D			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	30.0	8.1	43.2	8.0	30.0	13.0	38.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	25.0	15.0	29.0	4.0	26.0	9.0	35.0
Max Q Clear Time (g_c+I1), s	4.4	12.5	3.9	21.4	5.2	28.0	9.9	33.4
Green Ext Time (p_c), s	0.0	4.9	0.2	6.8	0.0	0.0	0.0	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	42.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	931	47	42	2147	153	28	545	61	64	267	167
Future Volume (veh/h)	75	931	47	42	2147	153	28	545	61	64	267	167
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1759	1845	1845	1759	1845
Adj Flow Rate, veh/h	75	931	47	42	2147	153	28	545	61	64	267	167
Adj No. of Lanes	2	2	0	1	2	1	1	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	8	3	3	8	3
Cap, veh/h	91	1888	95	54	1963	878	35	504	449	68	504	449
Arrive On Green	0.03	0.56	0.56	0.03	0.56	0.56	0.02	0.29	0.29	0.02	0.29	0.29
Sat Flow, veh/h	3408	3395	171	1757	3505	1568	1757	1759	1568	3408	1759	1568
Grp Volume(v), veh/h	75	481	497	42	2147	153	28	545	61	64	267	167
Grp Sat Flow(s),veh/h/ln	1704	1752	1814	1757	1752	1568	1757	1759	1568	1704	1759	1568
Q Serve(g_s), s	3.3	25.2	25.2	3.6	84.0	7.1	2.4	43.0	4.3	2.8	19.1	12.8
Cycle Q Clear(g_c), s	3.3	25.2	25.2	3.6	84.0	7.1	2.4	43.0	4.3	2.8	19.1	12.8
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	91	974	1009	54	1963	878	35	504	449	68	504	449
V/C Ratio(X)	0.83	0.49	0.49	0.78	1.09	0.17	0.79	1.08	0.14	0.94	0.53	0.37
Avail Cap(c_a), veh/h	91	974	1009	105	1963	878	70	504	449	68	504	449
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.7	20.4	20.4	72.2	33.0	16.1	73.2	53.5	39.7	73.4	45.0	42.7
Incr Delay (d2), s/veh	43.7	0.4	0.4	20.9	51.1	0.1	31.4	63.6	0.1	87.6	1.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	12.3	12.7	2.0	54.3	3.1	1.5	29.8	1.9	2.2	9.5	5.6
LnGrp Delay(d),s/veh	116.3	20.8	20.7	93.1	84.1	16.2	104.5	117.1	39.8	161.0	46.1	43.2
LnGrp LOS	F	C	C	F	F	B	F	F	D	F	D	D
Approach Vol, veh/h		1053			2342			634			498	
Approach Delay, s/veh		27.6			79.8			109.1			59.9	
Approach LOS		C			E			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	47.0	8.6	87.4	7.0	47.0	8.0	88.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	43.0	9.0	79.0	6.0	40.0	4.0	84.0
Max Q Clear Time (g_c+I1), s	4.8	45.0	5.6	27.2	4.4	21.1	5.3	86.0
Green Ext Time (p_c), s	0.0	0.0	0.0	44.9	0.0	6.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	69.6
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	190	191	95	458	183	380	2010	152	233	2065	268
Future Volume (veh/h)	320	190	191	95	458	183	380	2010	152	233	2065	268
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	320	190	191	95	458	183	380	2010	152	233	2065	268
Adj No. of Lanes	2	2	1	2	2	1	2	4	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	349	866	387	140	681	419	417	2977	736	279	2160	672
Arrive On Green	0.10	0.25	0.25	0.04	0.18	0.18	0.12	0.47	0.47	0.08	0.43	0.43
Sat Flow, veh/h	3408	3505	1568	3514	3689	1568	3375	6285	1553	3375	4988	1553
Grp Volume(v), veh/h	320	190	191	95	458	183	380	2010	152	233	2065	268
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1757	1845	1568	1688	1571	1553	1688	1663	1553
Q Serve(g_s), s	13.2	6.1	14.8	3.8	16.4	13.7	15.8	35.1	8.1	9.6	56.8	16.8
Cycle Q Clear(g_c), s	13.2	6.1	14.8	3.8	16.4	13.7	15.8	35.1	8.1	9.6	56.8	16.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	349	866	387	140	681	419	417	2977	736	279	2160	672
V/C Ratio(X)	0.92	0.22	0.49	0.68	0.67	0.44	0.91	0.68	0.21	0.83	0.96	0.40
Avail Cap(c_a), veh/h	349	939	420	213	833	484	417	2977	736	402	2245	699
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.0	42.5	45.8	67.2	53.8	43.1	61.4	28.9	21.8	64.1	38.9	27.5
Incr Delay (d2), s/veh	27.9	0.2	1.4	2.1	3.4	2.0	23.5	0.5	0.1	6.7	11.1	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	3.0	6.6	1.9	8.7	6.2	8.7	15.3	3.5	4.8	28.2	7.4
LnGrp Delay(d),s/veh	91.0	42.7	47.2	69.3	57.2	45.0	84.9	29.4	21.8	70.8	50.0	28.9
LnGrp LOS	F	D	D	E	E	D	F	C	C	E	D	C
Approach Vol, veh/h		701			736			2542			2566	
Approach Delay, s/veh		66.0			55.7			37.2			49.7	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.0	66.8	20.0	32.0	17.2	72.6	11.2	40.8
Change Period (Y+Rc), s	5.5	* 5.4	5.5	5.8	5.5	* 5.4	5.5	* 5.8
Max Green Setting (Gmax), s	17.5	* 64	14.5	32.0	16.9	* 64	8.6	* 38
Max Q Clear Time (g_c+I1), s	17.8	58.8	15.2	18.4	11.6	37.1	5.8	16.8
Green Ext Time (p_c), s	0.0	2.6	0.0	7.8	0.1	27.1	0.0	10.4

Intersection Summary	
HCM 2010 Ctrl Delay	47.3
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	224	455	303	669	1285	28	860	2028	348	118	773	317
Future Volume (veh/h)	224	455	303	669	1285	28	860	2028	348	118	773	317
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1827	1827	1827	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	224	455	303	669	1285	28	860	2028	348	118	773	317
Adj No. of Lanes	2	2	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	4	4	4	4	4	4
Cap, veh/h	267	700	313	650	1566	488	848	2091	651	124	1021	318
Arrive On Green	0.08	0.20	0.20	0.19	0.31	0.31	0.25	0.42	0.42	0.04	0.20	0.20
Sat Flow, veh/h	3408	3505	1568	3375	4988	1553	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	224	455	303	669	1285	28	860	2028	348	118	773	317
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1688	1663	1553	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	9.7	17.9	28.8	28.9	35.7	1.9	37.7	59.8	25.2	5.2	21.9	30.6
Cycle Q Clear(g_c), s	9.7	17.9	28.8	28.9	35.7	1.9	37.7	59.8	25.2	5.2	21.9	30.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	267	700	313	650	1566	488	848	2091	651	124	1021	318
V/C Ratio(X)	0.84	0.65	0.97	1.03	0.82	0.06	1.01	0.97	0.53	0.95	0.76	1.00
Avail Cap(c_a), veh/h	288	700	313	650	1566	488	848	2093	652	124	1021	318
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.3	55.2	59.6	60.6	47.6	36.0	56.2	42.7	32.6	72.2	56.2	59.7
Incr Delay (d2), s/veh	16.9	2.8	42.2	43.1	4.5	0.2	34.6	13.5	1.5	66.1	3.9	49.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	8.9	16.1	17.3	17.1	0.8	21.6	30.0	11.0	3.6	10.5	17.5
LnGrp Delay(d),s/veh	85.1	58.1	101.8	103.7	52.1	36.1	90.8	56.1	34.1	138.3	60.0	109.3
LnGrp LOS	F	E	F	F	D	D	F	E	C	F	E	F
Approach Vol, veh/h		982			1982			3236			1208	
Approach Delay, s/veh		77.7			69.3			63.0			80.6	
Approach LOS		E			E			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	43.2	36.5	17.3	53.1	11.0	68.7	34.4	36.0
Change Period (Y+Rc), s	5.5	* 5.8	5.5	* 6	5.5	* 5.8	5.5	6.0
Max Green Setting (Gmax), s	37.7	* 31	12.7	* 46	5.5	* 63	28.9	30.0
Max Q Clear Time (g_c+I1), s	39.7	32.6	11.7	37.7	7.2	61.8	30.9	30.8
Green Ext Time (p_c), s	0.0	0.0	0.0	8.3	0.0	1.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	69.5
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	341	560	175	40	1828	848	389	2034	20	78	834	632
Future Volume (veh/h)	341	560	175	40	1828	848	389	2034	20	78	834	632
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	341	560	175	40	1828	848	389	2034	20	78	834	632
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	278	2142	667	70	1834	571	299	1824	568	84	1506	469
Arrive On Green	0.08	0.43	0.43	0.02	0.36	0.36	0.09	0.37	0.37	0.02	0.30	0.30
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	341	560	175	40	1828	848	389	2034	20	78	834	632
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	11.5	10.1	10.2	1.6	51.1	51.4	12.5	51.6	1.2	3.3	19.8	42.6
Cycle Q Clear(g_c), s	11.5	10.1	10.2	1.6	51.1	51.4	12.5	51.6	1.2	3.3	19.8	42.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	278	2142	667	70	1834	571	299	1824	568	84	1506	469
V/C Ratio(X)	1.23	0.26	0.26	0.57	1.00	1.48	1.30	1.12	0.04	0.93	0.55	1.35
Avail Cap(c_a), veh/h	278	2142	667	121	1834	571	299	1824	568	84	1506	469
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.8	26.2	26.2	68.5	44.8	44.8	64.3	44.8	28.8	68.7	41.3	49.3
Incr Delay (d2), s/veh	130.0	0.0	0.1	2.7	20.1	227.4	157.7	60.1	0.0	74.7	0.3	170.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.4	4.7	4.4	0.8	27.1	58.2	12.4	33.8	0.5	2.4	9.1	40.5
LnGrp Delay(d),s/veh	194.8	26.2	26.3	71.2	64.9	272.2	222.0	104.8	28.8	143.4	41.5	219.5
LnGrp LOS	F	C	C	E	E	F	F	F	C	F	D	F
Approach Vol, veh/h		1076			2716			2443			1544	
Approach Delay, s/veh		79.7			129.7			122.9			119.5	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	48.6	17.0	57.5	9.0	57.6	8.4	66.1
Change Period (Y+Rc), s	5.5	6.0	5.5	* 6.1	5.5	* 6	5.5	* 6.1
Max Green Setting (Gmax), s	12.5	42.0	11.5	* 51	3.5	* 52	5.0	* 57
Max Q Clear Time (g_c+I1), s	14.5	44.6	13.5	53.4	5.3	53.6	3.6	12.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.6

Intersection Summary	
HCM 2010 Ctrl Delay	118.6
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	582	806	165	87	1809	926	786	2137	187	177	984	721
Future Volume (veh/h)	582	806	165	87	1809	926	786	2137	187	177	984	721
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1759	1759	1759	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	582	806	165	87	1809	926	786	2137	187	177	984	721
Adj No. of Lanes	2	3	0	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	8	8	8	4	4	4	4	4	4
Cap, veh/h	352	1684	342	126	1617	503	484	1879	585	124	1347	419
Arrive On Green	0.10	0.40	0.40	0.04	0.34	0.34	0.14	0.38	0.38	0.04	0.27	0.27
Sat Flow, veh/h	3408	4198	853	3250	4803	1495	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	582	643	328	87	1809	926	786	2137	187	177	984	721
Grp Sat Flow(s),veh/h/ln	1704	1679	1694	1625	1601	1495	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	15.5	21.3	21.5	4.0	50.5	50.5	21.5	56.5	12.8	5.5	26.9	40.5
Cycle Q Clear(g_c), s	15.5	21.3	21.5	4.0	50.5	50.5	21.5	56.5	12.8	5.5	26.9	40.5
Prop In Lane	1.00		0.50	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	352	1347	680	126	1617	503	484	1879	585	124	1347	419
V/C Ratio(X)	1.65	0.48	0.48	0.69	1.12	1.84	1.62	1.14	0.32	1.43	0.73	1.72
Avail Cap(c_a), veh/h	352	1347	680	186	1617	503	484	1879	585	124	1347	419
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.3	33.3	33.3	71.2	49.8	49.7	64.3	46.7	33.1	72.3	49.8	54.8
Incr Delay (d2), s/veh	306.1	0.1	0.2	2.5	62.4	385.4	290.4	69.0	0.1	233.6	1.8	333.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.3	9.8	10.1	1.8	31.7	74.7	29.5	37.9	5.5	6.6	12.6	56.3
LnGrp Delay(d),s/veh	373.3	33.4	33.5	73.7	112.2	435.1	354.7	115.7	33.2	305.9	51.6	388.5
LnGrp LOS	F	C	C	E	F	F	F	F	C	F	D	F
Approach Vol, veh/h		1553			2822			3110			1882	
Approach Delay, s/veh		160.8			217.0			171.2			204.6	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.0	46.0	21.0	56.0	11.0	62.0	11.3	65.7
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	21.5	40.5	15.5	50.5	5.5	56.5	8.6	57.4
Max Q Clear Time (g_c+I1), s	23.5	42.5	17.5	52.5	7.5	58.5	6.0	23.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3

Intersection Summary			
HCM 2010 Ctrl Delay		190.0	
HCM 2010 LOS		F	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	588	536	132	369	1386	329	178	1527	146	116	833	833
Future Volume (veh/h)	588	536	132	369	1386	329	178	1527	146	116	833	833
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845	1845	1827	1827	1827	1836	1900
Adj Flow Rate, veh/h	588	536	132	369	1386	329	178	1527	146	116	833	833
Adj No. of Lanes	2	2	1	0	1	1	1	2	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	4	4	4	4	4
Cap, veh/h	468	481	215	166	625	679	94	949	424	92	442	395
Arrive On Green	0.14	0.14	0.14	0.43	0.43	0.43	0.05	0.27	0.27	0.03	0.25	0.25
Sat Flow, veh/h	3408	3505	1568	384	1442	1568	1757	3471	1553	3375	1744	1560
Grp Volume(v), veh/h	588	536	132	1755	0	329	178	1527	146	116	833	833
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1825	0	1568	1757	1736	1553	1688	1744	1560
Q Serve(g_s), s	20.6	20.6	11.9	65.0	0.0	22.6	8.0	41.0	11.3	4.1	38.0	38.0
Cycle Q Clear(g_c), s	20.6	20.6	11.9	65.0	0.0	22.6	8.0	41.0	11.3	4.1	38.0	38.0
Prop In Lane	1.00		1.00	0.21		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	468	481	215	791	0	679	94	949	424	92	442	395
V/C Ratio(X)	1.26	1.11	0.61	2.22	0.00	0.48	1.90	1.61	0.34	1.26	1.89	2.11
Avail Cap(c_a), veh/h	468	481	215	791	0	679	94	949	424	92	442	395
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.7	64.7	60.9	42.5	0.0	30.5	71.0	54.5	43.7	72.9	56.0	56.0
Incr Delay (d2), s/veh	131.8	75.8	5.1	552.5	0.0	0.5	442.0	279.2	0.5	177.8	406.9	506.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.3	15.0	5.5	154.1	0.0	9.9	15.4	56.4	4.9	4.2	68.2	72.0
LnGrp Delay(d),s/veh	196.5	140.5	66.0	595.0	0.0	31.0	513.0	333.7	44.2	250.8	462.9	562.8
LnGrp LOS	F	F	E	F		C	F	F	D	F	F	F
Approach Vol, veh/h		1256			2084			1851			1782	
Approach Delay, s/veh		158.9			506.0			328.1			495.8	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	43.0		26.0	9.0	46.0		69.0
Change Period (Y+Rc), s	4.0	5.0		* 5.4	* 4.9	5.0		4.0
Max Green Setting (Gmax), s	8.0	38.0		* 21	* 4.1	41.0		65.0
Max Q Clear Time (g_c+I1), s	10.0	40.0		22.6	6.1	43.0		67.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary			
HCM 2010 Ctrl Delay		393.6	
HCM 2010 LOS		F	

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	839	61	386	1867	370	83	1214	301	216	711	430
Future Volume (veh/h)	188	839	61	386	1867	370	83	1214	301	216	711	430
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1792	1845	1845	1845	1827	1845	1845
Adj Flow Rate, veh/h	188	839	61	386	1867	370	83	1214	301	216	711	430
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	6	3	3	3	4	3	3
Cap, veh/h	141	1357	607	443	1668	799	125	1039	465	163	1080	548
Arrive On Green	0.04	0.39	0.39	0.13	0.48	0.48	0.04	0.30	0.30	0.05	0.31	0.31
Sat Flow, veh/h	3408	3505	1568	3408	3505	1524	3408	3505	1568	3375	3505	1568
Grp Volume(v), veh/h	188	839	61	386	1867	370	83	1214	301	216	711	430
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1524	1704	1752	1568	1688	1752	1568
Q Serve(g_s), s	6.0	28.0	3.6	16.1	69.0	22.1	3.5	43.0	24.2	7.0	25.5	35.6
Cycle Q Clear(g_c), s	6.0	28.0	3.6	16.1	69.0	22.1	3.5	43.0	24.2	7.0	25.5	35.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	141	1357	607	443	1668	799	125	1039	465	163	1080	548
V/C Ratio(X)	1.33	0.62	0.10	0.87	1.12	0.46	0.66	1.17	0.65	1.33	0.66	0.78
Avail Cap(c_a), veh/h	141	1357	607	564	1668	799	165	1039	465	163	1080	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.5	35.8	28.3	61.9	38.0	21.7	69.0	51.0	44.4	69.0	43.5	42.3
Incr Delay (d2), s/veh	190.1	0.9	0.1	11.6	62.4	0.4	6.1	86.2	3.1	182.6	1.5	7.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	13.7	1.6	8.3	47.8	9.3	1.8	33.2	10.9	7.4	12.6	16.6
LnGrp Delay(d),s/veh	259.6	36.6	28.4	73.4	100.4	22.1	75.1	137.2	47.5	251.6	45.0	49.6
LnGrp LOS	F	D	C	E	F	C	E	F	D	F	D	D
Approach Vol, veh/h		1088			2623			1598			1357	
Approach Delay, s/veh		74.7			85.4			117.1			79.4	
Approach LOS		E			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.9	62.1	9.3	50.7	10.0	75.0	11.0	49.0
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	24.0	51.0	7.0	43.0	6.0	69.0	7.0	43.0
Max Q Clear Time (g_c+I1), s	18.1	30.0	5.5	37.6	8.0	71.0	9.0	45.0
Green Ext Time (p_c), s	0.7	19.1	0.0	4.9	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	90.0
HCM 2010 LOS	F

Notes

User approved changes to right turn type.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	396	11	31	1183	538	625
Future Volume (veh/h)	396	11	31	1183	538	625
Number	7	14	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1900	1827	1827	1827	1900
Adj Flow Rate, veh/h	396	11	31	1183	538	625
Adj No. of Lanes	0	0	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	4	4	4	4
Cap, veh/h	449	12	36	1857	712	637
Arrive On Green	0.28	0.28	0.02	0.53	0.41	0.41
Sat Flow, veh/h	1592	44	1740	3563	1827	1553
Grp Volume(v), veh/h	408	0	31	1183	538	625
Grp Sat Flow(s),veh/h/ln	1640	0	1740	1736	1736	1553
Q Serve(g_s), s	12.6	0.0	0.9	12.7	14.0	21.0
Cycle Q Clear(g_c), s	12.6	0.0	0.9	12.7	14.0	21.0
Prop In Lane	0.97	0.03	1.00			1.00
Lane Grp Cap(c), veh/h	462	0	36	1857	712	637
V/C Ratio(X)	0.88	0.00	0.86	0.64	0.76	0.98
Avail Cap(c_a), veh/h	527	0	201	2211	712	637
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.2	0.0	25.8	8.7	13.3	15.4
Incr Delay (d2), s/veh	14.8	0.0	18.7	0.2	4.2	30.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	0.0	0.6	6.0	7.4	14.3
LnGrp Delay(d),s/veh	33.0	0.0	44.6	8.9	17.5	46.2
LnGrp LOS	C		D	A	B	D
Approach Vol, veh/h	408			1214	1163	
Approach Delay, s/veh	33.0			9.8	32.9	
Approach LOS	C			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	6.6	27.4		18.9		34.0		
Change Period (Y+Rc), s	5.5	* 5.7		4.0		* 5.7		
Max Green Setting (Gmax), s	6.1	* 22		17.0		* 34		
Max Q Clear Time (g_c+I1), s	2.9	23.0		14.6		14.7		
Green Ext Time (p_c), s	0.0	0.0		0.4		7.6		

Intersection Summary	
HCM 2010 Ctrl Delay	22.9
HCM 2010 LOS	C

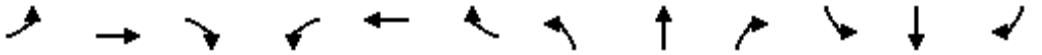
Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	234	31	52	4	26	53	7	1279	29	21	1842	424
Future Volume (veh/h)	234	31	52	4	26	53	7	1279	29	21	1842	424
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1583	1845	1845	1845	1845	1810	1845	1845	1845
Adj Flow Rate, veh/h	234	31	52	4	26	53	7	1279	29	21	1842	424
Adj No. of Lanes	2	1	1	1	1	1	2	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	20	3	3	3	3	5	3	3	3
Cap, veh/h	274	257	218	6	116	99	25	2184	958	33	2225	995
Arrive On Green	0.08	0.14	0.14	0.00	0.06	0.06	0.01	0.62	0.62	0.02	0.63	0.63
Sat Flow, veh/h	3408	1845	1568	1508	1845	1568	3408	3505	1538	1757	3505	1568
Grp Volume(v), veh/h	234	31	52	4	26	53	7	1279	29	21	1842	424
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1508	1845	1568	1704	1752	1538	1757	1752	1568
Q Serve(g_s), s	5.1	1.1	2.2	0.2	1.0	2.4	0.2	16.2	0.5	0.9	30.2	10.1
Cycle Q Clear(g_c), s	5.1	1.1	2.2	0.2	1.0	2.4	0.2	16.2	0.5	0.9	30.2	10.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	274	257	218	6	116	99	25	2184	958	33	2225	995
V/C Ratio(X)	0.85	0.12	0.24	0.62	0.22	0.54	0.28	0.59	0.03	0.63	0.83	0.43
Avail Cap(c_a), veh/h	274	445	378	81	396	336	183	2208	969	118	2255	1009
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.9	28.1	28.6	37.1	33.2	33.9	36.8	8.3	5.4	36.3	10.5	6.8
Incr Delay (d2), s/veh	22.1	0.2	0.6	70.4	1.0	4.4	6.1	0.4	0.0	18.1	2.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.6	1.0	0.2	0.5	1.2	0.1	7.8	0.2	0.6	15.2	4.3
LnGrp Delay(d),s/veh	56.0	28.3	29.1	107.5	34.2	38.3	43.0	8.7	5.4	54.4	13.2	7.1
LnGrp LOS	E	C	C	F	C	D	D	A	A	D	B	A
Approach Vol, veh/h		317			83			1315			2287	
Approach Delay, s/veh		48.9			40.4			8.8			12.4	
Approach LOS		D			D			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.4	50.5	4.3	14.4	4.5	51.4	10.0	8.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	47.0	4.0	18.0	4.0	48.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	2.9	18.2	2.2	4.2	2.2	32.2	7.1	4.4
Green Ext Time (p_c), s	0.0	26.9	0.0	0.5	0.0	15.2	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	14.7
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	609	393	58	58	770	103	2	646	40	94	1017	1130
Future Volume (veh/h)	609	393	58	58	770	103	2	646	40	94	1017	1130
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1810	1810	1810	1810	1810	1810
Adj Flow Rate, veh/h	609	393	58	58	770	103	2	646	40	94	1017	1130
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	5	5	5	5	5	5
Cap, veh/h	549	1241	555	93	773	346	5	1451	649	139	1588	710
Arrive On Green	0.17	0.36	0.36	0.03	0.23	0.23	0.00	0.42	0.42	0.04	0.46	0.46
Sat Flow, veh/h	3312	3406	1524	3312	3406	1524	3343	3438	1538	3343	3438	1538
Grp Volume(v), veh/h	609	393	58	58	770	103	2	646	40	94	1017	1130
Grp Sat Flow(s),veh/h/ln	1656	1703	1524	1656	1703	1524	1672	1719	1538	1672	1719	1538
Q Serve(g_s), s	24.4	12.2	3.7	2.6	33.3	8.3	0.1	19.7	2.3	4.1	33.3	68.0
Cycle Q Clear(g_c), s	24.4	12.2	3.7	2.6	33.3	8.3	0.1	19.7	2.3	4.1	33.3	68.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	549	1241	555	93	773	346	5	1451	649	139	1588	710
V/C Ratio(X)	1.11	0.32	0.10	0.62	1.00	0.30	0.37	0.45	0.06	0.68	0.64	1.59
Avail Cap(c_a), veh/h	549	1241	555	137	773	346	68	1455	651	198	1588	710
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.4	33.6	30.9	70.8	56.9	47.2	73.4	30.3	25.3	69.6	30.3	39.6
Incr Delay (d2), s/veh	72.1	0.3	0.2	2.5	31.5	1.0	15.3	0.2	0.0	2.2	0.9	272.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.6	5.8	1.6	1.2	19.0	3.6	0.1	9.4	1.0	1.9	16.0	82.6
LnGrp Delay(d),s/veh	133.5	33.9	31.1	73.3	88.4	48.2	88.7	30.5	25.3	71.7	31.2	312.1
LnGrp LOS	F	C	C	E	F	D	F	C	C	E	C	F
Approach Vol, veh/h		1060			931			688			2241	
Approach Delay, s/veh		91.0			83.0			30.4			174.5	
Approach LOS		F			F			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.0	39.4	4.8	74.0	8.7	59.7	10.7	68.1
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	24.4	33.4	3.0	68.0	6.1	51.7	8.7	62.3
Max Q Clear Time (g_c+I1), s	26.4	35.3	2.1	70.0	4.6	14.2	6.1	21.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	20.8	0.0	29.2

Intersection Summary	
HCM 2010 Ctrl Delay	119.0
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	877	94	309	742	146	85	1116	294	52	748	133
Future Volume (veh/h)	155	877	94	309	742	146	85	1116	294	52	748	133
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	155	877	94	309	742	146	85	1116	294	52	748	133
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	189	934	100	259	1163	520	109	1199	536	66	1113	498
Arrive On Green	0.11	0.29	0.29	0.15	0.33	0.33	0.06	0.34	0.34	0.04	0.32	0.32
Sat Flow, veh/h	1757	3194	342	1757	3505	1568	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	155	481	490	309	742	146	85	1116	294	52	748	133
Grp Sat Flow(s),veh/h/ln	1757	1752	1784	1757	1752	1568	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	7.6	23.7	23.7	13.0	15.9	6.1	4.2	27.2	13.4	2.6	16.4	5.6
Cycle Q Clear(g_c), s	7.6	23.7	23.7	13.0	15.9	6.1	4.2	27.2	13.4	2.6	16.4	5.6
Prop In Lane	1.00		0.19	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	189	512	522	259	1163	520	109	1199	536	66	1113	498
V/C Ratio(X)	0.82	0.94	0.94	1.20	0.64	0.28	0.78	0.93	0.55	0.79	0.67	0.27
Avail Cap(c_a), veh/h	239	516	525	259	1163	520	159	1230	550	80	1113	498
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.6	30.5	30.5	37.7	25.0	21.7	40.9	28.1	23.5	42.2	26.2	22.5
Incr Delay (d2), s/veh	16.3	25.3	25.0	119.3	1.2	0.3	14.0	12.4	1.1	34.4	1.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	15.0	15.2	14.8	7.8	2.6	2.5	15.1	6.0	1.9	8.1	2.5
LnGrp Delay(d),s/veh	54.9	55.8	55.5	156.9	26.2	22.0	54.9	40.5	24.6	76.6	27.7	22.8
LnGrp LOS	D	E	E	F	C	C	D	D	C	E	C	C
Approach Vol, veh/h		1126			1197			1495			933	
Approach Delay, s/veh		55.5			59.4			38.2			29.8	
Approach LOS		E			E			D			C	

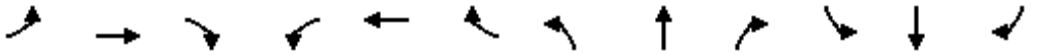
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	34.2	17.0	29.8	9.5	32.1	13.5	33.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	31.0	13.0	26.0	8.0	27.0	12.0	27.0
Max Q Clear Time (g_c+I1), s	4.6	29.2	15.0	25.7	6.2	18.4	9.6	17.9
Green Ext Time (p_c), s	0.0	1.1	0.0	0.2	0.0	7.3	0.1	6.8

Intersection Summary	
HCM 2010 Ctrl Delay	46.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	636	223	49	795	100	183	1649	188	131	461	58
Future Volume (veh/h)	147	636	223	49	795	100	183	1649	188	131	461	58
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	147	636	223	49	795	100	183	1649	188	131	461	58
Adj No. of Lanes	1	2	1	1	2	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	135	953	426	63	723	91	210	1573	177	120	1393	174
Arrive On Green	0.08	0.27	0.27	0.04	0.23	0.23	0.12	0.50	0.50	0.07	0.45	0.45
Sat Flow, veh/h	1757	3505	1568	1757	3133	394	1740	3147	353	1740	3105	389
Grp Volume(v), veh/h	147	636	223	49	445	450	183	898	939	131	257	262
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1775	1740	1736	1765	1740	1736	1758
Q Serve(g_s), s	10.0	21.0	15.7	3.6	30.0	30.0	13.4	65.0	65.0	9.0	12.4	12.6
Cycle Q Clear(g_c), s	10.0	21.0	15.7	3.6	30.0	30.0	13.4	65.0	65.0	9.0	12.4	12.6
Prop In Lane	1.00		1.00	1.00		0.22	1.00		0.20	1.00		0.22
Lane Grp Cap(c), veh/h	135	953	426	63	404	410	210	868	882	120	778	789
V/C Ratio(X)	1.09	0.67	0.52	0.78	1.10	1.10	0.87	1.04	1.06	1.09	0.33	0.33
Avail Cap(c_a), veh/h	135	953	426	108	404	410	308	868	882	120	778	789
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.0	42.1	40.2	62.2	50.0	50.0	56.2	32.5	32.5	60.5	23.2	23.2
Incr Delay (d2), s/veh	102.9	1.8	1.2	18.4	74.3	74.1	16.4	40.0	48.8	107.4	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	10.4	6.9	2.1	22.8	23.1	7.4	40.5	43.3	7.9	6.0	6.2
LnGrp Delay(d),s/veh	162.9	43.9	41.3	80.6	124.3	124.1	72.6	72.5	81.3	168.0	23.4	23.5
LnGrp LOS	F	D	D	F	F	F	E	F	F	F	C	C
Approach Vol, veh/h		1006			944			2020			650	
Approach Delay, s/veh		60.7			122.0			76.6			52.6	
Approach LOS		E			F			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	69.0	8.7	39.3	19.7	62.3	14.0	34.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	9.0	65.0	8.0	32.0	23.0	51.0	10.0	30.0
Max Q Clear Time (g_c+I1), s	11.0	67.0	5.6	23.0	15.4	14.6	12.0	32.0
Green Ext Time (p_c), s	0.0	0.0	0.0	6.4	0.3	26.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	79.0
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	319	1303	168	229	1446	142	179	1559	217	127	367	127
Future Volume (veh/h)	319	1303	168	229	1446	142	179	1559	217	127	367	127
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1827	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	319	1303	168	229	1446	142	179	1559	217	127	367	127
Adj No. of Lanes	1	3	0	1	3	1	1	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	255	1402	181	151	1264	393	201	1329	182	104	1311	587
Arrive On Green	0.15	0.31	0.31	0.09	0.25	0.25	0.12	0.43	0.43	0.06	0.38	0.38
Sat Flow, veh/h	1740	4473	577	1740	4988	1553	1740	3068	420	1740	3471	1553
Grp Volume(v), veh/h	319	969	502	229	1446	142	179	871	905	127	367	127
Grp Sat Flow(s),veh/h/ln	1740	1663	1725	1740	1663	1553	1740	1736	1753	1740	1736	1553
Q Serve(g_s), s	22.0	42.3	42.3	13.0	38.0	11.3	15.2	65.0	65.0	9.0	11.0	8.3
Cycle Q Clear(g_c), s	22.0	42.3	42.3	13.0	38.0	11.3	15.2	65.0	65.0	9.0	11.0	8.3
Prop In Lane	1.00		0.33	1.00		1.00	1.00		0.24	1.00		1.00
Lane Grp Cap(c), veh/h	255	1042	541	151	1264	393	201	752	760	104	1311	587
V/C Ratio(X)	1.25	0.93	0.93	1.52	1.14	0.36	0.89	1.16	1.19	1.22	0.28	0.22
Avail Cap(c_a), veh/h	255	1042	541	151	1264	393	232	752	760	104	1311	587
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.0	49.9	49.9	68.5	56.0	46.0	65.4	42.5	42.5	70.5	32.5	31.6
Incr Delay (d2), s/veh	140.7	14.1	22.8	264.3	74.8	0.6	29.3	85.8	98.9	157.4	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.5	21.4	23.5	17.3	26.2	4.9	8.9	49.1	52.3	8.9	5.3	3.6
LnGrp Delay(d),s/veh	204.7	64.0	72.7	332.8	130.8	46.6	94.7	128.3	141.4	227.9	32.6	31.8
LnGrp LOS	F	E	E	F	F	D	F	F	F	F	C	C
Approach Vol, veh/h		1790			1817			1955			621	
Approach Delay, s/veh		91.5			149.7			131.3			72.4	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	69.0	17.0	51.0	21.3	60.7	26.0	42.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	9.0	65.0	13.0	47.0	20.0	54.0	22.0	38.0
Max Q Clear Time (g_c+I1), s	11.0	67.0	15.0	44.3	17.2	13.0	24.0	40.0
Green Ext Time (p_c), s	0.0	0.0	0.0	2.6	0.1	26.7	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	119.3
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	192	1202	179	121	1729	404	147	989	335	28	252	212
Future Volume (veh/h)	192	1202	179	121	1729	404	147	989	335	28	252	212
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1827	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	192	1202	179	121	1729	404	147	989	335	28	252	212
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	3	3	3	3	3	3
Cap, veh/h	188	1542	229	144	1676	750	172	960	429	35	687	307
Arrive On Green	0.11	0.51	0.51	0.08	0.48	0.48	0.10	0.27	0.27	0.02	0.20	0.20
Sat Flow, veh/h	1740	3033	450	1740	3471	1553	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	192	685	696	121	1729	404	147	989	335	28	252	212
Grp Sat Flow(s),veh/h/ln	1740	1736	1748	1740	1736	1553	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	15.0	44.5	45.1	9.5	67.0	25.2	11.4	38.0	27.4	2.2	8.6	17.4
Cycle Q Clear(g_c), s	15.0	44.5	45.1	9.5	67.0	25.2	11.4	38.0	27.4	2.2	8.6	17.4
Prop In Lane	1.00		0.26	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	188	882	888	144	1676	750	172	960	429	35	687	307
V/C Ratio(X)	1.02	0.78	0.78	0.84	1.03	0.54	0.86	1.03	0.78	0.80	0.37	0.69
Avail Cap(c_a), veh/h	188	882	888	163	1676	750	253	960	429	51	687	307
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.9	27.7	27.9	62.8	35.9	25.1	61.6	50.4	46.5	67.7	48.3	51.9
Incr Delay (d2), s/veh	71.2	4.4	4.6	28.6	30.6	0.8	16.9	37.1	8.9	41.4	0.3	6.4
Initial Q Delay(d3),s/veh	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.9	22.4	22.8	5.7	39.0	10.9	6.4	23.2	13.0	1.5	4.2	8.1
LnGrp Delay(d),s/veh	133.3	32.1	32.5	91.4	66.5	25.9	78.5	87.5	55.5	109.1	48.7	58.3
LnGrp LOS	F	C	C	F	F	C	E	F	E	F	D	E
Approach Vol, veh/h		1573			2254			1471			492	
Approach Delay, s/veh		44.6			60.5			79.3			56.2	
Approach LOS		D			E			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	42.0	15.4	74.6	17.6	31.2	19.0	71.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	38.0	13.0	69.0	20.0	22.0	15.0	67.0
Max Q Clear Time (g_c+I1), s	4.2	40.0	11.5	47.1	13.4	19.4	17.0	69.0
Green Ext Time (p_c), s	0.0	0.0	0.0	20.6	0.2	2.1	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	60.6
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	404	520	33	72	681	273	65	1448	59	89	996	15
Future Volume (veh/h)	404	520	33	72	681	273	65	1448	59	89	996	15
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1827	1827	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	404	520	33	72	681	273	65	1448	59	89	996	15
Adj No. of Lanes	2	3	1	2	3	1	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	453	1376	428	126	892	278	121	1581	64	145	1639	733
Arrive On Green	0.13	0.28	0.28	0.04	0.18	0.18	0.04	0.46	0.46	0.04	0.47	0.47
Sat Flow, veh/h	3375	4988	1553	3375	4988	1553	3375	3400	138	3375	3471	1553
Grp Volume(v), veh/h	404	520	33	72	681	273	65	738	769	89	996	15
Grp Sat Flow(s),veh/h/ln	1688	1663	1553	1688	1663	1553	1688	1736	1803	1688	1736	1553
Q Serve(g_s), s	10.5	7.5	1.4	1.9	11.6	15.7	1.7	35.4	35.6	2.3	19.0	0.5
Cycle Q Clear(g_c), s	10.5	7.5	1.4	1.9	11.6	15.7	1.7	35.4	35.6	2.3	19.0	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	453	1376	428	126	892	278	121	807	838	145	1639	733
V/C Ratio(X)	0.89	0.38	0.08	0.57	0.76	0.98	0.54	0.91	0.92	0.61	0.61	0.02
Avail Cap(c_a), veh/h	453	1376	428	189	892	278	151	815	847	151	1639	733
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.1	26.2	24.0	42.3	34.9	36.6	42.4	22.3	22.3	42.1	17.5	12.6
Incr Delay (d2), s/veh	19.4	0.2	0.1	4.1	3.9	49.0	3.7	14.7	14.7	6.7	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	3.5	0.6	0.9	5.6	10.5	0.8	20.1	20.9	1.2	9.1	0.2
LnGrp Delay(d),s/veh	57.5	26.3	24.0	46.4	38.8	85.6	46.1	36.9	37.0	48.8	18.1	12.6
LnGrp LOS	E	C	C	D	D	F	D	D	D	D	B	B
Approach Vol, veh/h		957			1026			1572			1100	
Approach Delay, s/veh		39.4			51.8			37.4			20.5	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	45.6	7.3	28.7	7.2	46.2	16.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	42.0	5.0	23.0	4.0	42.0	12.0	16.0
Max Q Clear Time (g_c+I1), s	4.3	37.6	3.9	9.5	3.7	21.0	12.5	17.7
Green Ext Time (p_c), s	0.0	4.0	0.0	7.6	0.0	17.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	37.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	418	61	2	442	23	145	549	48	8	220	28
Future Volume (veh/h)	142	418	61	2	442	23	145	549	48	8	220	28
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1827	1827	1827	1845	1845	1845
Adj Flow Rate, veh/h	142	418	61	2	442	23	145	549	48	8	220	28
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	3	3	3
Cap, veh/h	179	980	142	4	743	39	184	665	565	15	492	418
Arrive On Green	0.10	0.32	0.32	0.00	0.22	0.22	0.11	0.36	0.36	0.01	0.27	0.27
Sat Flow, veh/h	1740	3043	441	1740	3357	174	1740	1827	1553	1757	1845	1568
Grp Volume(v), veh/h	142	237	242	2	228	237	145	549	48	8	220	28
Grp Sat Flow(s),veh/h/ln	1740	1736	1749	1740	1736	1796	1740	1827	1553	1757	1845	1568
Q Serve(g_s), s	4.2	5.7	5.7	0.1	6.2	6.2	4.3	14.4	1.1	0.2	5.2	0.7
Cycle Q Clear(g_c), s	4.2	5.7	5.7	0.1	6.2	6.2	4.3	14.4	1.1	0.2	5.2	0.7
Prop In Lane	1.00		0.25	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	179	559	563	4	384	398	184	665	565	15	492	418
V/C Ratio(X)	0.79	0.42	0.43	0.52	0.59	0.60	0.79	0.83	0.08	0.54	0.45	0.07
Avail Cap(c_a), veh/h	198	592	597	132	526	545	264	796	677	133	664	565
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.1	14.0	14.1	26.3	18.4	18.4	23.0	15.3	11.0	26.1	16.1	14.5
Incr Delay (d2), s/veh	18.0	0.5	0.5	81.6	1.5	1.4	9.6	6.1	0.1	27.6	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	2.8	2.8	0.1	3.1	3.3	2.5	8.3	0.5	0.2	2.7	0.3
LnGrp Delay(d),s/veh	41.1	14.6	14.6	107.9	19.9	19.9	32.6	21.3	11.1	53.7	16.8	14.5
LnGrp LOS	D	B	B	F	B	B	C	C	B	D	B	B
Approach Vol, veh/h		621			467			742			256	
Approach Delay, s/veh		20.6			20.2			22.9			17.7	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.4	23.2	4.1	21.0	9.6	18.1	9.4	15.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	23.0	4.0	18.0	8.0	19.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	2.2	16.4	2.1	7.7	6.3	7.2	6.2	8.2
Green Ext Time (p_c), s	0.0	2.8	0.0	4.1	0.1	4.1	0.0	3.4

Intersection Summary	
HCM 2010 Ctrl Delay	21.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1	163	110	3	1	301	1904	37	0	1609	0
Future Volume (veh/h)	0	1	163	110	3	1	301	1904	37	0	1609	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1759	1900	1845	1845	1900	1792	1792	1792	1792	1792	1900
Adj Flow Rate, veh/h	0	1	163	110	3	1	301	1904	37	0	1609	0
Adj No. of Lanes	0	1	0	1	1	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	8	8	8	3	3	3	6	6	6	6	6	6
Cap, veh/h	0	1	185	139	105	35	306	2075	928	97	1659	0
Arrive On Green	0.00	0.12	0.12	0.08	0.08	0.08	0.18	0.61	0.61	0.00	0.49	0.00
Sat Flow, veh/h	0	9	1488	1757	1325	442	1707	3406	1524	1707	3495	0
Grp Volume(v), veh/h	0	0	164	110	0	4	301	1904	37	0	1609	0
Grp Sat Flow(s),veh/h/ln	0	0	1497	1757	0	1767	1707	1703	1524	1707	1703	0
Q Serve(g_s), s	0.0	0.0	13.2	7.6	0.0	0.3	21.6	60.8	1.2	0.0	56.4	0.0
Cycle Q Clear(g_c), s	0.0	0.0	13.2	7.6	0.0	0.3	21.6	60.8	1.2	0.0	56.4	0.0
Prop In Lane	0.00		0.99	1.00		0.25	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	0	0	186	139	0	139	306	2075	928	97	1659	0
V/C Ratio(X)	0.00	0.00	0.88	0.79	0.00	0.03	0.98	0.92	0.04	0.00	0.97	0.00
Avail Cap(c_a), veh/h	0	0	195	229	0	230	306	2164	968	97	1665	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	52.8	55.6	0.0	52.2	50.2	21.2	9.6	0.0	30.6	0.0
Incr Delay (d2), s/veh	0.0	0.0	32.9	9.8	0.0	0.1	46.9	6.6	0.0	0.0	15.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	7.2	4.0	0.0	0.1	14.1	30.2	0.5	0.0	29.9	0.0
LnGrp Delay(d),s/veh	0.0	0.0	85.8	65.3	0.0	52.3	97.1	27.9	9.6	0.0	46.1	0.0
LnGrp LOS			F	E		D	F	C	A		D	
Approach Vol, veh/h		164			114			2242			1609	
Approach Delay, s/veh		85.8			64.9			36.9			46.1	
Approach LOS		F			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.0	78.8		19.3	26.0	63.8		13.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	78.0		16.0	22.0	60.0		16.0
Max Q Clear Time (g_c+I1), s	0.0	62.8		15.2	23.6	58.4		9.6
Green Ext Time (p_c), s	0.0	12.0		0.1	0.0	1.4		0.1

Intersection Summary		
HCM 2010 Ctrl Delay		43.2
HCM 2010 LOS		D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1	19	205	4	610	19	1807	107	224	1589	0
Future Volume (veh/h)	0	1	19	205	4	610	19	1807	107	224	1589	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	0	1	19	205	4	610	19	1807	107	224	1589	0
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	1	7	142	230	3	395	26	1825	107	210	2268	0
Arrive On Green	0.00	0.09	0.09	0.13	0.25	0.25	0.01	0.54	0.54	0.12	0.65	0.00
Sat Flow, veh/h	1757	79	1501	1757	10	1559	1757	3365	197	1757	3597	0
Grp Volume(v), veh/h	0	0	20	205	0	614	19	933	981	224	1589	0
Grp Sat Flow(s),veh/h/ln	1757	0	1580	1757	0	1569	1757	1752	1810	1757	1752	0
Q Serve(g_s), s	0.0	0.0	1.6	16.3	0.0	36.0	1.5	74.0	76.9	17.0	41.6	0.0
Cycle Q Clear(g_c), s	0.0	0.0	1.6	16.3	0.0	36.0	1.5	74.0	76.9	17.0	41.6	0.0
Prop In Lane	1.00		0.95	1.00		0.99	1.00		0.11	1.00		0.00
Lane Grp Cap(c), veh/h	1	0	149	230	0	398	26	950	981	210	2268	0
V/C Ratio(X)	0.00	0.00	0.13	0.89	0.00	1.54	0.73	0.98	1.00	1.07	0.70	0.00
Avail Cap(c_a), veh/h	49	0	178	297	0	398	62	950	981	210	2268	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	59.0	60.7	0.0	53.0	69.7	31.8	32.5	62.5	16.2	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.4	22.7	0.0	256.6	31.7	24.7	28.6	80.3	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.7	9.4	0.0	43.9	1.0	42.0	45.9	12.9	20.4	0.0
LnGrp Delay(d),s/veh	0.0	0.0	59.4	83.5	0.0	309.6	101.3	56.6	61.1	142.8	17.2	0.0
LnGrp LOS			E	F		F	F	E	E	F	B	
Approach Vol, veh/h		20			819			1933			1813	
Approach Delay, s/veh		59.4			253.0			59.3			32.7	
Approach LOS		E			F			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.0	81.0	22.6	17.4	6.1	95.9	0.0	40.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	17.0	77.0	24.0	16.0	5.0	89.0	4.0	36.0
Max Q Clear Time (g_c+I1), s	19.0	78.9	18.3	3.6	3.5	43.6	0.0	38.0
Green Ext Time (p_c), s	0.0	0.0	0.3	3.8	0.0	41.7	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	83.4
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	359	6	4	1	5	7	3	1391	1	0	1457	343
Future Volume (veh/h)	359	6	4	1	5	7	3	1391	1	0	1457	343
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1900	1845	1900	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	359	6	4	1	5	7	3	1391	1	0	1457	0
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	406	7	368	2	8	12	6	2063	1	3	1792	802
Arrive On Green	0.23	0.23	0.23	0.01	0.01	0.01	0.00	0.57	0.57	0.00	0.51	0.00
Sat Flow, veh/h	1729	29	1568	129	646	904	1757	3594	3	1757	3505	1568
Grp Volume(v), veh/h	365	0	4	13	0	0	3	678	714	0	1457	0
Grp Sat Flow(s),veh/h/ln	1758	0	1568	1679	0	0	1757	1752	1844	1757	1752	1568
Q Serve(g_s), s	13.5	0.0	0.1	0.5	0.0	0.0	0.1	18.1	18.1	0.0	23.4	0.0
Cycle Q Clear(g_c), s	13.5	0.0	0.1	0.5	0.0	0.0	0.1	18.1	18.1	0.0	23.4	0.0
Prop In Lane	0.98		1.00	0.08		0.54	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	413	0	368	22	0	0	6	1006	1059	3	1792	802
V/C Ratio(X)	0.88	0.00	0.01	0.60	0.00	0.00	0.53	0.67	0.67	0.00	0.81	0.00
Avail Cap(c_a), veh/h	444	0	396	399	0	0	104	1006	1059	104	1925	861
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	24.9	0.0	19.8	33.1	0.0	0.0	33.5	10.0	10.0	0.0	13.8	0.0
Incr Delay (d2), s/veh	17.8	0.0	0.0	24.3	0.0	0.0	59.4	1.8	1.7	0.0	2.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	0.0	0.1	0.4	0.0	0.0	0.1	9.2	9.6	0.0	11.8	0.0
LnGrp Delay(d),s/veh	42.7	0.0	19.8	57.3	0.0	0.0	93.0	11.8	11.7	0.0	16.4	0.0
LnGrp LOS	D		B	E			F	B	B		B	
Approach Vol, veh/h		369			13			1395			1457	
Approach Delay, s/veh		42.4			57.3			11.9			16.4	
Approach LOS		D			E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	42.7		19.8	4.2	38.5		4.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	37.0		17.0	4.0	37.0		16.0
Max Q Clear Time (g_c+I1), s	0.0	20.1		15.5	2.1	25.4		2.5
Green Ext Time (p_c), s	0.0	15.2		0.3	0.0	9.0		0.0

Intersection Summary			
HCM 2010 Ctrl Delay		17.6	
HCM 2010 LOS		B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	278	518	588	90	1297	6	242	1029	64	2	1412	336
Future Volume (veh/h)	278	518	588	90	1297	6	242	1029	64	2	1412	336
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	278	518	588	90	1297	6	242	1029	64	2	1412	336
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	262	1348	603	131	1213	543	236	1583	708	7	1348	603
Arrive On Green	0.08	0.38	0.38	0.04	0.35	0.35	0.07	0.45	0.45	0.00	0.38	0.38
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	278	518	588	90	1297	6	242	1029	64	2	1412	336
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	10.0	13.9	48.0	3.4	45.0	0.3	9.0	29.6	3.0	0.1	50.0	21.8
Cycle Q Clear(g_c), s	10.0	13.9	48.0	3.4	45.0	0.3	9.0	29.6	3.0	0.1	50.0	21.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	262	1348	603	131	1213	543	236	1583	708	7	1348	603
V/C Ratio(X)	1.06	0.38	0.98	0.69	1.07	0.01	1.03	0.65	0.09	0.27	1.05	0.56
Avail Cap(c_a), veh/h	262	1348	603	131	1213	543	236	1583	708	105	1348	603
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.0	28.9	39.4	61.7	42.5	27.9	60.5	27.7	20.4	64.8	40.0	31.3
Incr Delay (d2), s/veh	72.4	0.2	30.3	13.9	46.4	0.0	65.4	0.9	0.1	19.0	37.9	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	6.7	25.8	1.9	29.6	0.1	6.4	14.5	1.3	0.1	31.3	9.6
LnGrp Delay(d),s/veh	132.4	29.1	69.7	75.6	88.9	27.9	126.0	28.6	20.4	83.7	77.9	32.5
LnGrp LOS	F	C	E	E	F	C	F	C	C	F	F	C
Approach Vol, veh/h		1384			1393			1335			1750	
Approach Delay, s/veh		67.1			87.8			45.9			69.2	
Approach LOS		E			F			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.3	62.7	9.0	54.0	13.0	54.0	14.0	49.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	55.0	5.0	50.0	9.0	50.0	10.0	45.0
Max Q Clear Time (g_c+I1), s	2.1	31.6	5.4	50.0	11.0	52.0	12.0	47.0
Green Ext Time (p_c), s	0.0	19.8	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	67.8
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	2129	49	18	2851	171	387	257	36	213	64	266
Future Volume (veh/h)	140	2129	49	18	2851	171	387	257	36	213	64	266
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	140	2129	49	18	2851	171	387	257	36	213	64	266
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	94	2146	49	25	1928	114	258	295	251	187	221	188
Arrive On Green	0.05	0.61	0.61	0.01	0.57	0.57	0.15	0.16	0.16	0.11	0.12	0.12
Sat Flow, veh/h	1757	3503	80	1757	3362	200	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	140	1061	1117	18	1472	1550	387	257	36	213	64	266
Grp Sat Flow(s),veh/h/ln	1757	1752	1830	1757	1752	1809	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	8.0	89.2	91.0	1.5	86.0	86.0	22.0	20.4	3.0	16.0	4.7	18.0
Cycle Q Clear(g_c), s	8.0	89.2	91.0	1.5	86.0	86.0	22.0	20.4	3.0	16.0	4.7	18.0
Prop In Lane	1.00		0.04	1.00		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	94	1074	1121	25	1005	1037	258	295	251	187	221	188
V/C Ratio(X)	1.49	0.99	1.00	0.73	1.47	1.49	1.50	0.87	0.14	1.14	0.29	1.41
Avail Cap(c_a), veh/h	94	1074	1121	47	1005	1037	258	295	251	187	221	188
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.0	28.5	28.9	73.7	32.0	32.0	64.0	61.5	54.2	67.0	60.2	66.0
Incr Delay (d2), s/veh	270.2	24.6	25.9	33.2	214.9	227.4	245.1	23.4	0.3	107.3	0.7	214.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.9	50.1	53.7	1.0	101.3	108.2	28.2	12.3	1.3	13.3	2.5	19.0
LnGrp Delay(d),s/veh	341.2	53.1	54.7	106.8	246.9	259.4	309.1	84.9	54.4	174.3	60.9	280.5
LnGrp LOS	F	D	D	F	F	F	F	F	D	F	E	F
Approach Vol, veh/h		2318			3040			680			543	
Approach Delay, s/veh		71.3			252.4			210.9			213.0	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	28.0	6.1	95.9	26.0	22.0	12.0	90.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	24.0	4.0	90.0	22.0	18.0	8.0	86.0
Max Q Clear Time (g_c+I1), s	18.0	22.4	3.5	93.0	24.0	20.0	10.0	88.0
Green Ext Time (p_c), s	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	181.1
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	471	621	506	7	1179	414	643	1834	4	266	1276	1614
Future Volume (veh/h)	471	621	506	7	1179	414	643	1834	4	266	1276	1614
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	471	621	506	7	1179	414	643	1834	4	266	1276	1614
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	250	1410	439	23	1074	334	341	2591	807	314	2552	794
Arrive On Green	0.07	0.28	0.28	0.01	0.21	0.21	0.10	0.51	0.51	0.09	0.51	0.51
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	471	621	506	7	1179	414	643	1834	4	266	1276	1614
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	11.0	15.2	42.0	0.3	32.0	32.0	15.0	41.7	0.2	11.5	25.1	76.0
Cycle Q Clear(g_c), s	11.0	15.2	42.0	0.3	32.0	32.0	15.0	41.7	0.2	11.5	25.1	76.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	250	1410	439	23	1074	334	341	2591	807	314	2552	794
V/C Ratio(X)	1.88	0.44	1.15	0.30	1.10	1.24	1.89	0.71	0.00	0.85	0.50	2.03
Avail Cap(c_a), veh/h	250	1410	439	91	1074	334	341	2591	807	386	2552	794
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.5	44.4	54.0	74.1	59.0	59.0	67.5	27.8	17.7	67.0	24.4	37.0
Incr Delay (d2), s/veh	412.8	0.2	91.9	7.2	58.1	130.0	409.9	0.9	0.0	13.5	0.2	468.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.5	7.1	29.4	0.2	20.6	25.9	26.5	19.6	0.1	6.0	11.6	136.1
LnGrp Delay(d),s/veh	482.3	44.6	145.9	81.4	117.1	189.0	477.4	28.7	17.7	80.6	24.6	505.7
LnGrp LOS	F	D	F	F	F	F	F	C	B	F	C	F
Approach Vol, veh/h		1598			1600			2481			3156	
Approach Delay, s/veh		205.7			135.5			145.0			275.3	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.8	81.2	5.0	46.0	19.0	80.0	15.0	36.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	17.0	74.0	4.0	39.0	15.0	76.0	11.0	32.0
Max Q Clear Time (g_c+I1), s	13.5	43.7	2.3	44.0	17.0	78.0	13.0	34.0
Green Ext Time (p_c), s	0.3	29.9	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	200.8
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	605	301	402	1256	856	661	1097	239	357	329	0
Future Volume (veh/h)	0	605	301	402	1256	856	661	1097	239	357	329	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	0	605	301	402	1256	856	661	1097	239	357	329	0
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	4	1076	335	494	2043	636	753	1177	527	400	814	364
Arrive On Green	0.00	0.21	0.21	0.15	0.41	0.41	0.22	0.34	0.34	0.12	0.23	0.00
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	0	605	301	402	1256	856	661	1097	239	357	329	0
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	0.0	9.1	15.9	9.7	16.8	34.6	16.0	25.8	10.2	8.8	6.8	0.0
Cycle Q Clear(g_c), s	0.0	9.1	15.9	9.7	16.8	34.6	16.0	25.8	10.2	8.8	6.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	4	1076	335	494	2043	636	753	1177	527	400	814	364
V/C Ratio(X)	0.00	0.56	0.90	0.81	0.61	1.35	0.88	0.93	0.45	0.89	0.40	0.00
Avail Cap(c_a), veh/h	160	1124	350	640	2043	636	840	1194	534	400	814	364
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	29.9	32.6	35.3	20.0	25.3	32.1	27.3	22.2	37.0	27.7	0.0
Incr Delay (d2), s/veh	0.0	0.6	24.2	6.2	0.6	165.8	9.7	12.9	0.6	21.4	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.3	9.1	5.0	7.9	44.1	8.5	14.4	4.4	5.3	3.3	0.0
LnGrp Delay(d),s/veh	0.0	30.5	56.8	41.4	20.6	191.1	41.7	40.2	22.8	58.5	28.0	0.0
LnGrp LOS		C	E	D	C	F	D	D	C	E	C	
Approach Vol, veh/h		906			2514			1997			686	
Approach Delay, s/veh		39.2			82.0			38.6			43.9	
Approach LOS		D			F			D			D	

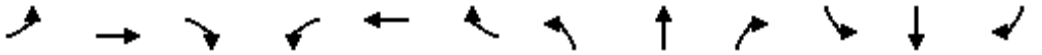
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	32.6	16.4	22.2	22.8	23.8	0.0	38.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	29.0	16.0	19.0	21.0	18.0	4.0	31.0
Max Q Clear Time (g_c+I1), s	10.8	27.8	11.7	17.9	18.0	8.8	0.0	36.6
Green Ext Time (p_c), s	0.0	0.8	0.6	0.3	0.9	6.5	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	57.2
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	74	18	155	408	995	134	985	89	357	461	244
Future Volume (veh/h)	28	74	18	155	408	995	134	985	89	357	461	244
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	28	74	18	155	408	995	134	985	89	357	461	244
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	69	1511	676	212	1658	742	189	947	424	345	1108	496
Arrive On Green	0.02	0.43	0.43	0.06	0.47	0.47	0.06	0.27	0.27	0.10	0.32	0.32
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	28	74	18	155	408	995	134	985	89	357	461	244
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	1.0	1.5	0.8	5.3	8.2	56.0	4.6	32.0	5.2	12.0	12.3	14.9
Cycle Q Clear(g_c), s	1.0	1.5	0.8	5.3	8.2	56.0	4.6	32.0	5.2	12.0	12.3	14.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	69	1511	676	212	1658	742	189	947	424	345	1108	496
V/C Ratio(X)	0.40	0.05	0.03	0.73	0.25	1.34	0.71	1.04	0.21	1.03	0.42	0.49
Avail Cap(c_a), veh/h	115	1511	676	288	1658	742	259	947	424	345	1108	496
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.3	19.6	19.4	54.6	18.6	31.2	55.0	43.2	33.4	53.2	31.9	32.8
Incr Delay (d2), s/veh	3.8	0.0	0.0	6.1	0.1	162.8	5.4	40.1	0.2	57.4	0.3	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.7	0.3	2.7	4.0	57.7	2.3	20.7	2.3	8.4	6.0	6.5
LnGrp Delay(d),s/veh	61.0	19.6	19.4	60.7	18.7	194.0	60.3	83.3	33.7	110.6	32.1	33.6
LnGrp LOS	E	B	B	E	B	F	E	F	C	F	C	C
Approach Vol, veh/h		120			1558			1208			1062	
Approach Delay, s/veh		29.2			134.8			77.1			58.8	
Approach LOS		C			F			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	36.0	11.4	55.0	10.6	41.4	6.4	60.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	12.0	32.0	10.0	50.0	9.0	35.0	4.0	56.0
Max Q Clear Time (g_c+I1), s	14.0	34.0	7.3	3.5	6.6	16.9	3.0	58.0
Green Ext Time (p_c), s	0.0	0.0	0.1	11.0	0.1	10.9	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	93.5
HCM 2010 LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	348	98	29	858	260	244	596	31	90	335	300
Future Volume (veh/h)	126	348	98	29	858	260	244	596	31	90	335	300
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	126	348	98	29	858	260	244	596	31	90	335	300
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	210	1172	524	88	1047	468	349	1063	475	182	891	399
Arrive On Green	0.06	0.33	0.33	0.03	0.30	0.30	0.10	0.30	0.30	0.05	0.25	0.25
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	126	348	98	29	858	260	244	596	31	90	335	300
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	2.0	4.1	2.5	0.5	12.9	7.9	3.9	8.1	0.8	1.5	4.5	10.0
Cycle Q Clear(g_c), s	2.0	4.1	2.5	0.5	12.9	7.9	3.9	8.1	0.8	1.5	4.5	10.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	210	1172	524	88	1047	468	349	1063	475	182	891	399
V/C Ratio(X)	0.60	0.30	0.19	0.33	0.82	0.56	0.70	0.56	0.07	0.49	0.38	0.75
Avail Cap(c_a), veh/h	241	1172	524	241	1116	499	362	1063	475	301	992	444
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.9	13.9	13.4	27.1	18.4	16.7	24.5	16.5	14.0	26.0	17.4	19.4
Incr Delay (d2), s/veh	3.2	0.1	0.2	2.1	4.7	1.2	5.6	0.7	0.1	2.1	0.3	6.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.0	1.1	0.2	6.9	3.5	2.1	4.0	0.3	0.7	2.2	5.0
LnGrp Delay(d),s/veh	29.0	14.0	13.5	29.2	23.1	17.9	30.1	17.2	14.1	28.1	17.6	25.8
LnGrp LOS	C	B	B	C	C	B	C	B	B	C	B	C
Approach Vol, veh/h		572			1147			871			725	
Approach Delay, s/veh		17.3			22.1			20.7			22.3	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	21.1	5.5	22.9	9.8	18.4	7.5	20.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	17.0	4.0	18.0	6.0	16.0	4.0	18.0
Max Q Clear Time (g_c+I1), s	3.5	10.1	2.5	6.1	5.9	12.0	4.0	14.9
Green Ext Time (p_c), s	0.0	4.0	0.0	7.2	0.0	2.4	0.0	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	20.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	773	124	25	1279	244	578	221	54	104	54	143
Future Volume (veh/h)	51	773	124	25	1279	244	578	221	54	104	54	143
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	51	773	124	25	1279	244	578	221	54	104	54	143
Adj No. of Lanes	1	2	1	1	2	1	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	65	1354	606	35	1293	578	581	680	578	131	206	175
Arrive On Green	0.04	0.39	0.39	0.02	0.37	0.37	0.33	0.37	0.37	0.07	0.11	0.11
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	51	773	124	25	1279	244	578	221	54	104	54	143
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	3.0	18.4	5.6	1.5	38.4	12.3	34.7	9.1	2.4	6.2	2.8	9.4
Cycle Q Clear(g_c), s	3.0	18.4	5.6	1.5	38.4	12.3	34.7	9.1	2.4	6.2	2.8	9.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	65	1354	606	35	1293	578	581	680	578	131	206	175
V/C Ratio(X)	0.78	0.57	0.20	0.72	0.99	0.42	0.99	0.33	0.09	0.80	0.26	0.82
Avail Cap(c_a), veh/h	66	1354	606	83	1293	578	581	680	578	216	279	237
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.5	25.6	21.6	51.5	33.2	24.9	35.3	24.0	21.8	48.2	43.0	45.9
Incr Delay (d2), s/veh	43.9	0.6	0.2	24.6	22.4	0.5	35.7	0.3	0.1	10.5	0.7	14.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	9.0	2.4	1.0	22.5	5.4	22.5	4.7	1.0	3.4	1.5	4.8
LnGrp Delay(d),s/veh	94.4	26.1	21.8	76.1	55.6	25.4	71.0	24.2	21.9	58.6	43.6	60.4
LnGrp LOS	F	C	C	E	E	C	E	C	C	E	D	E
Approach Vol, veh/h		948			1548			853			301	
Approach Delay, s/veh		29.2			51.2			55.8			56.8	
Approach LOS		C			D			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	43.0	6.1	44.8	39.0	15.8	7.9	43.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	13.0	38.0	5.0	38.0	35.0	16.0	4.0	39.0
Max Q Clear Time (g_c+I1), s	8.2	11.1	3.5	20.4	36.7	11.4	5.0	40.4
Green Ext Time (p_c), s	0.1	2.3	0.0	14.0	0.0	0.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	47.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	210	167	26	448	223	180	192	88	43	86	41
Future Volume (veh/h)	20	210	167	26	448	223	180	192	88	43	86	41
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	20	210	167	26	448	223	180	192	88	43	86	41
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	33	831	706	41	529	263	224	270	124	60	156	74
Arrive On Green	0.02	0.45	0.45	0.02	0.45	0.45	0.13	0.23	0.23	0.03	0.13	0.13
Sat Flow, veh/h	1757	1845	1568	1757	1163	579	1757	1198	549	1757	1182	563
Grp Volume(v), veh/h	20	210	167	26	0	671	180	0	280	43	0	127
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1742	1757	0	1748	1757	0	1745
Q Serve(g_s), s	0.7	4.2	3.9	0.9	0.0	20.5	6.0	0.0	8.9	1.5	0.0	4.1
Cycle Q Clear(g_c), s	0.7	4.2	3.9	0.9	0.0	20.5	6.0	0.0	8.9	1.5	0.0	4.1
Prop In Lane	1.00		1.00	1.00		0.33	1.00		0.31	1.00		0.32
Lane Grp Cap(c), veh/h	33	831	706	41	0	793	224	0	394	60	0	230
V/C Ratio(X)	0.60	0.25	0.24	0.63	0.00	0.85	0.80	0.00	0.71	0.72	0.00	0.55
Avail Cap(c_a), veh/h	117	983	836	146	0	958	293	0	641	146	0	494
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.2	10.2	10.1	29.1	0.0	14.5	25.4	0.0	21.4	28.7	0.0	24.4
Incr Delay (d2), s/veh	16.3	0.2	0.2	14.8	0.0	6.1	11.4	0.0	2.4	14.8	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.2	1.7	0.6	0.0	11.0	3.6	0.0	4.5	1.0	0.0	2.1
LnGrp Delay(d),s/veh	45.5	10.4	10.3	43.9	0.0	20.6	36.8	0.0	23.8	43.5	0.0	26.4
LnGrp LOS	D	B	B	D		C	D		C	D		C
Approach Vol, veh/h		397			697			460			170	
Approach Delay, s/veh		12.1			21.5			28.9			30.8	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.0	17.5	5.4	31.0	11.7	11.9	5.1	31.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	22.0	5.0	32.0	10.0	17.0	4.0	33.0
Max Q Clear Time (g_c+I1), s	3.5	10.9	2.9	6.2	8.0	6.1	2.7	22.5
Green Ext Time (p_c), s	0.0	1.8	0.0	7.5	0.1	1.8	0.0	4.8

Intersection Summary	
HCM 2010 Ctrl Delay	22.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	78	0	0	607	805	0	0	0	280	0	0
Future Volume (veh/h)	0	78	0	0	607	805	0	0	0	280	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	0	78	0	0	607	805	0	0	0	280	0	0
Adj No. of Lanes	2	2	1	1	2	1	1	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	11	2029	908	6	2029	908	6	6	5	517	280	238
Arrive On Green	0.00	0.58	0.00	0.00	0.58	0.58	0.00	0.00	0.00	0.15	0.00	0.00
Sat Flow, veh/h	3408	3505	1568	1757	3505	1568	1757	1845	1568	3408	1845	1568
Grp Volume(v), veh/h	0	78	0	0	607	805	0	0	0	280	0	0
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1757	1752	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	0.0	0.3	0.0	0.0	2.6	13.2	0.0	0.0	0.0	2.3	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.3	0.0	0.0	2.6	13.2	0.0	0.0	0.0	2.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	11	2029	908	6	2029	908	6	6	5	517	280	238
V/C Ratio(X)	0.00	0.04	0.00	0.00	0.30	0.89	0.00	0.00	0.00	0.54	0.00	0.00
Avail Cap(c_a), veh/h	459	2125	950	237	2125	950	237	994	845	1836	1739	1478
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	2.7	0.0	0.0	3.2	5.4	0.0	0.0	0.0	11.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.1	9.9	0.0	0.0	0.0	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	0.0	1.3	8.0	0.0	0.0	0.0	1.1	0.0	0.0
LnGrp Delay(d),s/veh	0.0	2.7	0.0	0.0	3.3	15.3	0.0	0.0	0.0	12.5	0.0	0.0
LnGrp LOS		A			A	B				B		
Approach Vol, veh/h		78			1412			0			280	
Approach Delay, s/veh		2.7			10.1			0.0			12.5	
Approach LOS		A			B						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	0.0	0.0	21.2	0.0	8.5	0.0	21.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	16.0	4.0	18.0	4.0	28.0	4.0	18.0
Max Q Clear Time (g_c+I1), s	4.3	0.0	0.0	2.3	0.0	0.0	0.0	15.2
Green Ext Time (p_c), s	0.7	0.0	0.0	7.6	0.0	0.0	0.0	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	10.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	17	66	189	10	77	22	1496	69	63	665	29
Future Volume (veh/h)	128	17	66	189	10	77	22	1496	69	63	665	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	128	17	66	189	10	77	22	1496	69	63	665	29
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	161	133	113	228	203	172	26	1848	85	80	1958	85
Arrive On Green	0.09	0.07	0.07	0.13	0.11	0.11	0.01	0.54	0.54	0.05	0.57	0.57
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	3412	157	1757	3422	149
Grp Volume(v), veh/h	128	17	66	189	10	77	22	766	799	63	340	354
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1817	1757	1752	1818
Q Serve(g_s), s	5.4	0.7	3.1	7.9	0.4	3.5	0.9	27.0	27.2	2.7	7.8	7.8
Cycle Q Clear(g_c), s	5.4	0.7	3.1	7.9	0.4	3.5	0.9	27.0	27.2	2.7	7.8	7.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.09	1.00		0.08
Lane Grp Cap(c), veh/h	161	133	113	228	203	172	26	949	984	80	1003	1041
V/C Ratio(X)	0.79	0.13	0.59	0.83	0.05	0.45	0.85	0.81	0.81	0.79	0.34	0.34
Avail Cap(c_a), veh/h	209	366	311	255	414	352	116	1019	1056	93	1003	1041
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.7	32.9	34.0	32.1	30.1	31.5	37.2	14.1	14.2	35.8	8.6	8.6
Incr Delay (d2), s/veh	14.6	0.4	4.7	18.4	0.1	1.8	49.9	4.6	4.6	31.4	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.3	1.5	5.0	0.2	1.6	0.8	14.0	14.8	2.0	3.7	3.9
LnGrp Delay(d),s/veh	48.3	33.3	38.8	50.6	30.2	33.3	87.1	18.7	18.8	67.1	8.8	8.8
LnGrp LOS	D	C	D	D	C	C	F	B	B	E	A	A
Approach Vol, veh/h		211			276			1587			757	
Approach Delay, s/veh		44.1			45.0			19.7			13.6	
Approach LOS		D			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.4	45.0	13.8	9.4	5.1	47.3	10.9	12.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	44.0	11.0	15.0	5.0	43.0	9.0	17.0
Max Q Clear Time (g_c+I1), s	4.7	29.2	9.9	5.1	2.9	9.8	7.4	5.5
Green Ext Time (p_c), s	0.0	11.8	0.1	0.4	0.0	22.1	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	22.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	3	59	67	2	47	13	1331	111	104	892	74
Future Volume (veh/h)	64	3	59	67	2	47	13	1331	111	104	892	74
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	64	3	59	67	2	47	13	1331	111	104	892	74
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	80	128	109	84	133	113	17	1762	146	132	1977	164
Arrive On Green	0.05	0.07	0.07	0.05	0.07	0.07	0.01	0.54	0.54	0.08	0.60	0.60
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	3277	272	1757	3277	272
Grp Volume(v), veh/h	64	3	59	67	2	47	13	710	732	104	477	489
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1797	1757	1752	1797
Q Serve(g_s), s	2.1	0.1	2.2	2.2	0.1	1.7	0.4	18.7	18.9	3.5	8.8	8.8
Cycle Q Clear(g_c), s	2.1	0.1	2.2	2.2	0.1	1.7	0.4	18.7	18.9	3.5	8.8	8.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.15	1.00		0.15
Lane Grp Cap(c), veh/h	80	128	109	84	133	113	17	942	966	132	1057	1084
V/C Ratio(X)	0.80	0.02	0.54	0.80	0.02	0.42	0.76	0.75	0.76	0.79	0.45	0.45
Avail Cap(c_a), veh/h	118	497	423	118	497	423	89	1004	1029	148	1063	1090
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.1	25.7	26.7	28.0	25.6	26.4	29.3	10.7	10.7	27.0	6.4	6.4
Incr Delay (d2), s/veh	20.6	0.1	4.1	21.8	0.0	2.4	49.2	3.1	3.1	21.7	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	1.1	1.6	0.0	0.8	0.4	9.7	10.0	2.5	4.3	4.4
LnGrp Delay(d),s/veh	48.7	25.8	30.8	49.8	25.6	28.8	78.5	13.7	13.8	48.7	6.7	6.7
LnGrp LOS	D	C	C	D	C	C	E	B	B	D	A	A
Approach Vol, veh/h		126			116			1455			1070	
Approach Delay, s/veh		39.8			40.9			14.3			10.8	
Approach LOS		D			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	35.9	6.8	8.1	4.6	39.8	6.7	8.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	34.0	4.0	16.0	3.0	36.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	5.5	20.9	4.2	4.2	2.4	10.8	4.1	3.7
Green Ext Time (p_c), s	0.0	11.0	0.0	0.2	0.0	18.9	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	15.2
HCM 2010 LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	819	23	101	1596	73	226
Future Volume (veh/h)	819	23	101	1596	73	226
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1900	1845	1845	1845	1845
Adj Flow Rate, veh/h	819	23	101	1596	73	226
Adj No. of Lanes	2	0	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	2204	62	492	2219	338	302
Arrive On Green	0.63	0.63	0.63	0.63	0.19	0.19
Sat Flow, veh/h	3574	98	645	3597	1757	1568
Grp Volume(v), veh/h	412	430	101	1596	73	226
Grp Sat Flow(s),veh/h/ln	1752	1827	645	1752	1757	1568
Q Serve(g_s), s	5.2	5.2	4.1	14.1	1.6	6.2
Cycle Q Clear(g_c), s	5.2	5.2	9.3	14.1	1.6	6.2
Prop In Lane		0.05	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1109	1157	492	2219	338	302
V/C Ratio(X)	0.37	0.37	0.21	0.72	0.22	0.75
Avail Cap(c_a), veh/h	1184	1234	520	2368	613	547
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	4.0	4.0	6.3	5.7	15.6	17.5
Incr Delay (d2), s/veh	0.2	0.2	0.2	1.0	0.3	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	2.6	0.8	7.0	0.8	3.0
LnGrp Delay(d),s/veh	4.2	4.2	6.5	6.7	15.9	21.2
LnGrp LOS	A	A	A	A	B	C
Approach Vol, veh/h	842			1697	299	
Approach Delay, s/veh	4.2			6.7	19.9	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		12.8		33.1				33.1
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		16.0		31.0				31.0
Max Q Clear Time (g_c+I1), s		8.2		7.2				16.1
Green Ext Time (p_c), s		0.6		19.5				13.0

Intersection Summary	
HCM 2010 Ctrl Delay	7.3
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	256	1915	0	75	2992	0	0	1	31	52	0	0
Future Volume (veh/h)	256	1915	0	75	2992	0	0	1	31	52	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	256	1915	0	75	2992	0	0	1	31	52	0	0
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	282	3707	0	96	3172	0	2	68	58	61	195	166
Arrive On Green	0.16	0.74	0.00	0.05	0.63	0.00	0.00	0.04	0.04	0.03	0.00	0.00
Sat Flow, veh/h	1757	5202	0	1757	5202	0	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	256	1915	0	75	2992	0	0	1	31	52	0	0
Grp Sat Flow(s),veh/h/ln	1757	1679	0	1757	1679	0	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	16.6	18.8	0.0	4.9	62.8	0.0	0.0	0.1	2.3	3.4	0.0	0.0
Cycle Q Clear(g_c), s	16.6	18.8	0.0	4.9	62.8	0.0	0.0	0.1	2.3	3.4	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	282	3707	0	96	3172	0	2	68	58	61	195	166
V/C Ratio(X)	0.91	0.52	0.00	0.78	0.94	0.00	0.00	0.01	0.53	0.86	0.00	0.00
Avail Cap(c_a), veh/h	288	3707	0	182	3257	0	45	255	216	61	270	230
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	47.8	6.5	0.0	54.1	19.6	0.0	0.0	53.8	54.9	55.7	0.0	0.0
Incr Delay (d2), s/veh	30.0	0.1	0.0	12.9	6.5	0.0	0.0	0.1	7.5	67.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.4	8.6	0.0	2.7	30.7	0.0	0.0	0.0	1.1	2.8	0.0	0.0
LnGrp Delay(d),s/veh	77.8	6.6	0.0	67.1	26.1	0.0	0.0	53.9	62.3	123.5	0.0	0.0
LnGrp LOS	E	A		E	C			D	E	F		
Approach Vol, veh/h		2171			3067			32			52	
Approach Delay, s/veh		15.0			27.1			62.1			123.5	
Approach LOS		B			C			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	8.3	10.3	89.4	0.0	16.3	22.6	77.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	12.0	82.0	3.0	17.0	19.0	75.0
Max Q Clear Time (g_c+I1), s	5.4	4.3	6.9	20.8	0.0	0.0	18.6	64.8
Green Ext Time (p_c), s	0.0	0.0	0.1	60.5	0.0	0.0	0.0	8.2

Intersection Summary	
HCM 2010 Ctrl Delay	23.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	319	1103	492	231	2150	8	859	600	151	48	635	259
Future Volume (veh/h)	319	1103	492	231	2150	8	859	600	151	48	635	259
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	319	1103	492	231	2150	8	859	600	151	48	635	259
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	243	1640	511	278	1691	526	633	818	696	61	540	459
Arrive On Green	0.07	0.33	0.33	0.08	0.34	0.34	0.19	0.44	0.44	0.03	0.29	0.29
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	319	1103	492	231	2150	8	859	600	151	48	635	259
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1845	1568	1757	1845	1568
Q Serve(g_s), s	10.0	26.5	43.2	9.3	47.0	0.5	26.0	37.6	8.3	3.8	41.0	19.6
Cycle Q Clear(g_c), s	10.0	26.5	43.2	9.3	47.0	0.5	26.0	37.6	8.3	3.8	41.0	19.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	243	1640	511	278	1691	526	633	818	696	61	540	459
V/C Ratio(X)	1.31	0.67	0.96	0.83	1.27	0.02	1.36	0.73	0.22	0.78	1.18	0.56
Avail Cap(c_a), veh/h	243	1640	511	292	1691	526	633	818	696	75	540	459
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.0	40.8	46.4	63.4	46.5	31.0	57.0	32.1	24.0	67.0	49.5	41.9
Incr Delay (d2), s/veh	165.9	1.1	30.6	17.5	127.1	0.0	170.9	3.4	0.2	33.6	97.1	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.3	12.4	23.0	5.1	41.6	0.2	27.2	19.8	3.6	2.4	35.4	8.7
LnGrp Delay(d),s/veh	230.9	41.8	77.0	80.9	173.6	31.1	227.9	35.5	24.1	100.6	146.6	43.5
LnGrp LOS	F	D	E	F	F	C	F	D	C	F	F	D
Approach Vol, veh/h		1914			2389			1610			942	
Approach Delay, s/veh		82.4			164.1			137.1			115.9	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	66.1	15.4	49.6	30.0	45.0	14.0	51.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	61.0	12.0	45.0	26.0	41.0	10.0	47.0
Max Q Clear Time (g_c+I1), s	5.8	39.6	11.3	45.2	28.0	43.0	12.0	49.0
Green Ext Time (p_c), s	0.0	10.7	0.1	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	128.3
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1117	14	75	2036	1	118	0	0	5	1	58
Future Volume (veh/h)	10	1117	14	75	2036	1	118	0	0	5	1	58
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	10	1117	14	75	2036	1	118	0	0	5	1	58
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	13	2935	37	76	3163	2	151	274	233	7	122	104
Arrive On Green	0.01	0.57	0.57	0.04	0.61	0.61	0.09	0.00	0.00	0.00	0.07	0.07
Sat Flow, veh/h	1757	5126	64	1757	5199	3	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	10	731	400	75	1315	722	118	0	0	5	1	58
Grp Sat Flow(s),veh/h/ln	1757	1679	1833	1757	1679	1844	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	0.4	8.2	8.2	2.9	17.4	17.4	4.5	0.0	0.0	0.2	0.0	2.5
Cycle Q Clear(g_c), s	0.4	8.2	8.2	2.9	17.4	17.4	4.5	0.0	0.0	0.2	0.0	2.5
Prop In Lane	1.00		0.04	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	13	1922	1049	76	2042	1122	151	274	233	7	122	104
V/C Ratio(X)	0.75	0.38	0.38	0.98	0.64	0.64	0.78	0.00	0.00	0.72	0.01	0.56
Avail Cap(c_a), veh/h	76	2140	1169	76	2140	1176	280	454	386	255	428	363
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.2	8.1	8.1	33.0	8.7	8.7	30.9	0.0	0.0	34.3	30.1	31.3
Incr Delay (d2), s/veh	57.9	0.1	0.2	96.7	0.6	1.1	8.4	0.0	0.0	84.6	0.0	4.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.8	4.2	3.5	8.0	9.0	2.5	0.0	0.0	0.3	0.0	1.2
LnGrp Delay(d),s/veh	92.1	8.2	8.3	129.7	9.3	9.8	39.3	0.0	0.0	118.9	30.1	35.9
LnGrp LOS	F	A	A	F	A	A	D			F	C	D
Approach Vol, veh/h		1141			2112			118			64	
Approach Delay, s/veh		9.0			13.8			39.3			42.3	
Approach LOS		A			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.3	14.2	7.0	43.5	9.9	8.6	4.5	46.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	17.0	3.0	44.0	11.0	16.0	3.0	44.0
Max Q Clear Time (g_c+I1), s	2.2	0.0	4.9	10.2	6.5	4.5	2.4	19.4
Green Ext Time (p_c), s	0.0	0.0	0.0	29.3	0.1	0.1	0.0	22.1

Intersection Summary	
HCM 2010 Ctrl Delay	13.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	1040	30	107	1892	34	139	9	92	42	27	81
Future Volume (veh/h)	51	1040	30	107	1892	34	139	9	92	42	27	81
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	51	1040	30	107	1892	34	139	9	92	42	27	81
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	61	2050	59	137	2296	41	176	315	268	50	182	155
Arrive On Green	0.04	0.41	0.41	0.08	0.45	0.45	0.10	0.17	0.17	0.03	0.10	0.10
Sat Flow, veh/h	1757	5031	145	1757	5094	91	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	51	694	376	107	1246	680	139	9	92	42	27	81
Grp Sat Flow(s),veh/h/ln	1757	1679	1819	1757	1679	1829	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	1.5	7.8	7.8	3.0	16.5	16.5	3.9	0.2	2.6	1.2	0.7	2.5
Cycle Q Clear(g_c), s	1.5	7.8	7.8	3.0	16.5	16.5	3.9	0.2	2.6	1.2	0.7	2.5
Prop In Lane	1.00		0.08	1.00		0.05	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	61	1368	741	137	1513	824	176	315	268	50	182	155
V/C Ratio(X)	0.83	0.51	0.51	0.78	0.82	0.82	0.79	0.03	0.34	0.84	0.15	0.52
Avail Cap(c_a), veh/h	104	1368	741	277	1587	864	208	618	525	173	581	494
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	11.2	11.2	23.0	12.2	12.2	22.3	17.5	18.5	24.6	20.9	21.7
Incr Delay (d2), s/veh	23.5	0.3	0.6	9.2	3.5	6.3	15.8	0.0	0.8	29.8	0.4	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	3.6	4.0	1.8	8.2	9.6	2.7	0.1	1.2	1.0	0.4	1.2
LnGrp Delay(d),s/veh	47.9	11.5	11.8	32.1	15.7	18.5	38.1	17.6	19.3	54.3	21.3	24.4
LnGrp LOS	D	B	B	C	B	B	D	B	B	D	C	C
Approach Vol, veh/h		1121			2033			240			150	
Approach Delay, s/veh		13.3			17.5			30.1			32.2	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.4	12.7	8.0	24.7	9.1	9.0	5.8	26.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	17.0	8.0	19.0	6.0	16.0	3.0	24.0
Max Q Clear Time (g_c+I1), s	3.2	4.6	5.0	9.8	5.9	4.5	3.5	18.5
Green Ext Time (p_c), s	0.0	0.6	0.1	8.6	0.0	0.5	0.0	4.4

Intersection Summary	
HCM 2010 Ctrl Delay	17.7
HCM 2010 LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	46	149	387	2781	1273	35
Future Volume (veh/h)	46	149	387	2781	1273	35
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	46	149	387	2781	1273	35
Adj No. of Lanes	1	1	1	3	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	227	203	452	3586	1893	52
Arrive On Green	0.13	0.13	0.26	0.71	0.38	0.38
Sat Flow, veh/h	1757	1568	1757	5202	5205	139
Grp Volume(v), veh/h	46	149	387	2781	848	460
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1679	1679	1820
Q Serve(g_s), s	1.2	4.6	10.6	17.9	10.6	10.6
Cycle Q Clear(g_c), s	1.2	4.6	10.6	17.9	10.6	10.6
Prop In Lane	1.00	1.00	1.00			0.08
Lane Grp Cap(c), veh/h	227	203	452	3586	1261	684
V/C Ratio(X)	0.20	0.74	0.86	0.78	0.67	0.67
Avail Cap(c_a), veh/h	523	466	557	3695	1261	684
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.6	21.1	17.8	4.7	13.2	13.2
Incr Delay (d2), s/veh	0.4	5.1	10.6	1.1	1.4	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	4.2	6.4	8.3	5.1	5.7
LnGrp Delay(d),s/veh	20.1	26.2	28.5	5.7	14.6	15.7
LnGrp LOS	C	C	C	A	B	B
Approach Vol, veh/h	195			3168	1308	
Approach Delay, s/veh	24.8			8.5	15.0	
Approach LOS	C			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		39.9		10.5	17.0	22.9		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		37.0		15.0	16.0	17.0		
Max Q Clear Time (g_c+I1), s		19.9		6.6	12.6	12.6		
Green Ext Time (p_c), s		16.0		0.4	0.4	4.3		

Intersection Summary	
HCM 2010 Ctrl Delay	11.0
HCM 2010 LOS	B



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	120	12	180	1488	832	518
Future Volume (veh/h)	120	12	180	1488	832	518
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	120	12	180	1488	832	518
Adj No. of Lanes	1	1	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	158	141	228	2523	1034	634
Arrive On Green	0.09	0.09	0.13	0.72	0.49	0.49
Sat Flow, veh/h	1757	1568	1757	3597	2182	1281
Grp Volume(v), veh/h	120	12	180	1488	696	654
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1752	1752	1619
Q Serve(g_s), s	2.8	0.3	4.2	8.7	14.0	14.4
Cycle Q Clear(g_c), s	2.8	0.3	4.2	8.7	14.0	14.4
Prop In Lane	1.00	1.00	1.00			0.79
Lane Grp Cap(c), veh/h	158	141	228	2523	867	801
V/C Ratio(X)	0.76	0.09	0.79	0.59	0.80	0.82
Avail Cap(c_a), veh/h	209	186	292	2667	875	808
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.7	17.5	17.7	2.9	8.9	9.0
Incr Delay (d2), s/veh	10.9	0.3	10.6	0.3	5.4	6.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.3	2.7	4.0	7.9	7.8
LnGrp Delay(d),s/veh	29.6	17.8	28.3	3.2	14.3	15.5
LnGrp LOS	C	B	C	A	B	B
Approach Vol, veh/h	132			1668	1350	
Approach Delay, s/veh	28.5			5.9	14.9	
Approach LOS	C			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		34.3		7.8	9.5	24.8		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		32.0		5.0	7.0	21.0		
Max Q Clear Time (g_c+I1), s		10.7		4.8	6.2	16.4		
Green Ext Time (p_c), s		18.8		0.0	0.0	4.4		

Intersection Summary	
HCM 2010 Ctrl Delay	10.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	984	950	35	791	895	0	133	2154	1044	54	691	791
Future Volume (veh/h)	984	950	35	791	895	0	133	2154	1044	54	691	791
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	984	950	35	791	895	0	133	2154	1044	54	691	791
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	828	876	392	730	776	347	146	2014	627	73	1906	594
Arrive On Green	0.24	0.25	0.25	0.21	0.22	0.00	0.04	0.40	0.40	0.02	0.38	0.38
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	984	950	35	791	895	0	133	2154	1044	54	691	791
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	34.0	35.0	2.4	30.0	31.0	0.0	5.4	56.0	56.0	2.2	13.8	53.0
Cycle Q Clear(g_c), s	34.0	35.0	2.4	30.0	31.0	0.0	5.4	56.0	56.0	2.2	13.8	53.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	828	876	392	730	776	347	146	2014	627	73	1906	594
V/C Ratio(X)	1.19	1.08	0.09	1.08	1.15	0.00	0.91	1.07	1.66	0.74	0.36	1.33
Avail Cap(c_a), veh/h	828	876	392	730	776	347	146	2014	627	73	1906	594
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.0	52.5	40.3	55.0	54.5	0.0	66.7	42.0	42.0	68.1	31.3	43.5
Incr Delay (d2), s/veh	97.0	55.8	0.1	58.1	83.4	0.0	48.8	41.5	306.1	32.4	0.1	161.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	27.1	23.7	1.1	20.0	24.0	0.0	3.6	33.7	77.5	1.4	6.4	49.5
LnGrp Delay(d),s/veh	150.0	108.3	40.4	113.1	137.9	0.0	115.5	83.5	348.1	100.5	31.4	204.5
LnGrp LOS	F	F	D	F	F		F	F	F	F	C	F
Approach Vol, veh/h		1969			1686			3331			1536	
Approach Delay, s/veh		127.9			126.2			167.7			123.0	
Approach LOS		F			F			F			F	

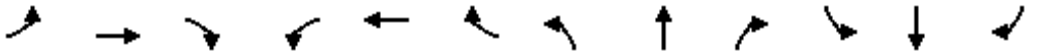
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	60.0	34.0	39.0	10.0	57.0	38.0	35.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	56.0	30.0	35.0	6.0	53.0	34.0	31.0
Max Q Clear Time (g_c+I1), s	4.2	58.0	32.0	37.0	7.4	55.0	36.0	33.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	142.3
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	1029	29	23	1197	14	102	3	69	29	0	102
Future Volume (veh/h)	73	1029	29	23	1197	14	102	3	69	29	0	102
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	73	1029	29	23	1197	14	102	3	69	29	0	102
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	90	1595	45	29	1501	18	129	305	259	35	207	176
Arrive On Green	0.05	0.46	0.46	0.02	0.42	0.42	0.07	0.17	0.17	0.02	0.00	0.11
Sat Flow, veh/h	1757	3482	98	1757	3548	41	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	73	518	540	23	591	620	102	3	69	29	0	102
Grp Sat Flow(s),veh/h/ln	1757	1752	1827	1757	1752	1837	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	1.9	10.7	10.7	0.6	13.8	13.8	2.7	0.1	1.8	0.8	0.0	2.9
Cycle Q Clear(g_c), s	1.9	10.7	10.7	0.6	13.8	13.8	2.7	0.1	1.8	0.8	0.0	2.9
Prop In Lane	1.00		0.05	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	90	803	837	29	742	777	129	305	259	35	207	176
V/C Ratio(X)	0.81	0.65	0.65	0.79	0.80	0.80	0.79	0.01	0.27	0.82	0.00	0.58
Avail Cap(c_a), veh/h	112	803	837	112	782	819	149	666	566	112	627	533
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.1	9.8	9.8	23.1	11.8	11.8	21.5	16.4	17.1	23.0	0.0	19.8
Incr Delay (d2), s/veh	28.6	1.8	1.7	36.5	5.6	5.3	21.7	0.0	0.5	35.1	0.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	5.4	5.7	0.6	7.7	8.0	2.1	0.0	0.8	0.7	0.0	1.4
LnGrp Delay(d),s/veh	50.7	11.6	11.5	59.5	17.4	17.1	43.1	16.4	17.7	58.1	0.0	22.8
LnGrp LOS	D	B	B	E	B	B	D	B	B	E		C
Approach Vol, veh/h		1131			1234			174			131	
Approach Delay, s/veh		14.1			18.0			32.6			30.6	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.9	11.8	4.8	25.6	7.5	9.3	6.4	23.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	17.0	3.0	21.0	4.0	16.0	3.0	21.0
Max Q Clear Time (g_c+I1), s	2.8	3.8	2.6	12.7	4.7	4.9	3.9	15.8
Green Ext Time (p_c), s	0.0	0.4	0.0	7.1	0.0	0.4	0.0	4.1

Intersection Summary	
HCM 2010 Ctrl Delay	17.9
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	289	1682	146	90	2285	94	100	3	0	63	3	83
Future Volume (veh/h)	289	1682	146	90	2285	94	100	3	0	63	3	83
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	289	1682	146	90	2285	94	100	3	0	63	3	83
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	313	2791	242	116	2378	97	112	147	125	106	140	119
Arrive On Green	0.18	0.59	0.59	0.07	0.48	0.48	0.06	0.08	0.00	0.06	0.08	0.08
Sat Flow, veh/h	1757	4721	409	1757	4963	203	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	289	1195	633	90	1542	837	100	3	0	63	3	83
Grp Sat Flow(s),veh/h/ln	1757	1679	1772	1757	1679	1809	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	12.7	17.8	17.9	4.0	34.8	35.3	4.4	0.1	0.0	2.8	0.1	4.1
Cycle Q Clear(g_c), s	12.7	17.8	17.9	4.0	34.8	35.3	4.4	0.1	0.0	2.8	0.1	4.1
Prop In Lane	1.00		0.23	1.00		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	313	1985	1048	116	1609	867	112	147	125	106	140	119
V/C Ratio(X)	0.92	0.60	0.60	0.78	0.96	0.97	0.90	0.02	0.00	0.60	0.02	0.70
Avail Cap(c_a), veh/h	313	1985	1048	223	1621	873	112	398	339	112	398	339
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.8	10.2	10.2	36.2	19.7	19.9	36.6	33.4	0.0	36.1	33.6	35.5
Incr Delay (d2), s/veh	32.1	0.5	1.0	10.6	13.7	22.4	54.0	0.1	0.0	7.7	0.1	7.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	8.3	8.9	2.3	18.9	22.8	3.8	0.1	0.0	1.6	0.1	2.0
LnGrp Delay(d),s/veh	63.9	10.7	11.2	46.8	33.5	42.3	90.6	33.5	0.0	43.7	33.7	42.5
LnGrp LOS	E	B	B	D	C	D	F	C		D	C	D
Approach Vol, veh/h		2117			2469			103			149	
Approach Delay, s/veh		18.1			36.9			88.9			42.9	
Approach LOS		B			D			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	10.3	9.2	50.5	9.0	10.0	18.0	41.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	17.0	10.0	42.0	5.0	17.0	14.0	38.0
Max Q Clear Time (g_c+I1), s	4.8	2.1	6.0	19.9	6.4	6.1	14.7	37.3
Green Ext Time (p_c), s	0.0	0.2	0.1	21.7	0.0	0.2	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	30.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	347	996	631	20	1649	37	1225	741	22	50	782	585
Future Volume (veh/h)	347	996	631	20	1649	37	1225	741	22	50	782	585
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	347	996	631	20	1649	37	1225	741	22	50	782	585
Adj No. of Lanes	2	3	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	243	2028	631	39	1202	538	828	1566	700	84	801	358
Arrive On Green	0.07	0.40	0.40	0.01	0.34	0.34	0.24	0.45	0.45	0.02	0.23	0.23
Sat Flow, veh/h	3408	5036	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	347	996	631	20	1649	37	1225	741	22	50	782	585
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	10.0	20.6	56.3	0.8	48.0	2.2	34.0	20.8	1.1	2.0	31.0	32.0
Cycle Q Clear(g_c), s	10.0	20.6	56.3	0.8	48.0	2.2	34.0	20.8	1.1	2.0	31.0	32.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	243	2028	631	39	1202	538	828	1566	700	84	801	358
V/C Ratio(X)	1.43	0.49	1.00	0.51	1.37	0.07	1.48	0.47	0.03	0.59	0.98	1.63
Avail Cap(c_a), veh/h	243	2028	631	73	1202	538	828	1566	700	122	801	358
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.0	31.1	41.8	68.8	46.0	31.0	53.0	27.2	21.7	67.6	53.6	54.0
Incr Delay (d2), s/veh	213.6	0.2	35.6	9.7	172.9	0.1	222.5	0.2	0.0	6.5	25.9	297.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.9	9.6	30.5	0.4	52.1	1.0	41.6	10.1	0.5	1.0	17.9	43.4
LnGrp Delay(d),s/veh	278.6	31.3	77.4	78.5	218.9	31.0	275.5	27.4	21.8	74.1	79.5	351.0
LnGrp LOS	F	C	E	E	F	C	F	C	C	E	E	F
Approach Vol, veh/h		1974			1706			1988			1417	
Approach Delay, s/veh		89.5			213.1			180.2			191.4	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	66.5	5.6	60.4	38.0	36.0	14.0	52.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	61.0	3.0	55.0	34.0	32.0	10.0	48.0
Max Q Clear Time (g_c+I1), s	4.0	22.8	2.8	58.3	36.0	34.0	12.0	50.0
Green Ext Time (p_c), s	0.0	19.5	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	165.1
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	292	595	27	33	1036	220	117	1075	199	122	316	453
Future Volume (veh/h)	292	595	27	33	1036	220	117	1075	199	122	316	453
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	292	595	27	33	1036	220	117	1075	199	122	316	453
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	342	1381	618	66	1098	491	171	1177	527	171	1177	527
Arrive On Green	0.10	0.39	0.39	0.02	0.31	0.31	0.05	0.34	0.34	0.05	0.34	0.34
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	292	595	27	33	1036	220	117	1075	199	122	316	453
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	6.7	9.9	0.8	0.8	23.0	8.9	2.7	23.4	7.7	2.8	5.3	21.5
Cycle Q Clear(g_c), s	6.7	9.9	0.8	0.8	23.0	8.9	2.7	23.4	7.7	2.8	5.3	21.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	342	1381	618	66	1098	491	171	1177	527	171	1177	527
V/C Ratio(X)	0.85	0.43	0.04	0.50	0.94	0.45	0.68	0.91	0.38	0.71	0.27	0.86
Avail Cap(c_a), veh/h	342	1381	618	128	1098	491	171	1186	530	171	1186	530
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.3	17.7	14.9	38.7	26.7	21.9	37.3	25.4	20.2	37.3	19.3	24.7
Incr Delay (d2), s/veh	18.6	0.2	0.0	5.6	15.5	0.6	10.8	10.8	0.4	13.2	0.1	13.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	4.8	0.4	0.4	13.4	3.9	1.5	13.1	3.4	1.6	2.6	11.3
LnGrp Delay(d),s/veh	54.0	17.9	14.9	44.4	42.2	22.5	48.1	36.1	20.6	50.5	19.5	38.1
LnGrp LOS	D	B	B	D	D	C	D	D	C	D	B	D
Approach Vol, veh/h		914			1289			1391			891	
Approach Delay, s/veh		29.3			38.9			34.9			33.2	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	30.8	5.6	35.4	8.0	30.8	12.0	29.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	27.0	3.0	30.0	4.0	27.0	8.0	25.0
Max Q Clear Time (g_c+I1), s	4.8	25.4	2.8	11.9	4.7	23.5	8.7	25.0
Green Ext Time (p_c), s	0.0	1.4	0.0	11.8	0.0	2.9	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	34.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	708	10	27	726	1	117	907	337	3	85	30
Future Volume (veh/h)	184	708	10	27	726	1	117	907	337	3	85	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	184	708	10	27	726	1	117	907	337	3	85	30
Adj No. of Lanes	2	1	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	272	778	661	78	1278	572	191	1048	469	137	993	444
Arrive On Green	0.08	0.42	0.42	0.02	0.36	0.36	0.06	0.30	0.30	0.04	0.28	0.28
Sat Flow, veh/h	3408	1845	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	184	708	10	27	726	1	117	907	337	3	85	30
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	3.9	26.7	0.3	0.6	12.3	0.0	2.5	18.1	14.2	0.1	1.3	1.0
Cycle Q Clear(g_c), s	3.9	26.7	0.3	0.6	12.3	0.0	2.5	18.1	14.2	0.1	1.3	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	272	778	661	78	1278	572	191	1048	469	137	993	444
V/C Ratio(X)	0.68	0.91	0.02	0.34	0.57	0.00	0.61	0.87	0.72	0.02	0.09	0.07
Avail Cap(c_a), veh/h	414	798	678	184	1279	572	322	1089	487	691	1468	657
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.1	20.1	12.5	35.6	18.8	14.9	34.2	24.5	23.2	34.1	19.5	19.4
Incr Delay (d2), s/veh	2.9	14.3	0.0	2.6	0.6	0.0	3.2	7.3	4.9	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	16.5	0.1	0.3	6.1	0.0	1.3	9.7	6.7	0.0	0.6	0.5
LnGrp Delay(d),s/veh	36.0	34.4	12.5	38.2	19.4	14.9	37.3	31.8	28.0	34.2	19.5	19.4
LnGrp LOS	D	C	B	D	B	B	D	C	C	C	B	B
Approach Vol, veh/h		902			754			1361			118	
Approach Delay, s/veh		34.5			20.1			31.3			19.9	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	26.1	5.7	35.2	8.1	25.0	9.9	31.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	15.0	23.0	4.0	32.0	7.0	31.0	9.0	27.0
Max Q Clear Time (g_c+I1), s	2.1	20.1	2.6	28.7	4.5	3.3	5.9	14.3
Green Ext Time (p_c), s	0.0	2.0	0.0	2.5	0.1	9.8	0.2	7.7

Intersection Summary	
HCM 2010 Ctrl Delay	29.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	1582	114	356	2405	9	9	1722	114	15	1410	85
Future Volume (veh/h)	102	1582	114	356	2405	9	9	1722	114	15	1410	85
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	102	1582	114	356	2405	9	9	1722	114	15	1410	85
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	92	1669	520	369	2078	647	28	1541	689	42	1555	696
Arrive On Green	0.03	0.33	0.33	0.11	0.41	0.41	0.01	0.44	0.44	0.01	0.44	0.44
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	102	1582	114	356	2405	9	9	1722	114	15	1410	85
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	4.0	45.3	7.7	15.4	61.0	0.5	0.4	65.0	6.5	0.6	55.4	4.7
Cycle Q Clear(g_c), s	4.0	45.3	7.7	15.4	61.0	0.5	0.4	65.0	6.5	0.6	55.4	4.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	92	1669	520	369	2078	647	28	1541	689	42	1555	696
V/C Ratio(X)	1.11	0.95	0.22	0.97	1.16	0.01	0.32	1.12	0.17	0.35	0.91	0.12
Avail Cap(c_a), veh/h	92	1669	520	369	2078	647	92	1541	689	92	1555	696
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.9	48.2	35.6	65.6	43.4	25.7	72.9	41.4	25.0	72.4	38.3	24.2
Incr Delay (d2), s/veh	125.3	11.9	0.2	37.6	76.7	0.0	6.2	62.3	0.1	4.9	8.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	22.8	3.4	9.1	42.9	0.2	0.2	44.6	2.8	0.3	28.6	2.1
LnGrp Delay(d),s/veh	197.2	60.1	35.8	103.2	120.1	25.7	79.1	103.7	25.1	77.3	46.3	24.3
LnGrp LOS	F	E	D	F	F	C	E	F	C	E	D	C
Approach Vol, veh/h		1798			2770			1845			1510	
Approach Delay, s/veh		66.3			117.7			98.7			45.4	
Approach LOS		E			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.8	69.0	20.0	53.0	5.2	69.6	8.0	65.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	65.0	16.0	49.0	4.0	65.0	4.0	61.0
Max Q Clear Time (g_c+I1), s	2.6	67.0	17.4	47.3	2.4	57.4	6.0	63.0
Green Ext Time (p_c), s	0.0	0.0	0.0	1.7	0.0	7.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	87.8
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	475	1343	0	391	1352	0	0	325	517	0	187	262
Future Volume (veh/h)	475	1343	0	391	1352	0	0	325	517	0	187	262
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	475	1343	0	391	1352	0	0	325	517	0	187	262
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	500	1564	0	420	1403	0	2	363	309	2	363	309
Arrive On Green	0.28	0.45	0.00	0.24	0.40	0.00	0.00	0.20	0.20	0.00	0.20	0.20
Sat Flow, veh/h	1757	3597	0	1757	3597	0	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	475	1343	0	391	1352	0	0	325	517	0	187	262
Grp Sat Flow(s),veh/h/ln	1757	1752	0	1757	1752	0	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	26.9	35.0	0.0	22.1	38.3	0.0	0.0	17.5	20.0	0.0	9.2	16.4
Cycle Q Clear(g_c), s	26.9	35.0	0.0	22.1	38.3	0.0	0.0	17.5	20.0	0.0	9.2	16.4
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	500	1564	0	420	1403	0	2	363	309	2	363	309
V/C Ratio(X)	0.95	0.86	0.00	0.93	0.96	0.00	0.00	0.89	1.67	0.00	0.51	0.85
Avail Cap(c_a), veh/h	501	1564	0	432	1414	0	69	363	309	69	363	309
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	25.3	0.0	37.9	29.8	0.0	0.0	39.8	40.8	0.0	36.5	39.3
Incr Delay (d2), s/veh	27.8	5.1	0.0	26.6	16.1	0.0	0.0	23.6	317.6	0.0	1.3	19.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.9	17.9	0.0	13.9	21.5	0.0	0.0	11.2	35.9	0.0	4.8	8.8
LnGrp Delay(d),s/veh	63.4	30.3	0.0	64.5	45.8	0.0	0.0	63.3	358.4	0.0	37.7	58.8
LnGrp LOS	E	C		E	D			E	F		D	E
Approach Vol, veh/h		1818			1743			842			449	
Approach Delay, s/veh		39.0			50.0			244.5			50.0	
Approach LOS		D			D			F			D	

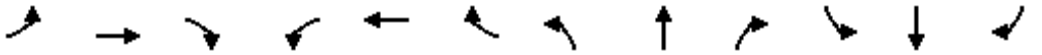
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	24.0	28.3	49.3	0.0	24.0	32.9	44.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	20.0	25.0	45.0	4.0	20.0	29.0	41.0
Max Q Clear Time (g_c+I1), s	0.0	22.0	24.1	37.0	0.0	18.4	28.9	40.3
Green Ext Time (p_c), s	0.0	0.0	0.1	7.5	0.0	1.0	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	79.6
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	238	672	0	1035	708	68	0	699	1197	118	797	238
Future Volume (veh/h)	238	672	0	1035	708	68	0	699	1197	118	797	238
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	238	672	0	1035	708	68	0	699	1197	118	797	238
Adj No. of Lanes	1	2	1	2	1	1	1	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	199	631	282	863	590	502	1	1519	679	91	1706	763
Arrive On Green	0.11	0.18	0.00	0.25	0.32	0.32	0.00	0.43	0.43	0.03	0.49	0.49
Sat Flow, veh/h	1757	3505	1568	3408	1845	1568	1757	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	238	672	0	1035	708	68	0	699	1197	118	797	238
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1704	1845	1568	1757	1752	1568	1704	1752	1568
Q Serve(g_s), s	17.0	27.0	0.0	38.0	48.0	4.6	0.0	21.2	65.0	4.0	22.7	13.8
Cycle Q Clear(g_c), s	17.0	27.0	0.0	38.0	48.0	4.6	0.0	21.2	65.0	4.0	22.7	13.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	199	631	282	863	590	502	1	1519	679	91	1706	763
V/C Ratio(X)	1.20	1.07	0.00	1.20	1.20	0.14	0.00	0.46	1.76	1.30	0.47	0.31
Avail Cap(c_a), veh/h	199	631	282	863	590	502	47	1519	679	91	1706	763
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.5	61.5	0.0	56.0	51.0	36.3	0.0	30.1	42.5	73.0	25.6	23.3
Incr Delay (d2), s/veh	126.4	54.5	0.0	100.6	105.4	0.1	0.0	0.2	348.8	193.9	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.2	17.8	0.0	29.9	41.7	2.0	0.0	10.2	94.0	4.3	11.0	6.0
LnGrp Delay(d),s/veh	192.9	116.0	0.0	156.6	156.4	36.4	0.0	30.3	391.3	266.9	25.8	23.5
LnGrp LOS	F	F		F	F	D		C	F	F	C	C
Approach Vol, veh/h		910			1811			1896			1153	
Approach Delay, s/veh		136.1			152.0			258.2			50.0	
Approach LOS		F			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	69.0	42.0	31.0	0.0	77.0	21.0	52.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	65.0	38.0	27.0	4.0	65.0	17.0	48.0
Max Q Clear Time (g_c+I1), s	6.0	67.0	40.0	29.0	0.0	24.7	19.0	50.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	29.3	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	164.0
HCM 2010 LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	2	34	31	11	76	16	283	24	11	252	88
Future Volume (veh/h)	40	2	34	31	11	76	16	283	24	11	252	88
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	40	2	34	31	11	76	16	283	24	11	252	88
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	51	175	149	41	164	140	22	897	76	15	694	237
Arrive On Green	0.03	0.09	0.09	0.02	0.09	0.09	0.01	0.27	0.27	0.01	0.27	0.27
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	3273	276	1757	2568	875
Grp Volume(v), veh/h	40	2	34	31	11	76	16	151	156	11	170	170
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1796	1757	1752	1690
Q Serve(g_s), s	0.6	0.0	0.5	0.5	0.1	1.2	0.2	1.8	1.8	0.2	2.1	2.2
Cycle Q Clear(g_c), s	0.6	0.0	0.5	0.5	0.1	1.2	0.2	1.8	1.8	0.2	2.1	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.15	1.00		0.52
Lane Grp Cap(c), veh/h	51	175	149	41	164	140	22	481	492	15	474	457
V/C Ratio(X)	0.79	0.01	0.23	0.76	0.07	0.54	0.72	0.31	0.32	0.71	0.36	0.37
Avail Cap(c_a), veh/h	329	1174	998	197	1036	880	197	1050	1076	197	1050	1012
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.9	11.0	11.2	13.0	11.1	11.6	13.1	7.7	7.7	13.2	7.9	7.9
Incr Delay (d2), s/veh	23.1	0.0	0.8	25.2	0.2	3.3	35.9	0.4	0.4	45.8	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.3	0.5	0.1	0.7	0.3	0.9	1.0	0.3	1.1	1.1
LnGrp Delay(d),s/veh	36.0	11.0	12.0	38.2	11.3	14.9	49.0	8.1	8.1	59.0	8.3	8.4
LnGrp LOS	D	B	B	D	B	B	D	A	A	E	A	A
Approach Vol, veh/h		76			118			323			351	
Approach Delay, s/veh		24.6			20.7			10.1			10.0	
Approach LOS		C			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.2	11.3	4.6	6.5	4.3	11.2	4.8	6.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	16.0	3.0	17.0	3.0	16.0	5.0	15.0
Max Q Clear Time (g_c+I1), s	2.2	3.8	2.5	2.5	2.2	4.2	2.6	3.2
Green Ext Time (p_c), s	0.0	3.1	0.0	0.3	0.0	3.0	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	12.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	5	9	5	5	5	3	586	5	5	364	22
Future Volume (veh/h)	21	5	9	5	5	5	3	586	5	5	364	22
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	21	5	9	5	5	5	3	586	5	5	364	22
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	50	96	81	10	53	45	6	1323	11	10	1258	76
Arrive On Green	0.03	0.05	0.05	0.01	0.03	0.03	0.00	0.37	0.37	0.01	0.37	0.37
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	3561	30	1757	3359	202
Grp Volume(v), veh/h	21	5	9	5	5	5	3	288	303	5	189	197
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1839	1757	1752	1809
Q Serve(g_s), s	0.3	0.1	0.2	0.1	0.1	0.1	0.0	3.5	3.5	0.1	2.1	2.2
Cycle Q Clear(g_c), s	0.3	0.1	0.2	0.1	0.1	0.1	0.0	3.5	3.5	0.1	2.1	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.02	1.00		0.11
Lane Grp Cap(c), veh/h	50	96	81	10	53	45	6	651	683	10	656	677
V/C Ratio(X)	0.42	0.05	0.11	0.52	0.09	0.11	0.48	0.44	0.44	0.52	0.29	0.29
Avail Cap(c_a), veh/h	932	1761	1497	248	1044	887	186	1177	1236	248	1239	1279
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.5	12.7	12.8	14.0	13.4	13.4	14.1	6.7	6.7	14.0	6.2	6.2
Incr Delay (d2), s/veh	5.4	0.2	0.6	37.8	0.8	1.1	48.4	0.5	0.5	37.8	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.1	0.1	0.0	0.1	0.1	1.8	1.9	0.1	1.0	1.1
LnGrp Delay(d),s/veh	18.9	13.0	13.4	51.8	14.1	14.4	62.5	7.2	7.1	51.8	6.4	6.4
LnGrp LOS	B	B	B	D	B	B	E	A	A	D	A	A
Approach Vol, veh/h		35			15			594			391	
Approach Delay, s/veh		16.7			26.8			7.4			7.0	
Approach LOS		B			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.2	14.5	4.2	5.5	4.1	14.6	4.8	4.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	19.0	4.0	27.0	3.0	20.0	15.0	16.0
Max Q Clear Time (g_c+I1), s	2.1	5.5	2.1	2.2	2.0	4.2	2.3	2.1
Green Ext Time (p_c), s	0.0	5.0	0.0	0.0	0.0	5.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	7.9
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	40	18	65	13	43	26	428	153	116	303	72
Future Volume (veh/h)	67	40	18	65	13	43	26	428	153	116	303	72
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	67	40	18	65	13	43	26	428	153	116	303	72
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	80	144	122	77	141	120	34	809	286	145	1077	252
Arrive On Green	0.05	0.08	0.08	0.04	0.08	0.08	0.02	0.32	0.32	0.08	0.38	0.38
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	2539	899	1757	2820	660
Grp Volume(v), veh/h	67	40	18	65	13	43	26	294	287	116	187	188
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1686	1757	1752	1728
Q Serve(g_s), s	1.3	0.7	0.4	1.2	0.2	0.9	0.5	4.6	4.7	2.2	2.5	2.5
Cycle Q Clear(g_c), s	1.3	0.7	0.4	1.2	0.2	0.9	0.5	4.6	4.7	2.2	2.5	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.53	1.00		0.38
Lane Grp Cap(c), veh/h	80	144	122	77	141	120	34	558	537	145	669	660
V/C Ratio(X)	0.84	0.28	0.15	0.85	0.09	0.36	0.77	0.53	0.53	0.80	0.28	0.29
Avail Cap(c_a), veh/h	157	825	701	157	825	701	157	836	804	262	941	927
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.9	14.6	14.4	15.9	14.4	14.7	16.4	9.4	9.4	15.1	7.2	7.2
Incr Delay (d2), s/veh	20.3	1.0	0.5	21.2	0.3	1.8	29.8	0.8	0.8	9.6	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.4	0.2	1.0	0.1	0.4	0.5	2.3	2.3	1.4	1.2	1.2
LnGrp Delay(d),s/veh	36.2	15.6	15.0	37.1	14.7	16.5	46.2	10.1	10.2	24.7	7.4	7.4
LnGrp LOS	D	B	B	D	B	B	D	B	B	C	A	A
Approach Vol, veh/h		125			121			607			491	
Approach Delay, s/veh		26.6			27.4			11.7			11.5	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	14.7	5.5	6.6	4.6	16.8	5.5	6.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	16.0	3.0	15.0	3.0	18.0	3.0	15.0
Max Q Clear Time (g_c+I1), s	4.2	6.7	3.2	2.7	2.5	4.5	3.3	2.9
Green Ext Time (p_c), s	0.0	4.0	0.0	0.3	0.0	5.0	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	14.4
HCM 2010 LOS	B



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	43	27	717	25	10	314
Future Volume (veh/h)	43	27	717	25	10	314
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845
Adj Flow Rate, veh/h	43	27	717	25	10	314
Adj No. of Lanes	1	1	2	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	114	102	1774	62	653	1799
Arrive On Green	0.07	0.07	0.51	0.51	0.51	0.51
Sat Flow, veh/h	1757	1568	3548	120	708	3597
Grp Volume(v), veh/h	43	27	364	378	10	314
Grp Sat Flow(s),veh/h/ln	1757	1568	1752	1823	708	1752
Q Serve(g_s), s	0.4	0.3	2.4	2.4	0.2	0.9
Cycle Q Clear(g_c), s	0.4	0.3	2.4	2.4	2.6	0.9
Prop In Lane	1.00	1.00		0.07	1.00	
Lane Grp Cap(c), veh/h	114	102	900	936	653	1799
V/C Ratio(X)	0.38	0.26	0.40	0.40	0.02	0.17
Avail Cap(c_a), veh/h	1481	1322	1477	1537	886	2955
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.5	8.4	2.8	2.8	3.6	2.5
Incr Delay (d2), s/veh	2.0	1.4	0.3	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.2	1.2	1.2	0.0	0.4
LnGrp Delay(d),s/veh	10.5	9.8	3.1	3.1	3.6	2.5
LnGrp LOS	B	A	A	A	A	A
Approach Vol, veh/h	70		742			324
Approach Delay, s/veh	10.3		3.1			2.5
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		13.7				13.7		5.2
Change Period (Y+Rc), s		4.0				4.0		4.0
Max Green Setting (Gmax), s		16.0				16.0		16.0
Max Q Clear Time (g_c+I1), s		4.4				4.6		2.4
Green Ext Time (p_c), s		5.2				5.2		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	3.4
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	51	70	212	13	83	132	550	80	30	219	108
Future Volume (veh/h)	109	51	70	212	13	83	132	550	80	30	219	108
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	109	51	70	212	13	83	132	550	80	30	219	108
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	352	264	224	266	717	609	167	1302	189	353	541	258
Arrive On Green	0.14	0.14	0.14	0.15	0.39	0.39	0.10	0.42	0.42	0.23	0.23	0.23
Sat Flow, veh/h	1282	1845	1568	1757	1845	1568	1757	3073	446	785	2306	1097
Grp Volume(v), veh/h	109	51	70	212	13	83	132	313	317	30	165	162
Grp Sat Flow(s),veh/h/ln	1282	1845	1568	1757	1845	1568	1757	1752	1766	785	1752	1651
Q Serve(g_s), s	3.4	1.0	1.7	5.0	0.2	1.5	3.1	5.3	5.4	1.3	3.4	3.6
Cycle Q Clear(g_c), s	3.4	1.0	1.7	5.0	0.2	1.5	3.1	5.3	5.4	1.3	3.4	3.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.25	1.00		0.66
Lane Grp Cap(c), veh/h	352	264	224	266	717	609	167	743	748	353	411	388
V/C Ratio(X)	0.31	0.19	0.31	0.80	0.02	0.14	0.79	0.42	0.42	0.08	0.40	0.42
Avail Cap(c_a), veh/h	620	649	552	330	1169	993	206	1028	1036	464	658	620
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.1	16.1	16.4	17.4	8.0	8.4	18.9	8.6	8.6	13.0	13.8	13.8
Incr Delay (d2), s/veh	0.5	0.4	0.8	10.5	0.0	0.1	15.2	0.4	0.4	0.1	0.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.6	0.8	3.2	0.1	0.6	2.2	2.6	2.6	0.3	1.7	1.7
LnGrp Delay(d),s/veh	17.6	16.4	17.2	27.9	8.0	8.5	34.0	9.0	9.0	13.1	14.4	14.6
LnGrp LOS	B	B	B	C	A	A	C	A	A	B	B	B
Approach Vol, veh/h		230			308			762			357	
Approach Delay, s/veh		17.2			21.8			13.3			14.4	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6		8
Phs Duration (G+Y+Rc), s		22.1	10.5	10.1	8.1	14.0		20.6
Change Period (Y+Rc), s		4.0	4.0	4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s		25.0	8.0	15.0	5.0	16.0		27.0
Max Q Clear Time (g_c+I1), s		7.4	7.0	5.4	5.1	5.6		3.5
Green Ext Time (p_c), s		5.9	0.1	0.8	0.0	4.4		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	15.7
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	60.5
Intersection LOS	F

Approach	EB	WB	NB	SB
Entry Lanes	0	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	0	659	652	152
Demand Flow Rate, veh/h	0	679	671	156
Vehicles Circulating, veh/h	62	671	0	612
Vehicles Exiting, veh/h	706	0	62	738
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	121.3	10.9	9.4
Approach LOS	-	F	B	A

Lane	Left	Left	Left
Designated Moves	LTR	LT	TR
Assumed Moves	LTR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	679	671	156
Cap Entry Lane, veh/h	578	1130	613
Entry HV Adj Factor	0.971	0.971	0.973
Flow Entry, veh/h	659	652	152
Cap Entry, veh/h	561	1098	596
V/C Ratio	1.176	0.594	0.255
Control Delay, s/veh	121.3	10.9	9.4
LOS	F	B	A
95th %tile Queue, veh	23	4	1

Intersection	
Intersection Delay, s/veh	24.0
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	1	0	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	292	0	669	210
Demand Flow Rate, veh/h	300	0	689	216
Vehicles Circulating, veh/h	216	670	393	0
Vehicles Exiting, veh/h	0	412	123	670
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.7	0.0	37.1	5.0
Approach LOS	A	-	E	A

Lane	Left	Left	Left
Designated Moves	LTR	TR	LT
Assumed Moves	LTR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	300	689	216
Cap Entry Lane, veh/h	910	763	1130
Entry HV Adj Factor	0.973	0.971	0.971
Flow Entry, veh/h	292	669	210
Cap Entry, veh/h	886	740	1097
V/C Ratio	0.330	0.903	0.191
Control Delay, s/veh	7.7	37.1	5.0
LOS	A	E	A
95th %tile Queue, veh	1	12	1

Intersection	
Intersection Delay, s/veh	181.2
Intersection LOS	F

Approach	EB	WB	NB	SB
Entry Lanes	0	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	0	314	2552	2097
Demand Flow Rate, veh/h	0	323	2629	2159
Vehicles Circulating, veh/h	2110	2629	0	598
Vehicles Exiting, veh/h	647	0	2110	2354
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	427.5	103.1	239.4
Approach LOS	-	F	F	F

Lane	Left	Left	Right	Left	Right
Designated Moves	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Critical Headway, s	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	323	1236	1393	1015	1144
Cap Entry Lane, veh/h	179	1130	1130	722	743
Entry HV Adj Factor	0.971	0.971	0.971	0.971	0.971
Flow Entry, veh/h	314	1200	1353	985	1111
Cap Entry, veh/h	174	1097	1097	701	722
V/C Ratio	1.800	1.094	1.233	1.407	1.539
Control Delay, s/veh	427.5	74.8	128.2	209.5	265.9
LOS	F	F	F	F	F
95th %tile Queue, veh	23	29	44	44	56

Intersection	
Intersection Delay, s/veh	171.2
Intersection LOS	F

Approach	EB	WB	NB	SB
Entry Lanes	1	0	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	535	0	2405	2049
Demand Flow Rate, veh/h	550	0	2477	2110
Vehicles Circulating, veh/h	2110	2628	331	0
Vehicles Exiting, veh/h	0	180	2329	2628
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	554.4	0.0	201.7	35.4
Approach LOS	F	-	F	E

Lane	Left	Left	Right	Left	Right
Designated Moves	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Critical Headway, s	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	550	1164	1313	992	1118
Cap Entry Lane, veh/h	258	882	896	1130	1130
Entry HV Adj Factor	0.972	0.971	0.971	0.971	0.971
Flow Entry, veh/h	535	1130	1274	963	1086
Cap Entry, veh/h	251	856	870	1097	1097
V/C Ratio	2.132	1.320	1.465	0.878	0.989
Control Delay, s/veh	554.4	169.0	230.7	25.5	44.1
LOS	F	F	F	D	E
95th %tile Queue, veh	40	44	59	12	19

Intersection	
Intersection Delay, s/veh	10.9
Intersection LOS	B

Approach	WB	NB	SB
Entry Lanes	1	2	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	449	729	1012
Demand Flow Rate, veh/h	462	751	1043
Vehicles Circulating, veh/h	622	269	140
Vehicles Exiting, veh/h	398	914	944
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	16.5	8.7	10.0
Approach LOS	C	A	A

Lane	Left	Left	Right	Left	Right
Designated Moves	LR	LT	TR	LT	TR
Assumed Moves	LR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Critical Headway, s	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	462	353	398	490	553
Cap Entry Lane, veh/h	731	924	936	1017	1024
Entry HV Adj Factor	0.972	0.970	0.971	0.971	0.970
Flow Entry, veh/h	449	343	386	476	537
Cap Entry, veh/h	711	896	909	988	994
V/C Ratio	0.632	0.382	0.425	0.482	0.540
Control Delay, s/veh	16.5	8.4	9.0	9.4	10.5
LOS	C	A	A	A	B
95th %tile Queue, veh	5	2	2	3	3

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	2	2	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	229	815	887
Demand Flow Rate, veh/h	236	839	914
Vehicles Circulating, veh/h	624	169	110
Vehicles Exiting, veh/h	384	855	750
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	7.0	8.5	8.5
Approach LOS	A	A	A

Lane	Left	Right	Left	Right	Left	Right
Designated Moves	L	TR	LT	TR	LT	TR
Assumed Moves	L	TR	LT	TR	LT	TR
RT Channelized						
Lane Util	0.466	0.534	0.470	0.530	0.470	0.530
Critical Headway, s	4.293	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	110	126	394	445	430	484
Cap Entry Lane, veh/h	708	730	995	1004	1040	1046
Entry HV Adj Factor	0.973	0.968	0.972	0.970	0.970	0.972
Flow Entry, veh/h	107	122	383	432	417	470
Cap Entry, veh/h	688	707	968	974	1009	1017
V/C Ratio	0.155	0.173	0.396	0.443	0.413	0.463
Control Delay, s/veh	7.0	7.0	8.1	8.8	8.1	8.9
LOS	A	A	A	A	A	A
95th %tile Queue, veh	1	1	2	2	2	2

Intersection	
Intersection Delay, s/veh	9.1
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	2	2	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	313	834	830
Demand Flow Rate, veh/h	323	859	855
Vehicles Circulating, veh/h	743	199	225
Vehicles Exiting, veh/h	315	881	841
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	9.5	8.9	9.2
Approach LOS	A	A	A

Lane	Left	Right	Left	Right	Left	Right
Designated Moves	L	TR	LT	TR	LT	TR
Assumed Moves	L	TR	LT	TR	LT	TR
RT Channelized						
Lane Util	0.697	0.303	0.470	0.530	0.470	0.530
Critical Headway, s	4.293	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	225	98	404	455	402	453
Cap Entry Lane, veh/h	647	672	973	983	954	965
Entry HV Adj Factor	0.969	0.969	0.971	0.972	0.970	0.971
Flow Entry, veh/h	218	95	392	442	390	440
Cap Entry, veh/h	627	651	945	955	926	937
V/C Ratio	0.348	0.146	0.415	0.463	0.421	0.469
Control Delay, s/veh	10.5	7.2	8.6	9.3	8.8	9.5
LOS	B	A	A	A	A	A
95th %tile Queue, veh	2	1	2	2	2	3

Intersection	
Int Delay, s/veh	2.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	46	108	725	44	131	495
Future Vol, veh/h	46	108	725	44	131	495
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	70	0	-	-	85	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	4	4	3	3	3	3
Mvmt Flow	46	108	725	44	131	495

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1257	385	0	0	769	0
Stage 1	747	-	-	-	-	-
Stage 2	510	-	-	-	-	-
Critical Hdwy	6.88	6.98	-	-	4.16	-
Critical Hdwy Stg 1	5.88	-	-	-	-	-
Critical Hdwy Stg 2	5.88	-	-	-	-	-
Follow-up Hdwy	3.54	3.34	-	-	2.23	-
Pot Cap-1 Maneuver	160	608	-	-	834	-
Stage 1	424	-	-	-	-	-
Stage 2	562	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	135	608	-	-	834	-
Mov Cap-2 Maneuver	266	-	-	-	-	-
Stage 1	424	-	-	-	-	-
Stage 2	474	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.9	0	2.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	266	608	834	-
HCM Lane V/C Ratio	-	-	0.173	0.178	0.157	-
HCM Control Delay (s)	-	-	21.3	12.2	10.1	-
HCM Lane LOS	-	-	C	B	B	-
HCM 95th %tile Q(veh)	-	-	0.6	0.6	0.6	-

Intersection	
Int Delay, s/veh	20.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	165	31	1910	289	80	744
Future Vol, veh/h	165	31	1910	289	80	744
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	4	4	4	4
Mvmt Flow	165	31	1910	289	80	744

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2513	1100	0	0	2199	0
Stage 1	2055	-	-	-	-	-
Stage 2	458	-	-	-	-	-
Critical Hdwy	5.76	7.16	-	-	5.38	-
Critical Hdwy Stg 1	6.66	-	-	-	-	-
Critical Hdwy Stg 2	6.06	-	-	-	-	-
Follow-up Hdwy	3.83	3.93	-	-	3.14	-
Pot Cap-1 Maneuver	~ 48	176	-	-	96	-
Stage 1	~ 52	-	-	-	-	-
Stage 2	549	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	0	176	-	-	96	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	~ 52	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	155.4	0	42
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	176	96	-
HCM Lane V/C Ratio	-	-	1.114	0.833	-
HCM Control Delay (s)	-	-	155.4	129.4	32.6
HCM Lane LOS	-	-	F	F	D
HCM 95th %tile Q(veh)	-	-	9.9	4.6	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	90.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	27	2469	2951	34	10	93
Future Vol, veh/h	27	2469	2951	34	10	93
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	190	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	6	6	6	6	3	3
Mvmt Flow	27	2469	2951	34	10	93

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2985	0	-	0	4257	1493
Stage 1	-	-	-	-	2968	-
Stage 2	-	-	-	-	1289	-
Critical Hdwy	4.22	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.26	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	107	-	-	-	~ 1	111
Stage 1	-	-	-	-	25	-
Stage 2	-	-	-	-	220	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	107	-	-	-	~ 1	111
Mov Cap-2 Maneuver	-	-	-	-	~ 1	-
Stage 1	-	-	-	-	25	-
Stage 2	-	-	-	-	164	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	$ 4916.6
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	107	-	-	-	10
HCM Lane V/C Ratio	0.252	-	-	-	10.3
HCM Control Delay (s)	49.6	-	-	-	$ 4916.6
HCM Lane LOS	E	-	-	-	F
HCM 95th %tile Q(veh)	0.9	-	-	-	14.3

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	1	0	3	1	6	0	1128	1	1	921	1
Future Vol, veh/h	3	1	0	3	1	6	0	1128	1	1	921	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	3	1	0	3	1	6	0	1128	1	1	921	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2056	2053	922	2053	2053	1129	922	0	0	1129	0	0
Stage 1	924	924	-	1129	1129	-	-	-	-	-	-	-
Stage 2	1132	1129	-	924	924	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	40	55	326	41	55	247	737	-	-	615	-	-
Stage 1	322	347	-	247	278	-	-	-	-	-	-	-
Stage 2	246	278	-	322	347	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	38	55	326	40	55	247	737	-	-	615	-	-
Mov Cap-2 Maneuver	38	55	-	40	55	-	-	-	-	-	-	-
Stage 1	322	346	-	247	278	-	-	-	-	-	-	-
Stage 2	239	278	-	320	346	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	102.1	52.9	0	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	737	-	-	41	85	615	-	-
HCM Lane V/C Ratio	-	-	-	0.098	0.118	0.002	-	-
HCM Control Delay (s)	0	-	-	102.1	52.9	10.9	0	-
HCM Lane LOS	A	-	-	F	F	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.4	0	-	-

Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	77	55	24	893	957	76
Future Vol, veh/h	77	55	24	893	957	76
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	77	55	24	893	957	76

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1490	517	1033	0	-	0
Stage 1	995	-	-	-	-	-
Stage 2	495	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	-	-
Pot Cap-1 Maneuver	113	501	662	-	-	-
Stage 1	316	-	-	-	-	-
Stage 2	575	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	109	501	662	-	-	-
Mov Cap-2 Maneuver	109	-	-	-	-	-
Stage 1	316	-	-	-	-	-
Stage 2	554	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	85	0.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	662	-	162	-	-
HCM Lane V/C Ratio	0.036	-	0.815	-	-
HCM Control Delay (s)	10.6	-	85	-	-
HCM Lane LOS	B	-	F	-	-
HCM 95th %tile Q(veh)	0.1	-	5.4	-	-

Intersection	
Int Delay, s/veh	409.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	725	266	506	730	144	751
Future Vol, veh/h	725	266	506	730	144	751
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	0	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	725	266	506	730	144	751

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	991	0	2235	496
Stage 1	-	-	-	-	858	-
Stage 2	-	-	-	-	1377	-
Critical Hdwy	-	-	4.16	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	2.23	-	3.53	3.33
Pot Cap-1 Maneuver	-	-	687	-	~ 36	~ 517
Stage 1	-	-	-	-	373	-
Stage 2	-	-	-	-	198	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	687	-	~ 9	~ 517
Mov Cap-2 Maneuver	-	-	-	-	~ 9	-
Stage 1	-	-	-	-	373	-
Stage 2	-	-	-	-	~ 52	-

Approach	EB	WB	NB
HCM Control Delay, s	0	9.6	$ 1414
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	9	517	-	-	687	-
HCM Lane V/C Ratio	16	1.453	-	-	0.737	-
HCM Control Delay (s)	$ 7557.6	236	-	-	23.4	-
HCM Lane LOS	F	F	-	-	C	-
HCM 95th %tile Q(veh)	19.6	36.9	-	-	6.5	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	331	412	1	0	648	7	5	302	0	0	168	188
Future Vol, veh/h	331	412	1	0	648	7	5	302	0	0	168	188
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	8	8	8	10	10	10	8	8	8	8	8	8
Mvmt Flow	331	412	1	0	648	7	5	302	0	0	168	188

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	655	0	0	413	0	0	1905	1730	413	1878	1727	652
Stage 1	-	-	-	-	-	-	1075	1075	-	652	652	-
Stage 2	-	-	-	-	-	-	830	655	-	1226	1075	-
Critical Hdwy	4.18	-	-	4.2	-	-	7.18	6.58	6.28	7.18	6.58	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Follow-up Hdwy	2.272	-	-	2.29	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	904	-	-	1104	-	-	50	~ 85	626	53	~ 86	457
Stage 1	-	-	-	-	-	-	259	~ 289	-	447	455	-
Stage 2	-	-	-	-	-	-	356	453	-	212	289	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	904	-	-	1104	-	-	-	~ 45	626	-	~ 45	457
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 45	-	-	~ 45	-
Stage 1	-	-	-	-	-	-	136	~ 152	-	235	455	-
Stage 2	-	-	-	-	-	-	132	453	-	-	~ 152	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	5	0		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	904	-	-	1104	-	-	-
HCM Lane V/C Ratio	-	0.366	-	-	-	-	-	-
HCM Control Delay (s)	-	11.3	0	-	0	-	-	-
HCM Lane LOS	-	B	A	-	A	-	-	-
HCM 95th %tile Q(veh)	-	1.7	-	-	0	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	76	34	35	177	81
Future Vol, veh/h	15	76	34	35	177	81
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	15	76	34	35	177	81

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	321	218	258	0	-	0
Stage 1	218	-	-	-	-	-
Stage 2	103	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	671	819	1301	-	-	-
Stage 1	816	-	-	-	-	-
Stage 2	919	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	653	819	1301	-	-	-
Mov Cap-2 Maneuver	653	-	-	-	-	-
Stage 1	816	-	-	-	-	-
Stage 2	894	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	3.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1301	-	786	-	-
HCM Lane V/C Ratio	0.026	-	0.116	-	-
HCM Control Delay (s)	7.8	0	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	6	20	95	228	10
Future Vol, veh/h	2	6	20	95	228	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	2	6	20	95	228	10

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	368	233	238	0	-	0
Stage 1	233	-	-	-	-	-
Stage 2	135	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	630	804	1323	-	-	-
Stage 1	803	-	-	-	-	-
Stage 2	889	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	620	804	1323	-	-	-
Mov Cap-2 Maneuver	620	-	-	-	-	-
Stage 1	803	-	-	-	-	-
Stage 2	875	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.9	1.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1323	-	748	-	-
HCM Lane V/C Ratio	0.015	-	0.011	-	-
HCM Control Delay (s)	7.8	0	9.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	6.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	122	184	73	85	211	220
Future Vol, veh/h	122	184	73	85	211	220
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	122	184	73	85	211	220

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	552	321	431	0	-	0
Stage 1	321	-	-	-	-	-
Stage 2	231	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	493	718	1123	-	-	-
Stage 1	733	-	-	-	-	-
Stage 2	805	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	459	718	1123	-	-	-
Mov Cap-2 Maneuver	459	-	-	-	-	-
Stage 1	733	-	-	-	-	-
Stage 2	750	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.7	3.9	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1123	-	586	-	-
HCM Lane V/C Ratio	0.065	-	0.522	-	-
HCM Control Delay (s)	8.4	0	17.7	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.2	-	3	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	52	25	7	216	183	67
Future Vol, veh/h	52	25	7	216	183	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	150	0	150	-	-	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	52	25	7	216	183	67

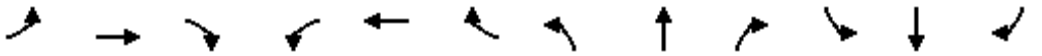
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	413	183	183	0	-	0
Stage 1	183	-	-	-	-	-
Stage 2	230	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	594	857	1386	-	-	-
Stage 1	846	-	-	-	-	-
Stage 2	806	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	591	857	1386	-	-	-
Mov Cap-2 Maneuver	591	-	-	-	-	-
Stage 1	846	-	-	-	-	-
Stage 2	802	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.9	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1386	-	591	857	-	-
HCM Lane V/C Ratio	0.005	-	0.088	0.029	-	-
HCM Control Delay (s)	7.6	-	11.7	9.3	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.3	0.1	-	-

Cumulative Plus All Projects

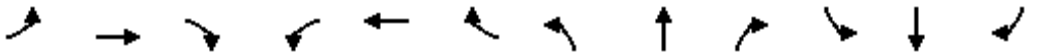
PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	375	0	514	376	294	1087	0	2004	627	0	2951	486
Future Volume (vph)	375	0	514	376	294	1087	0	2004	627	0	2951	486
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00		0.88	0.86	0.81	0.91		0.91	1.00		0.86	1.00
Frt	1.00		0.85	1.00	0.91	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00	1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)	1752		2760	2985	2678	1413		4988	1553		6285	1553
Flt Permitted	0.95		1.00	0.95	1.00	1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)	1752		2760	2985	2678	1413		4988	1553		6285	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	375	0	514	376	294	1087	0	2004	627	0	2951	486
RTOR Reduction (vph)	0	0	118	0	16	32	0	0	0	0	0	102
Lane Group Flow (vph)	375	0	396	338	860	511	0	2004	627	0	2951	384
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot		Perm	Split	NA	Perm		NA	Free		NA	Perm
Protected Phases	4			8	8			2			6	
Permitted Phases			4			8			Free			6
Actuated Green, G (s)	22.0		22.0	35.0	35.0	35.0		51.0	120.0		51.0	51.0
Effective Green, g (s)	22.0		22.0	35.0	35.0	35.0		51.0	120.0		51.0	51.0
Actuated g/C Ratio	0.18		0.18	0.29	0.29	0.29		0.42	1.00		0.42	0.42
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0		4.0			4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	321		506	870	781	412		2119	1553		2671	660
v/s Ratio Prot	c0.21			0.11	0.32			0.40			c0.47	
v/s Ratio Perm			0.14			c0.36			0.40			0.25
v/c Ratio	1.17		0.78	0.39	1.35dr	1.24		0.95	0.40		1.10	0.58
Uniform Delay, d1	49.0		46.7	34.0	42.5	42.5		33.2	0.0		34.5	26.4
Progression Factor	1.00		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	104.0		7.7	0.3	63.7	127.4		9.6	0.8		53.4	1.3
Delay (s)	153.0		54.4	34.2	106.2	169.9		42.8	0.8		87.9	27.7
Level of Service	F		D	C	F	F		D	A		F	C
Approach Delay (s)		96.0			112.0			32.8			79.4	
Approach LOS		F			F			C			E	

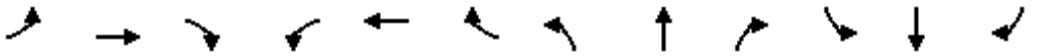
Intersection Summary			
HCM 2000 Control Delay	73.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	114.4%	ICU Level of Service	H
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	764	0	1334	0	0	0	0	1867	613	0	1890	1313
Future Volume (vph)	764	0	1334	0	0	0	0	1867	613	0	1890	1313
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	4.0		4.0	4.0
Lane Util. Factor	0.97		0.88					0.91	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3367		2733					4988	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3367		2733					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	764	0	1334	0	0	0	0	1867	613	0	1890	1313
RTOR Reduction (vph)	0	0	8	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	764	0	1326	0	0	0	0	1867	613	0	1890	1313
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	36.0		36.0					31.0	75.0		31.0	75.0
Effective Green, g (s)	36.0		36.0					31.0	75.0		31.0	75.0
Actuated g/C Ratio	0.48		0.48					0.41	1.00		0.41	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	1616		1311					2061	1553		2061	1553
v/s Ratio Prot								0.37			0.38	
v/s Ratio Perm	0.23		c0.49						0.39			c0.85
v/c Ratio	0.47		1.01					0.91	0.39		0.92	0.85
Uniform Delay, d1	13.1		19.5					20.6	0.0		20.8	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.2		27.7					6.2	0.8		7.0	5.8
Delay (s)	13.3		47.2					26.8	0.8		27.7	5.8
Level of Service	B		D					C	A		C	A
Approach Delay (s)		34.9			0.0			20.4			18.8	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM 2000 Control Delay	23.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	89.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

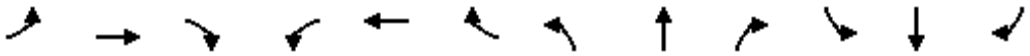


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	271	571	338	152	934	981	475	1225	49	1391	1798	150
Future Volume (vph)	271	571	338	152	934	981	475	1225	49	1391	1798	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		0.97	0.95	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	3278		3367	3471	2733	3367	4988	1553	3367	4988	1553
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	3278		3367	3471	2733	3367	4988	1553	3367	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	271	571	338	152	934	981	475	1225	49	1391	1798	150
RTOR Reduction (vph)	0	67	0	0	0	755	0	0	37	0	0	63
Lane Group Flow (vph)	271	842	0	152	934	226	475	1225	12	1391	1798	87
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	8.0	32.0		6.0	30.0	30.0	20.6	31.0	31.0	45.0	55.4	55.4
Effective Green, g (s)	8.0	32.0		6.0	30.0	30.0	20.6	31.0	31.0	45.0	55.4	55.4
Actuated g/C Ratio	0.06	0.25		0.05	0.23	0.23	0.16	0.24	0.24	0.35	0.43	0.43
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	207	806		155	801	630	533	1189	370	1165	2125	661
v/s Ratio Prot	c0.08	0.26		0.05	c0.27		0.14	c0.25		c0.41	0.36	
v/s Ratio Perm						0.08			0.01			0.06
v/c Ratio	1.31	1.04		0.98	1.17	0.36	0.89	1.03	0.03	1.19	0.85	0.13
Uniform Delay, d1	61.0	49.0		61.9	50.0	41.9	53.6	49.5	38.0	42.5	33.5	22.7
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	169.4	43.9		66.2	88.1	0.4	16.9	34.2	0.0	95.9	3.3	0.1
Delay (s)	230.4	92.9		128.2	138.1	42.3	70.5	83.7	38.0	138.4	36.8	22.8
Level of Service	F	F		F	F	D	E	F	D	F	D	C
Approach Delay (s)		124.5			91.9			78.8			78.5	
Approach LOS		F			F			E			E	

Intersection Summary			
HCM 2000 Control Delay	88.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	110.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	437	1543	12	653	19	1172	5	3	14	13	39
Future Volume (vph)	38	437	1543	12	653	19	1172	5	3	14	13	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.97	1.00
Satd. Flow (prot)	1736	3471	1553	1736	3471	1553	1618	1622	1524		1798	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.97	1.00
Satd. Flow (perm)	1736	3471	1553	1736	3471	1553	1618	1622	1524		1798	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	38	437	1543	12	653	19	1172	5	3	14	13	39
RTOR Reduction (vph)	0	0	234	0	0	15	0	0	1	0	0	37
Lane Group Flow (vph)	38	437	1309	12	653	4	586	591	2	0	27	2
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4	2	3	8		2	2		6	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	2.2	19.2	62.9	0.7	17.7	17.7	43.7	43.7	43.7		4.1	4.1
Effective Green, g (s)	2.2	19.2	62.9	0.7	17.7	17.7	43.7	43.7	43.7		4.1	4.1
Actuated g/C Ratio	0.03	0.23	0.75	0.01	0.21	0.21	0.52	0.52	0.52		0.05	0.05
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	45	796	1241	14	734	328	844	846	795		88	76
v/s Ratio Prot	c0.02	0.13	c0.55	0.01	0.19		0.36	0.36			c0.02	
v/s Ratio Perm			0.29			0.00			0.00			0.00
v/c Ratio	0.84	0.55	1.05	0.86	0.89	0.01	0.69	0.70	0.00		0.31	0.03
Uniform Delay, d1	40.6	28.4	10.4	41.5	32.1	26.1	15.0	15.0	9.6		38.4	37.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	77.0	0.8	41.2	164.6	12.7	0.0	2.5	2.5	0.0		2.0	0.1
Delay (s)	117.5	29.2	51.6	206.1	44.8	26.1	17.5	17.6	9.6		40.4	38.0
Level of Service	F	C	D	F	D	C	B	B	A		D	D
Approach Delay (s)		48.0			47.1			17.5			39.0	
Approach LOS		D			D			B			D	

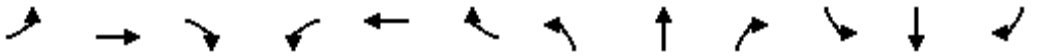
Intersection Summary			
HCM 2000 Control Delay	38.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	83.7	Sum of lost time (s)	20.0
Intersection Capacity Utilization	112.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	352	164	358	432	110	214	253	388	139	228	37
Future Volume (vph)	38	352	164	358	432	110	214	253	388	139	228	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		0.95	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85		0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1752	3505	1568	1752	3398		1665	1746	1568		3398	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.98	
Satd. Flow (perm)	1752	3505	1568	1752	3398		1665	1746	1568		3398	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	38	352	164	358	432	110	214	253	388	139	228	37
RTOR Reduction (vph)	0	0	133	0	23	0	0	0	313	0	8	0
Lane Group Flow (vph)	38	352	31	358	519	0	193	274	75	0	396	0
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4						2			
Actuated Green, G (s)	2.8	15.1	15.1	19.6	31.9		15.4	15.4	15.4		13.8	
Effective Green, g (s)	2.8	15.1	15.1	19.6	31.9		15.4	15.4	15.4		13.8	
Actuated g/C Ratio	0.04	0.19	0.19	0.25	0.40		0.19	0.19	0.19		0.17	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	61	662	296	429	1356		320	336	302		586	
v/s Ratio Prot	0.02	c0.10		c0.20	0.15		0.12	c0.16			c0.12	
v/s Ratio Perm			0.02						0.05			
v/c Ratio	0.62	0.53	0.10	0.83	0.38		0.60	0.82	0.25		0.68	
Uniform Delay, d1	38.0	29.2	26.8	28.6	17.0		29.5	30.9	27.3		31.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	18.1	0.8	0.2	13.1	0.2		3.2	14.1	0.4		3.1	
Delay (s)	56.2	30.0	27.0	41.7	17.2		32.6	45.0	27.8		34.0	
Level of Service	E	C	C	D	B		C	D	C		C	
Approach Delay (s)		30.9			26.9			34.4			34.0	
Approach LOS		C			C			C			C	

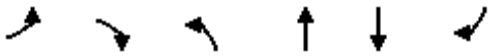
Intersection Summary			
HCM 2000 Control Delay	31.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	79.9	Sum of lost time (s)	20.0
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	2296	387	153	2224	5	138	30	79	4	32	23
Future Volume (vph)	14	2296	387	153	2224	5	138	30	79	4	32	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	6.4	6.4	3.5	6.4	6.4	4.4	4.4	4.4	3.5	3.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1703	3406	1524	1703	3406	1524	1752	1845	1568	1752	1729	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1703	3406	1524	1703	3406	1524	1752	1845	1568	1752	1729	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	14	2296	387	153	2224	5	138	30	79	4	32	23
RTOR Reduction (vph)	0	0	64	0	0	1	0	0	69	0	19	0
Lane Group Flow (vph)	14	2296	323	153	2224	4	138	30	10	4	36	0
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			
Actuated Green, G (s)	1.6	93.5	93.5	10.5	102.4	102.4	9.6	18.0	18.0	0.8	9.2	
Effective Green, g (s)	1.6	93.5	93.5	10.5	102.4	102.4	9.6	18.0	18.0	0.8	9.2	
Actuated g/C Ratio	0.01	0.67	0.67	0.07	0.73	0.73	0.07	0.13	0.13	0.01	0.07	
Clearance Time (s)	3.5	6.4	6.4	3.5	6.4	6.4	4.4	4.4	4.4	3.5	3.5	
Vehicle Extension (s)	2.4	4.5	4.5	2.4	4.5	4.5	2.4	2.8	2.8	2.4	2.8	
Lane Grp Cap (vph)	19	2265	1013	127	2480	1109	119	236	200	9	113	
v/s Ratio Prot	0.01	c0.67		c0.09	0.65		c0.08	0.02		0.00	c0.02	
v/s Ratio Perm			0.21			0.00			0.01			
v/c Ratio	0.74	1.01	0.32	1.20	0.90	0.00	1.16	0.13	0.05	0.44	0.32	
Uniform Delay, d1	69.3	23.5	10.0	65.0	15.0	5.2	65.5	54.3	53.8	69.7	62.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	83.7	22.4	0.3	145.1	4.9	0.0	131.8	0.2	0.1	21.2	1.5	
Delay (s)	153.0	45.9	10.3	210.1	19.9	5.2	197.3	54.6	53.9	90.9	64.2	
Level of Service	F	D	B	F	B	A	F	D	D	F	E	
Approach Delay (s)		41.4			32.1			134.1			66.0	
Approach LOS		D			C			F			E	

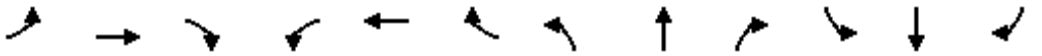
Intersection Summary			
HCM 2000 Control Delay	41.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	140.6	Sum of lost time (s)	17.8
Intersection Capacity Utilization	98.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1010	165	126	965	1184	961
Future Volume (vph)	1010	165	126	965	1184	961
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	0.97	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3400	1568	3400	3505	3505	1568
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3400	1568	3400	3505	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1010	165	126	965	1184	961
RTOR Reduction (vph)	0	110	0	0	0	543
Lane Group Flow (vph)	1010	55	126	965	1184	418
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	19.4	19.4	3.1	31.3	24.2	24.2
Effective Green, g (s)	19.4	19.4	3.1	31.3	24.2	24.2
Actuated g/C Ratio	0.33	0.33	0.05	0.53	0.41	0.41
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1123	518	179	1868	1444	646
v/s Ratio Prot	c0.30		0.04	c0.28	c0.34	
v/s Ratio Perm		0.03				0.27
v/c Ratio	0.90	0.11	0.70	0.52	0.82	0.65
Uniform Delay, d1	18.7	13.6	27.3	8.8	15.3	13.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	9.7	0.1	11.9	0.2	3.8	2.2
Delay (s)	28.4	13.7	39.2	9.1	19.1	16.1
Level of Service	C	B	D	A	B	B
Approach Delay (s)	26.4			12.5	17.7	
Approach LOS	C			B	B	

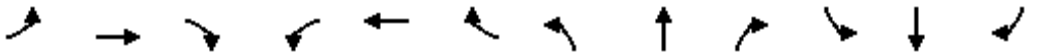
Intersection Summary			
HCM 2000 Control Delay	18.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	58.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



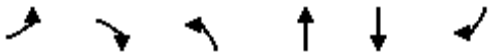
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	732	833	184	809	40	540	160	82	36	80	31
Future Volume (vph)	34	732	833	184	809	40	540	160	82	36	80	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	3.9	3.9	5.5	4.0	4.0	4.3	4.3		5.1	5.1	5.1
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1568	3400	3505	1568	3367	3295		1752	3505	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	3505	1568	3400	3505	1568	3367	3295		1752	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	34	732	833	184	809	40	540	160	82	36	80	31
RTOR Reduction (vph)	0	0	517	0	0	22	0	64	0	0	0	29
Lane Group Flow (vph)	34	732	316	184	809	18	540	178	0	36	80	2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	3%	3%	3%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		8	8		4	4	
Permitted Phases			6			2						4
Actuated Green, G (s)	1.9	28.4	28.4	6.6	33.0	33.0	16.8	16.8		4.3	4.3	4.3
Effective Green, g (s)	1.9	28.4	28.4	6.6	33.0	33.0	16.8	16.8		4.3	4.3	4.3
Actuated g/C Ratio	0.03	0.38	0.38	0.09	0.44	0.44	0.22	0.22		0.06	0.06	0.06
Clearance Time (s)	5.5	3.9	3.9	5.5	4.0	4.0	4.3	4.3		5.1	5.1	5.1
Vehicle Extension (s)	1.0	4.9	4.9	1.0	4.1	4.1	2.0	2.0		1.0	1.0	1.0
Lane Grp Cap (vph)	44	1328	594	299	1544	690	755	739		100	201	90
v/s Ratio Prot	0.02	0.21		c0.05	c0.23		c0.16	0.05		0.02	c0.02	
v/s Ratio Perm			0.20			0.01						0.00
v/c Ratio	0.77	0.55	0.53	0.62	0.52	0.03	0.72	0.24		0.36	0.40	0.02
Uniform Delay, d1	36.3	18.2	18.1	32.9	15.2	11.9	26.8	23.8		34.0	34.1	33.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	53.1	0.8	1.6	2.6	0.4	0.0	2.7	0.1		0.8	0.5	0.0
Delay (s)	89.4	19.1	19.7	35.6	15.7	11.9	29.5	23.9		34.8	34.5	33.3
Level of Service	F	B	B	D	B	B	C	C		C	C	C
Approach Delay (s)		20.9			19.1			27.8			34.3	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	22.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	74.9	Sum of lost time (s)	22.9
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	468	0	1458	0	0	0	0	1888	1021	0	1941	497
Future Volume (vph)	468	0	1458	0	0	0	0	1888	1021	0	1941	497
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4		6.4					5.1	4.0		4.6	4.0
Lane Util. Factor	0.97		0.88					0.91	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3367		2733					4988	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3367		2733					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	468	0	1458	0	0	0	0	1888	1021	0	1941	497
RTOR Reduction (vph)	0	0	12	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	468	0	1446	0	0	0	0	1888	1021	0	1941	497
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	49.6		49.6					38.9	100.0		39.4	100.0
Effective Green, g (s)	49.6		49.6					38.9	100.0		39.4	100.0
Actuated g/C Ratio	0.50		0.50					0.39	1.00		0.39	1.00
Clearance Time (s)	6.4		6.4					5.1			4.6	
Vehicle Extension (s)	1.0		1.0					1.0			1.0	
Lane Grp Cap (vph)	1670		1355					1940	1553		1965	1553
v/s Ratio Prot								0.38			c0.39	
v/s Ratio Perm	0.14		c0.53						0.66			0.32
v/c Ratio	0.28		1.07					0.97	0.66		0.99	0.32
Uniform Delay, d1	14.8		25.2					30.0	0.0		30.1	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0		44.6					14.5	2.2		17.3	0.5
Delay (s)	14.8		69.8					44.5	2.2		47.3	0.5
Level of Service	B		E					D	A		D	A
Approach Delay (s)		56.5			0.0			29.7			37.8	
Approach LOS		E			A			C			D	

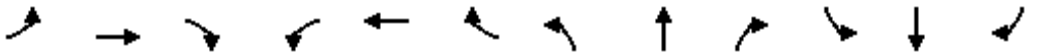
Intersection Summary			
HCM 2000 Control Delay	39.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	97.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1155	28	33	361	838	779
Future Volume (vph)	1155	28	33	361	838	779
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1752	1568	1752	1845	3505	1568
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1752	1568	1752	1845	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1155	28	33	361	838	779
RTOR Reduction (vph)	0	11	0	0	0	492
Lane Group Flow (vph)	1155	17	33	361	838	287
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	54.1	54.1	1.7	26.7	21.0	21.0
Effective Green, g (s)	54.1	54.1	1.7	26.7	21.0	21.0
Actuated g/C Ratio	0.61	0.61	0.02	0.30	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1067	955	33	554	828	370
v/s Ratio Prot	c0.66		0.02	c0.20	c0.24	
v/s Ratio Perm		0.01				0.18
v/c Ratio	1.08	0.02	1.00	0.65	1.01	0.77
Uniform Delay, d1	17.3	6.9	43.5	27.0	33.9	31.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	52.7	0.0	156.7	2.7	34.3	9.7
Delay (s)	70.1	6.9	200.2	29.8	68.2	41.4
Level of Service	E	A	F	C	E	D
Approach Delay (s)	68.6			44.0	55.3	
Approach LOS	E			D	E	

Intersection Summary			
HCM 2000 Control Delay	58.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	88.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.1%	ICU Level of Service	F
Analysis Period (min)	15		

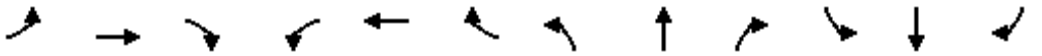
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	214	3	39	0	1	1	19	237	1	1	460	307
Future Volume (vph)	214	3	39	0	1	1	19	237	1	1	460	307
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00		1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85		0.93		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.95	1.00		1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1665	1671	1568		1706		1752	3503		1752	3505	1568
Flt Permitted	0.95	0.95	1.00		1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1665	1671	1568		1706		1752	3503		1752	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	214	3	39	0	1	1	19	237	1	1	460	307
RTOR Reduction (vph)	0	0	33	0	1	0	0	1	0	0	0	180
Lane Group Flow (vph)	109	108	6	0	1	0	19	237	0	1	460	127
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	6.8	6.8	6.8		0.7		0.5	16.9		0.5	16.9	16.9
Effective Green, g (s)	6.8	6.8	6.8		0.7		0.5	16.9		0.5	16.9	16.9
Actuated g/C Ratio	0.17	0.17	0.17		0.02		0.01	0.41		0.01	0.41	0.41
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	276	277	260		29		21	1447		21	1448	647
v/s Ratio Prot	c0.07	0.06			c0.00		c0.01	0.07		0.00	c0.13	
v/s Ratio Perm			0.00									0.08
v/c Ratio	0.39	0.39	0.02		0.04		0.90	0.16		0.05	0.32	0.20
Uniform Delay, d1	15.2	15.2	14.3		19.8		20.2	7.6		20.0	8.1	7.7
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.9	0.9	0.0		0.5		151.1	0.1		0.9	0.1	0.1
Delay (s)	16.1	16.1	14.3		20.3		171.3	7.6		20.9	8.2	7.8
Level of Service	B	B	B		C		F	A		C	A	A
Approach Delay (s)		15.9			20.3			19.7			8.1	
Approach LOS		B			C			B			A	

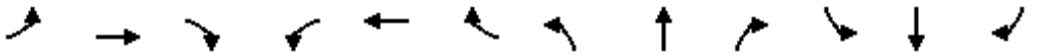
Intersection Summary			
HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	40.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	35.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



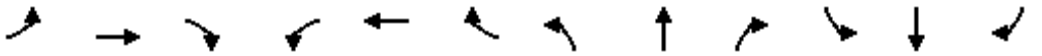
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	634	0	355	0	1176	1392	0	1028	468
Future Volume (vph)	0	0	0	634	0	355	0	1176	1392	0	1028	468
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.9	4.9			4.8	4.0		4.8	4.0
Lane Util. Factor				0.95	0.95			0.91	1.00		0.91	1.00
Frt				1.00	0.89			1.00	0.85		1.00	0.85
Flt Protected				0.95	0.99			1.00	1.00		1.00	1.00
Satd. Flow (prot)				1649	1522			4988	1553		4988	1553
Flt Permitted				0.95	0.99			1.00	1.00		1.00	1.00
Satd. Flow (perm)				1649	1522			4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	634	0	355	0	1176	1392	0	1028	468
RTOR Reduction (vph)	0	0	0	0	27	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	514	448	0	0	1176	1392	0	1028	468
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type				Perm	NA			NA	Free		NA	Free
Protected Phases					8			2			6	
Permitted Phases				8					Free			Free
Actuated Green, G (s)				15.1	15.1			13.3	38.1		13.3	38.1
Effective Green, g (s)				15.1	15.1			13.3	38.1		13.3	38.1
Actuated g/C Ratio				0.40	0.40			0.35	1.00		0.35	1.00
Clearance Time (s)				4.9	4.9			4.8			4.8	
Vehicle Extension (s)				1.0	1.0			1.0			1.0	
Lane Grp Cap (vph)				653	603			1741	1553		1741	1553
v/s Ratio Prot								0.24			0.21	
v/s Ratio Perm				0.31	0.29				c0.90			0.30
v/c Ratio				0.79	0.74			0.68	0.90		0.59	0.30
Uniform Delay, d1				10.1	9.8			10.6	0.0		10.2	0.0
Progression Factor				1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2				5.8	4.3			0.8	8.5		0.4	0.5
Delay (s)				15.9	14.2			11.4	8.5		10.5	0.5
Level of Service				B	B			B	A		B	A
Approach Delay (s)		0.0			15.1			9.8			7.4	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	38.1	Sum of lost time (s)	9.7
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



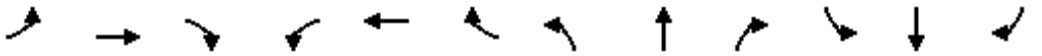
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	537	0	806	0	0	0	0	2105	1191	0	1354	309
Future Volume (vph)	537	0	806	0	0	0	0	2105	1191	0	1354	309
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	5.1					4.9	4.0		4.8	4.0
Lane Util. Factor	0.95	0.91	0.95					0.91	1.00		0.91	1.00
Frt	1.00	0.87	0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95	0.99	1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	1649	1441	1475					4988	1553		4988	1553
Flt Permitted	0.95	0.99	1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	1649	1441	1475					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	537	0	806	0	0	0	0	2105	1191	0	1354	309
RTOR Reduction (vph)	0	23	23	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	467	418	412	0	0	0	0	2105	1191	0	1354	309
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA	Perm					NA	Free		NA	Free
Protected Phases		4						2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	18.7	18.7	18.7					27.3	56.0		27.4	56.0
Effective Green, g (s)	18.7	18.7	18.7					27.3	56.0		27.4	56.0
Actuated g/C Ratio	0.33	0.33	0.33					0.49	1.00		0.49	1.00
Clearance Time (s)	5.1	5.1	5.1					4.9			4.8	
Vehicle Extension (s)	1.0	1.0	1.0					1.0			1.0	
Lane Grp Cap (vph)	550	481	492					2431	1553		2440	1553
v/s Ratio Prot								0.42			0.27	
v/s Ratio Perm	0.28	0.29	0.28						c0.77			0.20
v/c Ratio	0.85	0.87	0.84					0.87	0.77		0.55	0.20
Uniform Delay, d1	17.3	17.5	17.2					12.7	0.0		10.0	0.0
Progression Factor	1.00	1.00	1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	11.2	14.8	11.3					3.4	3.7		0.2	0.3
Delay (s)	28.6	32.3	28.5					16.1	3.7		10.2	0.3
Level of Service	C	C	C					B	A		B	A
Approach Delay (s)		29.8			0.0			11.6			8.3	
Approach LOS		C			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	56.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	908	0	384	0	1661	1961	0	1251	649
Future Volume (vph)	0	0	0	908	0	384	0	1661	1961	0	1251	649
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.8		6.8		4.6	4.0		4.6	4.0
Lane Util. Factor				0.97		1.00		0.91	1.00		0.91	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3400		1568		5036	1568		5036	1568
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3400		1568		5036	1568		5036	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	908	0	384	0	1661	1961	0	1251	649
RTOR Reduction (vph)	0	0	0	0	0	24	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	908	0	360	0	1661	1961	0	1251	649
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				Perm		Perm		NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases				8		8			Free			Free
Actuated Green, G (s)				14.7		14.7		19.0	45.1		19.0	45.1
Effective Green, g (s)				14.7		14.7		19.0	45.1		19.0	45.1
Actuated g/C Ratio				0.33		0.33		0.42	1.00		0.42	1.00
Clearance Time (s)				6.8		6.8		4.6			4.6	
Vehicle Extension (s)				1.0		1.0		1.0			1.0	
Lane Grp Cap (vph)				1108		511		2121	1568		2121	1568
v/s Ratio Prot								0.33			0.25	
v/s Ratio Perm				0.27		0.23			c1.25			0.41
v/c Ratio				0.82		0.71		0.78	1.25		0.59	0.41
Uniform Delay, d1				14.0		13.3		11.3	22.6		10.0	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				4.6		3.6		1.8	118.3		0.3	0.8
Delay (s)				18.6		16.9		13.1	140.8		10.3	0.8
Level of Service				B		B		B	F		B	A
Approach Delay (s)		0.0			18.1			82.2			7.1	
Approach LOS		A			B			F			A	

Intersection Summary			
HCM 2000 Control Delay	49.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.67		
Actuated Cycle Length (s)	45.1	Sum of lost time (s)	11.4
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

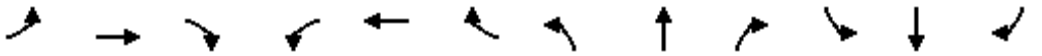


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	529	19	1006	0	0	547	0	3442	8	0	2010	147
Future Volume (vph)	529	19	1006	0	0	547	0	3442	8	0	2010	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0		4.0			4.0	4.0
Lane Util. Factor	0.91	0.86	0.91			0.88		0.86			0.91	1.00
Frt	1.00	0.89	0.85			0.85		1.00			1.00	0.85
Flt Protected	0.95	0.99	1.00			1.00		1.00			1.00	1.00
Satd. Flow (prot)	1595	2789	1427			2733		6343			5036	1568
Flt Permitted	0.95	0.99	1.00			1.00		1.00			1.00	1.00
Satd. Flow (perm)	1595	2789	1427			2733		6343			5036	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	529	19	1006	0	0	547	0	3442	8	0	2010	147
RTOR Reduction (vph)	0	11	36	0	0	51	0	0	0	0	0	52
Lane Group Flow (vph)	370	670	467	0	0	496	0	3450	0	0	2010	95
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Turn Type	Split	NA	Perm			Prot		NA			NA	custom
Protected Phases	4	4				1		2			6	
Permitted Phases			4									2
Actuated Green, G (s)	31.0	31.0	31.0			15.0		52.0			71.0	52.0
Effective Green, g (s)	31.0	31.0	31.0			15.0		52.0			71.0	52.0
Actuated g/C Ratio	0.28	0.28	0.28			0.14		0.47			0.65	0.47
Clearance Time (s)	4.0	4.0	4.0			4.0		4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	449	785	402			372		2998			3250	741
v/s Ratio Prot	0.23	0.24				c0.18		c0.54			0.40	
v/s Ratio Perm			c0.33									0.06
v/c Ratio	0.82	1.22dr	1.16			1.33		1.15			0.62	0.13
Uniform Delay, d1	36.9	37.4	39.5			47.5		29.0			11.5	16.3
Progression Factor	1.00	1.00	1.00			1.00		1.00			1.00	1.00
Incremental Delay, d2	11.7	9.0	97.0			167.4		72.2			0.4	0.1
Delay (s)	48.6	46.3	136.5			214.9		101.2			11.9	16.4
Level of Service	D	D	F			F		F			B	B
Approach Delay (s)		76.0			214.9			101.2			12.2	
Approach LOS		E			F			F			B	

Intersection Summary			
HCM 2000 Control Delay	79.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.9%	ICU Level of Service	F
Analysis Period (min)	15		

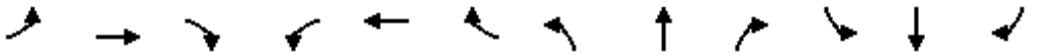
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	67	0	667	0	3345	681	0	1999	1121
Future Volume (vph)	0	0	0	67	0	667	0	3345	681	0	1999	1121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.5		3.5		4.8	4.0		5.1	4.0
Lane Util. Factor				0.97		0.88		0.91	1.00		0.91	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3303		2682		4988	1553		4988	1553
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3303		2682		4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	67	0	667	0	3345	681	0	1999	1121
RTOR Reduction (vph)	0	0	0	0	0	16	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	67	0	651	0	3345	681	0	1999	1121
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	4%	4%	4%	4%	4%	4%
Turn Type				Perm		Perm		NA	Free		NA	Free
Protected Phases								6			2	
Permitted Phases				8		8			Free			Free
Actuated Green, G (s)				25.9		25.9		75.8	110.0		75.5	110.0
Effective Green, g (s)				25.9		25.9		75.8	110.0		75.5	110.0
Actuated g/C Ratio				0.24		0.24		0.69	1.00		0.69	1.00
Clearance Time (s)				3.5		3.5		4.8			5.1	
Vehicle Extension (s)				1.0		1.0		1.0			1.0	
Lane Grp Cap (vph)				777		631		3437	1553		3423	1553
v/s Ratio Prot								c0.67			0.40	
v/s Ratio Perm				0.02		c0.24			0.44			0.72
v/c Ratio				0.09		1.03		0.97	0.44		0.58	0.72
Uniform Delay, d1				32.8		42.0		16.1	0.0		9.0	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				0.0		44.2		9.9	0.9		0.2	2.9
Delay (s)				32.8		86.2		26.0	0.9		9.2	2.9
Level of Service				C		F		C	A		A	A
Approach Delay (s)		0.0			81.4			21.8			6.9	
Approach LOS		A			F			C			A	

Intersection Summary			
HCM 2000 Control Delay	21.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.6
Intersection Capacity Utilization	95.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



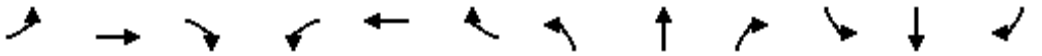
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1575	0	492	0	0	0	0	2449	240	0	1567	498
Future Volume (vph)	1575	0	492	0	0	0	0	2449	240	0	1567	498
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		3.5					4.8	4.0		5.1	4.0
Lane Util. Factor	0.94		0.88					0.86	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	4894		2733					6285	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	4894		2733					6285	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1575	0	492	0	0	0	0	2449	240	0	1567	498
RTOR Reduction (vph)	0	0	27	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	1575	0	465	0	0	0	0	2449	240	0	1567	498
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								6			2	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	19.3		19.3					24.9	52.5		24.6	52.5
Effective Green, g (s)	19.3		19.3					24.9	52.5		24.6	52.5
Actuated g/C Ratio	0.37		0.37					0.47	1.00		0.47	1.00
Clearance Time (s)	3.5		3.5					4.8			5.1	
Vehicle Extension (s)	1.0		1.0					1.0			1.0	
Lane Grp Cap (vph)	1799		1004					2980	1553		2337	1553
v/s Ratio Prot								c0.39			0.31	
v/s Ratio Perm	c0.32		0.17						0.15			0.32
v/c Ratio	0.88		0.46					0.82	0.15		0.67	0.32
Uniform Delay, d1	15.5		12.7					11.9	0.0		10.8	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	5.0		0.1					1.8	0.2		0.6	0.5
Delay (s)	20.4		12.8					13.7	0.2		11.4	0.5
Level of Service	C		B					B	A		B	A
Approach Delay (s)		18.6			0.0			12.5			8.8	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	13.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	52.5	Sum of lost time (s)	8.6
Intersection Capacity Utilization	72.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



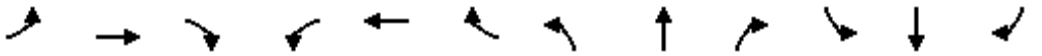
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	151	169	1224	448	228	2026
Future Volume (vph)	151	169	1224	448	228	2026
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.0	5.0	5.5	5.0
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3400	1568	4988	1553	3367	3471
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3400	1568	4988	1553	3367	3471
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	151	169	1224	448	228	2026
RTOR Reduction (vph)	0	154	0	243	0	0
Lane Group Flow (vph)	151	15	1224	205	228	2026
Heavy Vehicles (%)	3%	3%	4%	4%	4%	4%
Turn Type	Prot	Prot	NA	Perm	Prot	NA
Protected Phases	4	4	6		5	2
Permitted Phases				6		
Actuated Green, G (s)	4.5	4.5	23.1	23.1	7.0	35.6
Effective Green, g (s)	4.5	4.5	23.1	23.1	7.0	35.6
Actuated g/C Ratio	0.09	0.09	0.46	0.46	0.14	0.70
Clearance Time (s)	5.5	5.5	5.0	5.0	5.5	5.0
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lane Grp Cap (vph)	302	139	2277	708	465	2442
v/s Ratio Prot	c0.04	0.01	0.25		0.07	c0.58
v/s Ratio Perm				0.13		
v/c Ratio	0.50	0.11	0.54	0.29	0.49	0.83
Uniform Delay, d1	22.0	21.2	9.9	8.6	20.2	5.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.1	0.1	0.1	0.3	2.4
Delay (s)	22.5	21.3	10.0	8.7	20.4	7.7
Level of Service	C	C	B	A	C	A
Approach Delay (s)	21.9		9.7			9.0
Approach LOS	C		A			A

Intersection Summary			
HCM 2000 Control Delay	10.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	50.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



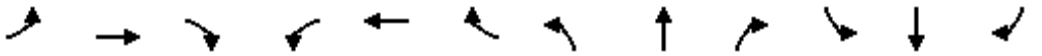
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	549	1024	9	2	750	6	7	15	2	5	21	1108
Future Volume (vph)	549	1024	9	2	750	6	7	15	2	5	21	1108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.9	6.9	5.5	6.0			6.1			6.2	5.5
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95			1.00			1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00			0.99			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (prot)	3303	3406	1524	1719	3434			1798			1810	2733
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (perm)	3303	3406	1524	1719	3434			1798			1810	2733
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	549	1024	9	2	750	6	7	15	2	5	21	1108
RTOR Reduction (vph)	0	0	3	0	0	0	0	2	0	0	0	73
Lane Group Flow (vph)	549	1024	6	2	756	0	0	22	0	0	26	1035
Heavy Vehicles (%)	6%	6%	6%	5%	5%	5%	3%	3%	3%	4%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	pm+ov
Protected Phases	1	6		5	2		8	8		4	4	1
Permitted Phases			6									4
Actuated Green, G (s)	35.4	66.0	66.0	0.5	32.0			1.6			1.9	37.3
Effective Green, g (s)	35.4	66.0	66.0	0.5	32.0			1.6			1.9	37.3
Actuated g/C Ratio	0.37	0.70	0.70	0.01	0.34			0.02			0.02	0.39
Clearance Time (s)	5.5	6.9	6.9	5.5	6.0			6.1			6.2	5.5
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0			1.0			1.0	1.0
Lane Grp Cap (vph)	1234	2373	1062	9	1160			30			36	1076
v/s Ratio Prot	0.17	0.30		0.00	c0.22			c0.01			0.01	c0.36
v/s Ratio Perm			0.00									0.02
v/c Ratio	0.44	0.43	0.01	0.22	0.65			0.73			0.72	0.96
Uniform Delay, d1	22.3	6.2	4.4	46.9	26.6			46.3			46.1	28.0
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.1	0.0	0.0	4.5	1.0			56.4			45.7	18.7
Delay (s)	22.4	6.3	4.4	51.4	27.6			102.7			91.8	46.7
Level of Service	C	A	A	D	C			F			F	D
Approach Delay (s)		11.8			27.7			102.7			47.7	
Approach LOS		B			C			F			D	

Intersection Summary			
HCM 2000 Control Delay	27.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	94.7	Sum of lost time (s)	24.7
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	406	39	200	749	255	3789	0	0	4201	70
Future Volume (vph)	0	0	406	39	200	749	255	3789	0	0	4201	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.6		6.2	6.2	4.6	5.0			5.3	5.3
Lane Util. Factor			1.00		1.00	0.88	0.97	0.91			0.86	1.00
Frt			0.86		1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected			1.00		0.99	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)			1596		1778	2682	3303	4893			6166	1524
Flt Permitted			1.00		0.99	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)			1596		1778	2682	3303	4893			6166	1524
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	406	39	200	749	255	3789	0	0	4201	70
RTOR Reduction (vph)	0	0	193	0	0	40	0	0	0	0	0	25
Lane Group Flow (vph)	0	0	213	0	239	709	255	3789	0	0	4201	45
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type			Over	Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases			1	4	4		1	6			2	
Permitted Phases						4						2
Actuated Green, G (s)			20.0		29.8	29.8	20.0	109.0			84.1	84.1
Effective Green, g (s)			20.0		29.8	29.8	20.0	109.0			84.1	84.1
Actuated g/C Ratio			0.13		0.20	0.20	0.13	0.73			0.56	0.56
Clearance Time (s)			4.6		6.2	6.2	4.6	5.0			5.3	5.3
Vehicle Extension (s)			3.0		3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)			212		353	532	440	3555			3457	854
v/s Ratio Prot			0.13		0.13		0.08	c0.77			c0.68	
v/s Ratio Perm						c0.26						0.03
v/c Ratio			1.00		0.68	1.33	0.58	1.07			1.22	0.05
Uniform Delay, d1			65.0		55.6	60.1	61.1	20.5			33.0	14.9
Progression Factor			1.00		1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2			62.7		5.1	162.2	1.9	36.3			99.7	0.0
Delay (s)			127.7		60.7	222.3	62.9	56.8			132.7	14.9
Level of Service			F		E	F	E	E			F	B
Approach Delay (s)		127.7			183.2			57.2			130.7	
Approach LOS		F			F			E			F	

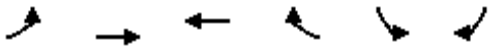
Intersection Summary			
HCM 2000 Control Delay	105.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.1
Intersection Capacity Utilization	112.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2776	0	134	0	0	0	0	1670	217	0	328	1965
Future Volume (vph)	2776	0	134	0	0	0	0	1670	217	0	328	1965
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0			4.0	4.0
Lane Util. Factor	0.94		0.88					0.91			0.91	1.00
Frt	1.00		0.85					0.98			1.00	0.85
Flt Protected	0.95		1.00					1.00			1.00	1.00
Satd. Flow (prot)	4942		2760					4949			5036	1568
Flt Permitted	0.95		1.00					1.00			1.00	1.00
Satd. Flow (perm)	4942		2760					4949			5036	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2776	0	134	0	0	0	0	1670	217	0	328	1965
RTOR Reduction (vph)	0	0	54	0	0	0	0	16	0	0	0	0
Lane Group Flow (vph)	2776	0	80	0	0	0	0	1871	0	0	328	1965
Turn Type	Prot		Perm					NA			NA	Free
Protected Phases	4							2			6	
Permitted Phases			4									Free
Actuated Green, G (s)	55.0		55.0					37.0			37.0	100.0
Effective Green, g (s)	55.0		55.0					37.0			37.0	100.0
Actuated g/C Ratio	0.55		0.55					0.37			0.37	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	2718		1518					1831			1863	1568
v/s Ratio Prot	0.56							0.38			0.07	
v/s Ratio Perm			0.03									c1.25
v/c Ratio	1.02		0.05					1.02			0.18	1.25
Uniform Delay, d1	22.5		10.4					31.5			21.2	50.0
Progression Factor	1.00		1.00					1.00			1.00	1.00
Incremental Delay, d2	22.9		0.0					26.7			0.0	119.4
Delay (s)	45.4		10.4					58.2			21.3	169.4
Level of Service	D		B					E			C	F
Approach Delay (s)		43.8			0.0			58.2			148.2	
Approach LOS		D			A			E			F	

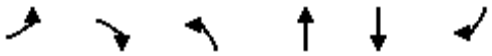
Intersection Summary			
HCM 2000 Control Delay	81.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	96.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	808	1438	1327	34	32	1098
Future Volume (vph)	808	1438	1327	34	32	1098
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	0.88
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3242	3343	3343	1495	3400	2760
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3242	3343	3343	1495	3400	2760
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	808	1438	1327	34	32	1098
RTOR Reduction (vph)	0	0	0	14	0	610
Lane Group Flow (vph)	808	1438	1327	20	32	488
Heavy Vehicles (%)	8%	8%	8%	8%	3%	3%
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	23.0	63.1	36.1	36.1	17.6	17.6
Effective Green, g (s)	23.0	63.1	36.1	36.1	17.6	17.6
Actuated g/C Ratio	0.26	0.71	0.41	0.41	0.20	0.20
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	840	2378	1360	608	674	547
v/s Ratio Prot	c0.25	0.43	c0.40		0.01	
v/s Ratio Perm				0.01		c0.18
v/c Ratio	0.96	0.60	0.98	0.03	0.05	0.89
Uniform Delay, d1	32.4	6.5	25.9	15.8	28.8	34.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	22.1	0.4	18.7	0.0	0.0	16.7
Delay (s)	54.5	6.9	44.6	15.8	28.8	51.3
Level of Service	D	A	D	B	C	D
Approach Delay (s)		24.1	43.8		50.7	
Approach LOS		C	D		D	

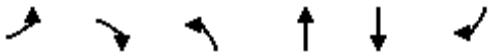
Intersection Summary			
HCM 2000 Control Delay	36.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	88.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	878	147	9	1393	1808	614
Future Volume (vph)	878	147	9	1393	1808	614
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3400	1568	1752	3505	3505	1568
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3400	1568	1752	3505	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	878	147	9	1393	1808	614
RTOR Reduction (vph)	0	7	0	0	0	109
Lane Group Flow (vph)	878	140	9	1393	1808	505
Turn Type	Prot	pm+ov	Prot	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4				6
Actuated Green, G (s)	25.0	29.0	4.0	57.0	49.0	74.0
Effective Green, g (s)	25.0	29.0	4.0	57.0	49.0	74.0
Actuated g/C Ratio	0.28	0.32	0.04	0.63	0.54	0.82
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	944	574	77	2219	1908	1358
v/s Ratio Prot	c0.26	0.01	0.01	c0.40	c0.52	0.10
v/s Ratio Perm		0.08				0.22
v/c Ratio	0.93	0.24	0.12	0.63	0.95	0.37
Uniform Delay, d1	31.6	22.4	41.3	10.0	19.3	2.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	15.2	0.2	0.7	0.6	10.6	0.2
Delay (s)	46.8	22.7	42.0	10.6	29.9	2.2
Level of Service	D	C	D	B	C	A
Approach Delay (s)	43.4			10.8	22.9	
Approach LOS	D			B	C	

Intersection Summary			
HCM 2000 Control Delay	23.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.7%	ICU Level of Service	D
Analysis Period (min)	15		

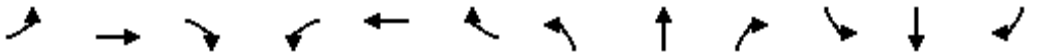
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	238	818	858	1153	1625	273
Future Volume (vph)	238	818	858	1153	1625	273
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.97	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1752	1568	3400	3505	3505	1568
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1752	1568	3400	3505	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	238	818	858	1153	1625	273
RTOR Reduction (vph)	0	281	0	0	0	136
Lane Group Flow (vph)	238	537	858	1153	1625	137
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	28.0	28.0	24.0	74.0	46.0	46.0
Effective Green, g (s)	28.0	28.0	24.0	74.0	46.0	46.0
Actuated g/C Ratio	0.25	0.25	0.22	0.67	0.42	0.42
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	445	399	741	2357	1465	655
v/s Ratio Prot	0.14		c0.25	0.33	c0.46	
v/s Ratio Perm		c0.34				0.09
v/c Ratio	0.53	1.35	1.16	0.49	1.11	0.21
Uniform Delay, d1	35.4	41.0	43.0	8.8	32.0	20.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.2	171.5	85.8	0.2	59.5	0.2
Delay (s)	36.6	212.5	128.8	8.9	91.5	20.6
Level of Service	D	F	F	A	F	C
Approach Delay (s)	172.9			60.1	81.3	
Approach LOS	F			E	F	

Intersection Summary			
HCM 2000 Control Delay	92.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.2%	ICU Level of Service	G
Analysis Period (min)	15		

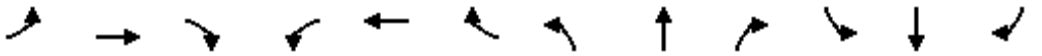
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	773	0	816	0	0	0	0	3544	625	0	1888	1108
Future Volume (vph)	773	0	816	0	0	0	0	3544	625	0	1888	1108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	4.0		4.0	4.0
Lane Util. Factor	0.97		0.88					0.86	1.00		0.86	0.86
Frt	1.00		0.85					1.00	0.85		0.97	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3400		2760					6346	1568		4626	1348
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3400		2760					6346	1568		4626	1348
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	773	0	816	0	0	0	0	3544	625	0	1888	1108
RTOR Reduction (vph)	0	0	19	0	0	0	0	0	0	0	48	0
Lane Group Flow (vph)	773	0	797	0	0	0	0	3544	625	0	2272	676
Turn Type	Prot		Perm					NA	Free		NA	Free
Protected Phases	4							2			6	
Permitted Phases			4						Free			Free
Actuated Green, G (s)	20.0		20.0					42.0	70.0		42.0	70.0
Effective Green, g (s)	20.0		20.0					42.0	70.0		42.0	70.0
Actuated g/C Ratio	0.29		0.29					0.60	1.00		0.60	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	971		788					3807	1568		2775	1348
v/s Ratio Prot	0.23							c0.56			0.49	
v/s Ratio Perm			c0.29						0.40			0.50
v/c Ratio	0.80		1.01					0.93	0.40		0.82	0.50
Uniform Delay, d1	23.1		25.0					12.7	0.0		11.0	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	4.6		35.1					4.9	0.8		2.0	1.3
Delay (s)	27.7		60.1					17.6	0.8		13.0	1.3
Level of Service	C		E					B	A		B	A
Approach Delay (s)		44.3			0.0			15.1			10.4	
Approach LOS		D			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	342	0	1095	0	2693	1629	0	4241	402
Future Volume (vph)	0	0	0	342	0	1095	0	2693	1629	0	4241	402
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0		4.0		4.0	4.0		4.0	4.0
Lane Util. Factor				0.97		0.76		0.86	0.86		0.81	0.81
Frt				1.00		0.85		0.97	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3400		3575		4620	1348		5968	1270
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3400		3575		4620	1348		5968	1270
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	342	0	1095	0	2693	1629	0	4241	402
RTOR Reduction (vph)	0	0	0	0	0	6	0	26	0	0	1	0
Lane Group Flow (vph)	0	0	0	342	0	1089	0	3319	977	0	4280	362
Turn Type				Prot		Perm		NA	Free		NA	Free
Protected Phases				8				2			6	
Permitted Phases						8			Free			Free
Actuated Green, G (s)				39.0		39.0		93.0	140.0		93.0	140.0
Effective Green, g (s)				39.0		39.0		93.0	140.0		93.0	140.0
Actuated g/C Ratio				0.28		0.28		0.66	1.00		0.66	1.00
Clearance Time (s)				4.0		4.0		4.0			4.0	
Vehicle Extension (s)				3.0		3.0		3.0			3.0	
Lane Grp Cap (vph)				947		995		3069	1348		3964	1270
v/s Ratio Prot				0.10				c0.72			0.72	
v/s Ratio Perm						c0.30			0.72			0.29
v/c Ratio				0.36		1.09		1.08	0.72		1.08	0.29
Uniform Delay, d1				40.5		50.5		23.5	0.0		23.5	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				0.2		57.7		43.3	3.4		41.3	0.6
Delay (s)				40.7		108.2		66.8	3.4		64.8	0.6
Level of Service				D		F		E	A		E	A
Approach Delay (s)		0.0			92.2			52.5			59.8	
Approach LOS		A			F			D			E	

Intersection Summary			
HCM 2000 Control Delay	61.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	96.3%	ICU Level of Service	F
Analysis Period (min)	15		

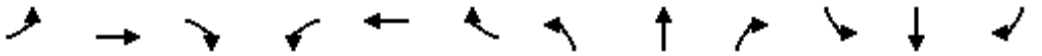
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	818	337	358	1144	538	432
Future Volume (vph)	818	337	358	1144	538	432
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3154	1411	1577	3154	3060	1411
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3154	1411	1577	3154	3060	1411
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	818	337	358	1144	538	432
RTOR Reduction (vph)	0	178	0	0	0	326
Lane Group Flow (vph)	818	159	358	1144	538	106
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	19.0	19.0	16.8	39.8	15.5	15.5
Effective Green, g (s)	19.0	19.0	16.8	39.8	15.5	15.5
Actuated g/C Ratio	0.30	0.30	0.27	0.63	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	946	423	418	1983	749	345
v/s Ratio Prot	c0.26		c0.23	0.36	c0.18	
v/s Ratio Perm		0.11				0.07
v/c Ratio	0.86	0.38	0.86	0.58	0.72	0.31
Uniform Delay, d1	20.9	17.5	22.1	6.8	21.9	19.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.3	0.6	15.7	0.4	3.3	0.5
Delay (s)	29.2	18.0	37.8	7.3	25.2	20.0
Level of Service	C	B	D	A	C	C
Approach Delay (s)	26.0			14.5	22.9	
Approach LOS	C			B	C	

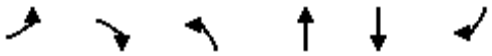
Intersection Summary			
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	63.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	309	400	1	0	489	53	0	0	0	179	0	248
Future Volume (vph)	309	400	1	0	489	53	0	0	0	179	0	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0					4.0	4.0	4.0
Lane Util. Factor	1.00	0.95			0.95					0.95	0.95	1.00
Frt	1.00	1.00			0.99					1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00					0.95	0.95	1.00
Satd. Flow (prot)	1736	3470			3420					1665	1665	1568
Flt Permitted	0.95	1.00			1.00					0.95	0.95	1.00
Satd. Flow (perm)	1736	3470			3420					1665	1665	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	309	400	1	0	489	53	0	0	0	179	0	248
RTOR Reduction (vph)	0	0	0	0	10	0	0	0	0	0	0	211
Lane Group Flow (vph)	309	401	0	0	532	0	0	0	0	89	90	37
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA					Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases												6
Actuated Green, G (s)	15.3	33.5			14.2					9.1	9.1	9.1
Effective Green, g (s)	15.3	33.5			14.2					9.1	9.1	9.1
Actuated g/C Ratio	0.25	0.56			0.24					0.15	0.15	0.15
Clearance Time (s)	4.0	4.0			4.0					4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0					3.0	3.0	3.0
Lane Grp Cap (vph)	441	1930			806					251	251	237
v/s Ratio Prot	c0.18	0.12			c0.16					0.05	c0.05	
v/s Ratio Perm												0.02
v/c Ratio	0.70	0.21			0.66					0.35	0.36	0.16
Uniform Delay, d1	20.4	6.7			20.8					22.9	22.9	22.2
Progression Factor	1.00	1.00			1.00					1.00	1.00	1.00
Incremental Delay, d2	5.0	0.1			2.0					0.9	0.9	0.3
Delay (s)	25.3	6.7			22.9					23.8	23.8	22.5
Level of Service	C	A			C					C	C	C
Approach Delay (s)		14.8			22.9			0.0			23.1	
Approach LOS		B			C			A			C	

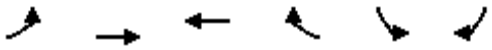
Intersection Summary			
HCM 2000 Control Delay	19.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	60.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	361	47	22	1333	1729	487
Future Volume (vph)	361	47	22	1333	1729	487
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1568	1752	3505	3389	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1752	1568	1752	3505	3389	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	361	47	22	1333	1729	487
RTOR Reduction (vph)	0	37	0	0	27	0
Lane Group Flow (vph)	361	10	22	1333	2189	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	18.0	18.0	1.5	62.3	56.8	
Effective Green, g (s)	18.0	18.0	1.5	62.3	56.8	
Actuated g/C Ratio	0.20	0.20	0.02	0.71	0.64	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	357	319	29	2472	2180	
v/s Ratio Prot	c0.21		0.01	c0.38	c0.65	
v/s Ratio Perm		0.01				
v/c Ratio	1.01	0.03	0.76	0.54	1.00	
Uniform Delay, d1	35.1	28.2	43.2	6.2	15.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	50.5	0.0	71.7	0.2	20.3	
Delay (s)	85.6	28.2	114.9	6.4	36.0	
Level of Service	F	C	F	A	D	
Approach Delay (s)	79.0			8.2	36.0	
Approach LOS	E			A	D	

Intersection Summary			
HCM 2000 Control Delay	30.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	88.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	1215	804	1686	1898	0
Future Volume (vph)	2	1215	804	1686	1898	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	
Frt	1.00	1.00	1.00	0.85	1.00	
Flt Protected	0.95	1.00	1.00	1.00	0.95	
Satd. Flow (prot)	3400	3505	3505	1568	3400	
Flt Permitted	0.95	1.00	1.00	1.00	0.95	
Satd. Flow (perm)	3400	3505	3505	1568	3400	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2	1215	804	1686	1898	0
RTOR Reduction (vph)	0	0	0	72	0	0
Lane Group Flow (vph)	2	1215	804	1614	1898	0
Turn Type	Prot	NA	NA	custom	Prot	
Protected Phases	4	5	5	2	6	
Permitted Phases						
Actuated Green, G (s)	1.1	46.0	46.0	126.1	76.1	
Effective Green, g (s)	1.1	46.0	46.0	126.1	76.1	
Actuated g/C Ratio	0.01	0.34	0.34	0.93	0.56	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	27	1192	1192	1462	1913	
v/s Ratio Prot	c0.00	0.35	0.23	c1.03	0.56	
v/s Ratio Perm						
v/c Ratio	0.07	1.02	0.67	1.10	0.99	
Uniform Delay, d1	66.5	44.6	38.2	4.5	29.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.2	31.0	1.5	57.5	18.6	
Delay (s)	67.7	75.6	39.7	62.1	47.9	
Level of Service	E	E	D	E	D	
Approach Delay (s)		75.6	54.9		47.9	
Approach LOS		E	D		D	

Intersection Summary			
HCM 2000 Control Delay	57.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	135.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	114.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0
Turn Type			Prot		Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases						2
Actuated Green, G (s)						
Effective Green, g (s)						
Actuated g/C Ratio						
Clearance Time (s)						
Vehicle Extension (s)						
Lane Grp Cap (vph)						
v/s Ratio Prot						
v/s Ratio Perm						
v/c Ratio						
Uniform Delay, d1						
Progression Factor						
Incremental Delay, d2						
Delay (s)						
Level of Service						
Approach Delay (s)	0.0			0.0	0.0	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	0.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.00		
Actuated Cycle Length (s)	24.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		

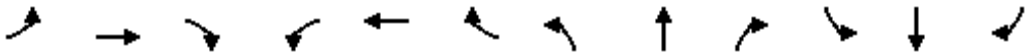
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	2346	0	1217	0
Future Volume (vph)	0	0	2346	0	1217	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	4.0	4.0	
Lane Util. Factor			0.95	0.95	0.97	
Frt			1.00	1.00	1.00	
Flt Protected			0.95	0.95	0.95	
Satd. Flow (prot)			1665	1665	3400	
Flt Permitted			0.95	0.95	0.95	
Satd. Flow (perm)			1665	1665	3400	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	2346	0	1217	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	1173	1173	1217	0
Turn Type			Split	NA	Prot	
Protected Phases			4	4	2	
Permitted Phases						
Actuated Green, G (s)			93.0	93.0	49.0	
Effective Green, g (s)			93.0	93.0	49.0	
Actuated g/C Ratio			0.62	0.62	0.33	
Clearance Time (s)			4.0	4.0	4.0	
Vehicle Extension (s)			3.0	3.0	3.0	
Lane Grp Cap (vph)			1032	1032	1110	
v/s Ratio Prot			c0.70	0.70	c0.36	
v/s Ratio Perm						
v/c Ratio			1.14	1.14	1.10	
Uniform Delay, d1			28.5	28.5	50.5	
Progression Factor			1.00	1.00	1.00	
Incremental Delay, d2			73.6	73.6	57.3	
Delay (s)			102.1	102.1	107.8	
Level of Service			F	F	F	
Approach Delay (s)	0.0			102.1	107.8	
Approach LOS	A			F	F	

Intersection Summary			
HCM 2000 Control Delay	104.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	196.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	871	0	0	0	0	1217	1971	0	2346	0
Future Volume (vph)	0	0	871	0	0	0	0	1217	1971	0	2346	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0					4.0	4.0		4.0	
Lane Util. Factor		0.95	0.95					0.91	0.91		0.95	
Frt		0.85	0.85					0.93	0.85		1.00	
Flt Protected		1.00	1.00					1.00	1.00		1.00	
Satd. Flow (prot)		1490	1490					3134	1427		3505	
Flt Permitted		1.00	1.00					1.00	1.00		1.00	
Satd. Flow (perm)		1490	1490					3134	1427		3505	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	871	0	0	0	0	1217	1971	0	2346	0
RTOR Reduction (vph)	0	38	0	0	0	0	0	105	311	0	0	0
Lane Group Flow (vph)	0	398	435	0	0	0	0	2078	694	0	2346	0
Turn Type		NA	Free					NA	Perm	Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases			Free						2			
Actuated Green, G (s)		26.0	110.0					76.0	76.0		76.0	
Effective Green, g (s)		26.0	110.0					76.0	76.0		76.0	
Actuated g/C Ratio		0.24	1.00					0.69	0.69		0.69	
Clearance Time (s)		4.0						4.0	4.0		4.0	
Vehicle Extension (s)		3.0						3.0	3.0		3.0	
Lane Grp Cap (vph)		352	1490					2165	985		2421	
v/s Ratio Prot		c0.27						0.66			c0.67	
v/s Ratio Perm			0.29						0.49			
v/c Ratio		1.13	0.29					0.96	0.70		0.97	
Uniform Delay, d1		42.0	0.0					15.6	10.2		15.9	
Progression Factor		1.00	1.00					1.00	1.00		1.00	
Incremental Delay, d2		88.1	0.5					11.2	2.3		11.8	
Delay (s)		130.1	0.5					26.8	12.6		27.7	
Level of Service		F	A					C	B		C	
Approach Delay (s)		65.4			0.0			22.3			27.7	
Approach LOS		E			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	30.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	153.0%	ICU Level of Service	H
Analysis Period (min)	15		

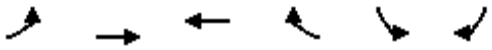
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	355	134	2874	223	105	3210
Future Volume (vph)	355	134	2874	223	105	3210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.91
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3400	1568	5036	1568	3400	5036
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3400	1568	5036	1568	3400	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	355	134	2874	223	105	3210
RTOR Reduction (vph)	0	71	0	77	0	0
Lane Group Flow (vph)	355	63	2874	146	105	3210
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Actuated Green, G (s)	13.0	13.0	50.1	50.1	3.2	57.3
Effective Green, g (s)	13.0	13.0	50.1	50.1	3.2	57.3
Actuated g/C Ratio	0.17	0.17	0.64	0.64	0.04	0.73
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	564	260	3222	1003	138	3685
v/s Ratio Prot	c0.10		0.57		0.03	c0.64
v/s Ratio Perm		0.04		0.09		
v/c Ratio	0.63	0.24	0.89	0.15	0.76	0.87
Uniform Delay, d1	30.4	28.4	11.8	5.6	37.2	7.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.2	0.5	3.5	0.1	21.6	2.5
Delay (s)	32.6	28.9	15.4	5.7	58.7	10.3
Level of Service	C	C	B	A	E	B
Approach Delay (s)	31.6		14.7			11.8
Approach LOS	C		B			B

Intersection Summary			
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	78.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	339	1713	1328	99	76	266
Future Volume (vph)	339	1713	1328	99	76	266
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1752	3505	3505	1568	1752	1568
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1752	3505	3505	1568	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	339	1713	1328	99	76	266
RTOR Reduction (vph)	0	0	0	54	0	232
Lane Group Flow (vph)	339	1713	1328	45	76	34
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	15.6	49.3	29.7	29.7	8.5	8.5
Effective Green, g (s)	15.6	49.3	29.7	29.7	8.5	8.5
Actuated g/C Ratio	0.24	0.75	0.45	0.45	0.13	0.13
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	415	2626	1582	707	226	202
v/s Ratio Prot	c0.19	0.49	c0.38		c0.04	
v/s Ratio Perm				0.03		0.02
v/c Ratio	0.82	0.65	0.84	0.06	0.34	0.17
Uniform Delay, d1	23.7	4.0	15.9	10.2	26.1	25.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	11.8	0.6	4.1	0.0	0.9	0.4
Delay (s)	35.5	4.6	20.0	10.2	27.0	25.9
Level of Service	D	A	C	B	C	C
Approach Delay (s)		9.7	19.4		26.1	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	65.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.7%	ICU Level of Service	C
Analysis Period (min)	15		

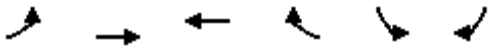
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1140	111	72	702	86	139
Future Volume (vph)	1140	111	72	702	86	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	0.97	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3505	1568	3400	3505	1752	1568
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3505	1568	3400	3505	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1140	111	72	702	86	139
RTOR Reduction (vph)	0	58	0	0	0	113
Lane Group Flow (vph)	1140	53	72	702	86	26
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	20.1	20.1	2.0	26.1	7.8	7.8
Effective Green, g (s)	20.1	20.1	2.0	26.1	7.8	7.8
Actuated g/C Ratio	0.48	0.48	0.05	0.62	0.19	0.19
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1681	752	162	2183	326	291
v/s Ratio Prot	c0.33		0.02	c0.20	c0.05	
v/s Ratio Perm		0.03				0.02
v/c Ratio	0.68	0.07	0.44	0.32	0.26	0.09
Uniform Delay, d1	8.4	5.9	19.4	3.7	14.6	14.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1	0.0	1.9	0.1	0.4	0.1
Delay (s)	9.5	5.9	21.3	3.8	15.0	14.2
Level of Service	A	A	C	A	B	B
Approach Delay (s)	9.2			5.4	14.5	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	8.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	41.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	46.8%	ICU Level of Service	A
Analysis Period (min)	15		

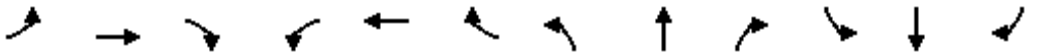
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	281	415	273	45	18	239
Future Volume (vph)	281	415	273	45	18	239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	
Frt		1.00	0.98		0.87	
Flt Protected		0.98	1.00		1.00	
Satd. Flow (prot)		1808	1809		1607	
Flt Permitted		0.73	1.00		1.00	
Satd. Flow (perm)		1354	1809		1607	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	281	415	273	45	18	239
RTOR Reduction (vph)	0	0	9	0	199	0
Lane Group Flow (vph)	0	696	309	0	58	0
Turn Type	Perm	NA	NA		Prot	
Protected Phases		4	8		6	
Permitted Phases	4					
Actuated Green, G (s)		29.3	29.3		7.5	
Effective Green, g (s)		29.3	29.3		7.5	
Actuated g/C Ratio		0.65	0.65		0.17	
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		885	1183		269	
v/s Ratio Prot			0.17		c0.04	
v/s Ratio Perm		c0.51				
v/c Ratio		0.79	0.26		0.22	
Uniform Delay, d1		5.5	3.2		16.1	
Progression Factor		1.00	1.00		1.00	
Incremental Delay, d2		4.7	0.1		0.4	
Delay (s)		10.2	3.4		16.5	
Level of Service		B	A		B	
Approach Delay (s)		10.2	3.4		16.5	
Approach LOS		B	A		B	

Intersection Summary			
HCM 2000 Control Delay	9.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	44.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		

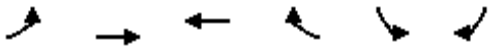
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	242	108	543	139	89	231	231	1656	80	96	1505	368
Future Volume (vph)	242	108	543	139	89	231	231	1656	80	96	1505	368
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1845	1568	3400	3505	1568	3400	3505	1568	3400	3505	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1752	1845	1568	3400	3505	1568	3400	3505	1568	3400	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	242	108	543	139	89	231	231	1656	80	96	1505	368
RTOR Reduction (vph)	0	0	130	0	0	141	0	0	41	0	0	134
Lane Group Flow (vph)	242	108	413	139	89	90	231	1656	39	96	1505	234
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	17.4	28.1	28.1	7.8	18.5	18.5	11.8	54.0	54.0	4.0	46.2	46.2
Effective Green, g (s)	17.4	28.1	28.1	7.8	18.5	18.5	11.8	54.0	54.0	4.0	46.2	46.2
Actuated g/C Ratio	0.16	0.26	0.26	0.07	0.17	0.17	0.11	0.49	0.49	0.04	0.42	0.42
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	277	471	400	241	590	263	365	1722	770	123	1473	659
v/s Ratio Prot	c0.14	0.06		0.04	0.03		c0.07	c0.47		0.03	c0.43	
v/s Ratio Perm			c0.26			0.06			0.03			0.15
v/c Ratio	0.87	0.23	1.03	0.58	0.15	0.34	0.63	0.96	0.05	0.78	1.02	0.35
Uniform Delay, d1	45.2	32.3	40.9	49.5	39.0	40.3	47.0	27.0	14.6	52.5	31.9	21.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	24.8	0.2	54.0	3.3	0.1	0.8	3.6	13.7	0.0	26.7	29.1	0.3
Delay (s)	70.0	32.6	94.9	52.8	39.1	41.1	50.5	40.6	14.6	79.2	60.9	22.0
Level of Service	E	C	F	D	D	D	D	D	B	E	E	C
Approach Delay (s)		80.6			44.3			40.7			54.6	
Approach LOS		F			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	52.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	109.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	89.2%	ICU Level of Service	E
Analysis Period (min)	15		

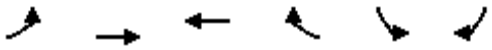
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	228	1222	811	119	255	364
Future Volume (vph)	228	1222	811	119	255	364
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3400	3505	3438		1752	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3400	3505	3438		1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	228	1222	811	119	255	364
RTOR Reduction (vph)	0	0	22	0	0	210
Lane Group Flow (vph)	228	1222	908	0	255	154
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	5.1	24.3	15.2		11.9	11.9
Effective Green, g (s)	5.1	24.3	15.2		11.9	11.9
Actuated g/C Ratio	0.12	0.55	0.34		0.27	0.27
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	392	1926	1182		471	422
v/s Ratio Prot	0.07	c0.35	c0.26		c0.15	
v/s Ratio Perm						0.10
v/c Ratio	0.58	0.63	0.77		0.54	0.37
Uniform Delay, d1	18.5	6.9	12.9		13.8	13.1
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	2.2	0.7	3.1		1.3	0.5
Delay (s)	20.7	7.6	16.0		15.1	13.6
Level of Service	C	A	B		B	B
Approach Delay (s)		9.6	16.0		14.2	
Approach LOS		A	B		B	

Intersection Summary			
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	44.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	158	1330	886	454	725	195
Future Volume (vph)	158	1330	886	454	725	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1752	3505	3505	1568	1752	1568
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1752	3505	3505	1568	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	158	1330	886	454	725	195
RTOR Reduction (vph)	0	0	0	332	0	111
Lane Group Flow (vph)	158	1330	886	122	725	84
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	6.0	26.0	16.0	16.0	25.7	25.7
Effective Green, g (s)	6.0	26.0	16.0	16.0	25.7	25.7
Actuated g/C Ratio	0.10	0.44	0.27	0.27	0.43	0.43
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	176	1526	939	420	754	675
v/s Ratio Prot	0.09	c0.38	0.25		c0.41	
v/s Ratio Perm				0.08		0.05
v/c Ratio	0.90	0.87	0.94	0.29	0.96	0.12
Uniform Delay, d1	26.5	15.3	21.4	17.3	16.5	10.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	39.7	5.8	17.3	0.4	23.6	0.1
Delay (s)	66.3	21.1	38.7	17.7	40.1	10.3
Level of Service	E	C	D	B	D	B
Approach Delay (s)		25.9	31.6		33.8	
Approach LOS		C	C		C	

Intersection Summary			
HCM 2000 Control Delay	29.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	59.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		

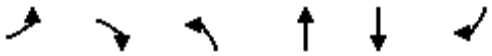
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2381	67	45	2392	32	23
Future Volume (vph)	2381	67	45	2392	32	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3490		1752	3505	1752	1568
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3490		1752	3505	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2381	67	45	2392	32	23
RTOR Reduction (vph)	1	0	0	0	0	22
Lane Group Flow (vph)	2447	0	45	2392	32	1
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases						2
Actuated Green, G (s)	104.0		4.4	112.4	8.1	8.1
Effective Green, g (s)	104.0		4.4	112.4	8.1	8.1
Actuated g/C Ratio	0.81		0.03	0.87	0.06	0.06
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2824		59	3065	110	98
v/s Ratio Prot	c0.70		0.03	c0.68	c0.02	
v/s Ratio Perm						0.00
v/c Ratio	0.87		0.76	0.78	0.29	0.01
Uniform Delay, d1	7.8		61.5	3.2	57.5	56.5
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	3.1		43.5	1.3	1.5	0.1
Delay (s)	10.9		105.0	4.5	58.9	56.5
Level of Service	B		F	A	E	E
Approach Delay (s)	10.9			6.4	57.9	
Approach LOS	B			A	E	

Intersection Summary			
HCM 2000 Control Delay	9.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	128.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	18	76	84	1566	1686	117
Future Volume (vph)	18	76	84	1566	1686	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1568	1752	1845	3471	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1752	1568	1752	1845	3471	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	18	76	84	1566	1686	117
RTOR Reduction (vph)	0	72	0	0	3	0
Lane Group Flow (vph)	18	4	84	1566	1800	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	6.1	6.1	10.8	117.2	102.4	
Effective Green, g (s)	6.1	6.1	10.8	117.2	102.4	
Actuated g/C Ratio	0.05	0.05	0.08	0.89	0.78	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	81	72	144	1646	2707	
v/s Ratio Prot	c0.01		0.05	c0.85	0.52	
v/s Ratio Perm		0.00				
v/c Ratio	0.22	0.05	0.58	0.95	0.66	
Uniform Delay, d1	60.3	59.8	58.1	5.0	6.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.4	0.3	5.9	12.5	0.6	
Delay (s)	61.7	60.1	64.0	17.5	7.2	
Level of Service	E	E	E	B	A	
Approach Delay (s)	60.4			19.9	7.2	
Approach LOS	E			B	A	

Intersection Summary			
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	131.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.4%	ICU Level of Service	F
Analysis Period (min)	15		

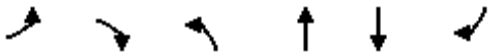
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	182	216	2162	33	579	2011
Future Volume (vph)	182	216	2162	33	579	2011
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.91		0.97	0.91
Frt	1.00	0.85	1.00		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	1568	5025		3400	5036
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	1568	5025		3400	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	182	216	2162	33	579	2011
RTOR Reduction (vph)	0	181	2	0	0	0
Lane Group Flow (vph)	182	35	2193	0	579	2011
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Actuated Green, G (s)	12.4	12.4	38.1		14.9	57.0
Effective Green, g (s)	12.4	12.4	38.1		14.9	57.0
Actuated g/C Ratio	0.16	0.16	0.49		0.19	0.74
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	280	251	2473		654	3708
v/s Ratio Prot	c0.10		c0.44		c0.17	0.40
v/s Ratio Perm		0.02				
v/c Ratio	0.65	0.14	0.89		0.89	0.54
Uniform Delay, d1	30.5	27.9	17.7		30.4	4.5
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	5.3	0.3	4.3		13.6	0.2
Delay (s)	35.8	28.2	22.0		44.0	4.6
Level of Service	D	C	C		D	A
Approach Delay (s)	31.6		22.0			13.4
Approach LOS	C		C			B

Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	77.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.1%	ICU Level of Service	D
Analysis Period (min)	15		

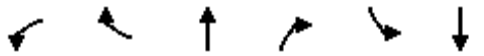
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	628	30	124	983	1294	516
Future Volume (vph)	628	30	124	983	1294	516
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	0.96	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1568	1752	3505	3355	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1752	1568	1752	3505	3355	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	628	30	124	983	1294	516
RTOR Reduction (vph)	0	6	0	0	36	0
Lane Group Flow (vph)	628	24	124	983	1775	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	40.0	40.0	8.0	72.0	60.0	
Effective Green, g (s)	40.0	40.0	8.0	72.0	60.0	
Actuated g/C Ratio	0.33	0.33	0.07	0.60	0.50	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	584	522	116	2103	1677	
v/s Ratio Prot	c0.36		c0.07	0.28	c0.53	
v/s Ratio Perm		0.02				
v/c Ratio	1.08	0.05	1.07	0.47	1.06	
Uniform Delay, d1	40.0	27.1	56.0	13.3	30.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	59.1	0.0	103.3	0.2	39.2	
Delay (s)	99.1	27.1	159.3	13.5	69.2	
Level of Service	F	C	F	B	E	
Approach Delay (s)	95.8			29.8	69.2	
Approach LOS	F			C	E	

Intersection Summary			
HCM 2000 Control Delay	61.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	103.9%	ICU Level of Service	G
Analysis Period (min)	15		

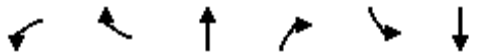
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	1	92	1695	50	160	2740
Future Volume (vph)	1	92	1695	50	160	2740
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.91		1.00	0.91
Frt	1.00	0.85	1.00		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	1568	5014		1752	5036
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	1568	5014		1752	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1	92	1695	50	160	2740
RTOR Reduction (vph)	0	85	3	0	0	0
Lane Group Flow (vph)	1	7	1742	0	160	2740
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		6		5	2
Permitted Phases		8				
Actuated Green, G (s)	4.1	4.1	30.2		6.6	40.8
Effective Green, g (s)	4.1	4.1	30.2		6.6	40.8
Actuated g/C Ratio	0.08	0.08	0.57		0.12	0.77
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	135	121	2862		218	3884
v/s Ratio Prot	0.00		0.35		0.09	c0.54
v/s Ratio Perm		c0.00				
v/c Ratio	0.01	0.06	0.61		0.73	0.71
Uniform Delay, d1	22.5	22.6	7.5		22.3	3.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	0.2	0.4		12.0	0.6
Delay (s)	22.5	22.8	7.8		34.3	3.6
Level of Service	C	C	A		C	A
Approach Delay (s)	22.8		7.8			5.3
Approach LOS	C		A			A

Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	52.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	95	0	1659	52	42	2800
Future Volume (vph)	95	0	1659	52	42	2800
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0	4.0
Lane Util. Factor	1.00		0.91		1.00	0.91
Frt	1.00		1.00		1.00	1.00
Flt Protected	0.95		1.00		0.95	1.00
Satd. Flow (prot)	1752		5013		1752	5036
Flt Permitted	0.95		1.00		0.95	1.00
Satd. Flow (perm)	1752		5013		1752	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	95	0	1659	52	42	2800
RTOR Reduction (vph)	0	0	3	0	0	0
Lane Group Flow (vph)	95	0	1708	0	42	2800
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Actuated Green, G (s)	8.7		66.6		3.0	73.6
Effective Green, g (s)	8.7		66.6		3.0	73.6
Actuated g/C Ratio	0.10		0.74		0.03	0.82
Clearance Time (s)	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	168		3697		58	4104
v/s Ratio Prot	c0.05		0.34		0.02	c0.56
v/s Ratio Perm						
v/c Ratio	0.57		0.46		0.72	0.68
Uniform Delay, d1	39.0		4.7		43.2	3.5
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	4.3		0.1		35.9	0.5
Delay (s)	43.3		4.8		79.1	4.0
Level of Service	D		A		E	A
Approach Delay (s)	43.3		4.8			5.1
Approach LOS	D		A			A

Intersection Summary			
HCM 2000 Control Delay	5.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

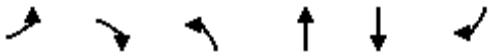
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	390	690	1158	312	475	2678
Future Volume (vph)	390	690	1158	312	475	2678
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.91		1.00	0.91
Frt	1.00	0.85	0.97		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	1568	4876		1752	5036
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	1568	4876		1752	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	390	690	1158	312	475	2678
RTOR Reduction (vph)	0	392	75	0	0	0
Lane Group Flow (vph)	390	298	1395	0	475	2678
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		3				
Actuated Green, G (s)	15.0	15.0	20.0		18.0	42.0
Effective Green, g (s)	15.0	15.0	20.0		18.0	42.0
Actuated g/C Ratio	0.23	0.23	0.31		0.28	0.65
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	404	361	1500		485	3254
v/s Ratio Prot	c0.22		c0.29		c0.27	0.53
v/s Ratio Perm		0.19				
v/c Ratio	0.97	0.82	0.93		0.98	0.82
Uniform Delay, d1	24.7	23.8	21.8		23.3	8.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	35.5	14.2	10.6		35.1	1.8
Delay (s)	60.2	37.9	32.4		58.4	10.5
Level of Service	E	D	C		E	B
Approach Delay (s)	46.0		32.4			17.7
Approach LOS	D		C			B

Intersection Summary			
HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.3%	ICU Level of Service	E
Analysis Period (min)	15		

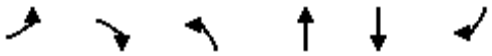
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	109	110	131	1180	2693	138
Future Volume (vph)	109	110	131	1180	2693	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1568	1752	5036	4999	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1752	1568	1752	5036	4999	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	109	110	131	1180	2693	138
RTOR Reduction (vph)	0	96	0	0	6	0
Lane Group Flow (vph)	109	14	131	1180	2825	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	10.1	10.1	7.0	59.9	48.9	
Effective Green, g (s)	10.1	10.1	7.0	59.9	48.9	
Actuated g/C Ratio	0.13	0.13	0.09	0.77	0.63	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	226	203	157	3867	3133	
v/s Ratio Prot	c0.06		c0.07	0.23	c0.57	
v/s Ratio Perm		0.01				
v/c Ratio	0.48	0.07	0.83	0.31	0.90	
Uniform Delay, d1	31.5	29.8	34.9	2.7	12.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.6	0.1	30.0	0.0	4.1	
Delay (s)	33.1	30.0	64.9	2.8	16.5	
Level of Service	C	C	E	A	B	
Approach Delay (s)	31.6			9.0	16.5	
Approach LOS	C			A	B	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	78.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		

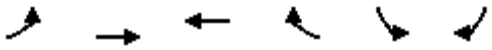
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	282	437	216	827	1228	155
Future Volume (vph)	282	437	216	827	1228	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1568	1752	3505	3446	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1752	1568	1752	3505	3446	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	282	437	216	827	1228	155
RTOR Reduction (vph)	0	218	0	0	15	0
Lane Group Flow (vph)	282	219	216	827	1368	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	13.5	13.5	9.0	41.4	28.4	
Effective Green, g (s)	13.5	13.5	9.0	41.4	28.4	
Actuated g/C Ratio	0.21	0.21	0.14	0.66	0.45	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	376	336	250	2306	1555	
v/s Ratio Prot	c0.16		c0.12	0.24	c0.40	
v/s Ratio Perm		0.14				
v/c Ratio	0.75	0.65	0.86	0.36	0.88	
Uniform Delay, d1	23.1	22.5	26.4	4.8	15.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	8.2	4.5	25.2	0.1	6.0	
Delay (s)	31.3	27.0	51.5	4.9	21.7	
Level of Service	C	C	D	A	C	
Approach Delay (s)	28.7			14.6	21.7	
Approach LOS	C			B	C	

Intersection Summary			
HCM 2000 Control Delay	20.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	62.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		

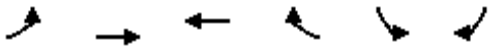
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	818	2167	1641	62	134	761
Future Volume (vph)	818	2167	1641	62	134	761
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	0.95	0.91		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3400	3505	5008		1752	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3400	3505	5008		1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	818	2167	1641	62	134	761
RTOR Reduction (vph)	0	0	5	0	0	335
Lane Group Flow (vph)	818	2167	1698	0	134	426
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	18.0	47.0	25.0		20.0	20.0
Effective Green, g (s)	18.0	47.0	25.0		20.0	20.0
Actuated g/C Ratio	0.24	0.63	0.33		0.27	0.27
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	816	2196	1669		467	418
v/s Ratio Prot	0.24	c0.62	0.34		0.08	
v/s Ratio Perm						c0.27
v/c Ratio	1.00	0.99	1.02		0.29	1.02
Uniform Delay, d1	28.5	13.7	25.0		21.8	27.5
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	32.1	16.0	26.4		0.3	48.9
Delay (s)	60.6	29.7	51.4		22.2	76.4
Level of Service	E	C	D		C	E
Approach Delay (s)		38.2	51.4		68.3	
Approach LOS		D	D		E	

Intersection Summary			
HCM 2000 Control Delay	47.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.9%	ICU Level of Service	E
Analysis Period (min)	15		

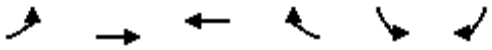
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	248	2054	1269	64	237	184
Future Volume (vph)	248	2054	1269	64	237	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3400	3505	3505	1568	3400	1568
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3400	3505	3505	1568	3400	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	248	2054	1269	64	237	184
RTOR Reduction (vph)	0	0	0	32	0	153
Lane Group Flow (vph)	248	2054	1269	32	237	31
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	6.0	37.0	27.0	27.0	9.0	9.0
Effective Green, g (s)	6.0	37.0	27.0	27.0	9.0	9.0
Actuated g/C Ratio	0.11	0.69	0.50	0.50	0.17	0.17
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	377	2401	1752	784	566	261
v/s Ratio Prot	0.07	c0.59	0.36		c0.07	
v/s Ratio Perm				0.02		0.02
v/c Ratio	0.66	0.86	0.72	0.04	0.42	0.12
Uniform Delay, d1	23.0	6.5	10.6	6.9	20.2	19.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.1	3.2	1.5	0.0	0.5	0.2
Delay (s)	27.1	9.7	12.1	6.9	20.7	19.3
Level of Service	C	A	B	A	C	B
Approach Delay (s)		11.6	11.8		20.1	
Approach LOS		B	B		C	

Intersection Summary			
HCM 2000 Control Delay	12.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	54.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	173	2121	1189	25	20	154
Future Volume (vph)	173	2121	1189	25	20	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3494		1752	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3494		1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	173	2121	1189	25	20	154
RTOR Reduction (vph)	0	0	2	0	0	135
Lane Group Flow (vph)	173	2121	1212	0	20	19
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	8.7	41.7	29.0		6.9	6.9
Effective Green, g (s)	8.7	41.7	29.0		6.9	6.9
Actuated g/C Ratio	0.15	0.74	0.51		0.12	0.12
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	269	2582	1790		213	191
v/s Ratio Prot	0.10	c0.61	0.35		0.01	
v/s Ratio Perm						c0.01
v/c Ratio	0.64	0.82	0.68		0.09	0.10
Uniform Delay, d1	22.5	5.0	10.3		22.1	22.1
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	5.2	2.2	1.0		0.2	0.2
Delay (s)	27.7	7.2	11.3		22.3	22.3
Level of Service	C	A	B		C	C
Approach Delay (s)		8.7	11.3		22.3	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	10.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	56.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1307	168	370	923	163	252
Future Volume (vph)	1307	168	370	923	163	252
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3505	1568	3400	3505	3400	1568
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3505	1568	3400	3505	3400	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1307	168	370	923	163	252
RTOR Reduction (vph)	0	90	0	0	0	213
Lane Group Flow (vph)	1307	78	370	923	163	39
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	24.4	24.4	8.0	36.4	8.2	8.2
Effective Green, g (s)	24.4	24.4	8.0	36.4	8.2	8.2
Actuated g/C Ratio	0.46	0.46	0.15	0.69	0.16	0.16
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1625	727	517	2425	530	244
v/s Ratio Prot	c0.37		c0.11	0.26	c0.05	
v/s Ratio Perm		0.05				0.03
v/c Ratio	0.80	0.11	0.72	0.38	0.31	0.16
Uniform Delay, d1	12.1	8.0	21.2	3.4	19.7	19.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.0	0.1	4.7	0.1	0.3	0.3
Delay (s)	15.1	8.0	25.9	3.5	20.0	19.5
Level of Service	B	A	C	A	C	B
Approach Delay (s)	14.3			9.9	19.7	
Approach LOS	B			A	B	

Intersection Summary			
HCM 2000 Control Delay	13.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	52.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		

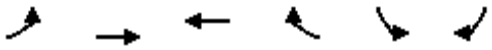
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1560	0	127	1293	0	208
Future Volume (vph)	1560	0	127	1293	0	208
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0		4.0
Lane Util. Factor	0.95		1.00	0.95		1.00
Frt	1.00		1.00	1.00		0.85
Flt Protected	1.00		0.95	1.00		1.00
Satd. Flow (prot)	3505		1752	3505		1568
Flt Permitted	1.00		0.12	1.00		1.00
Satd. Flow (perm)	3505		225	3505		1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1560	0	127	1293	0	208
RTOR Reduction (vph)	0	0	0	0	0	59
Lane Group Flow (vph)	1560	0	127	1293	0	149
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	50.6		50.6	50.6		11.9
Effective Green, g (s)	50.6		50.6	50.6		11.9
Actuated g/C Ratio	0.72		0.72	0.72		0.17
Clearance Time (s)	4.0		4.0	4.0		4.0
Vehicle Extension (s)	3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	2515		161	2515		264
v/s Ratio Prot	0.45			0.37		
v/s Ratio Perm			c0.56			c0.10
v/c Ratio	0.62		0.79	0.51		0.56
Uniform Delay, d1	5.1		6.5	4.5		26.9
Progression Factor	1.00		1.00	1.00		1.00
Incremental Delay, d2	0.5		22.1	0.2		2.8
Delay (s)	5.5		28.6	4.6		29.7
Level of Service	A		C	A		C
Approach Delay (s)	5.5			6.8	29.7	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	70.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		

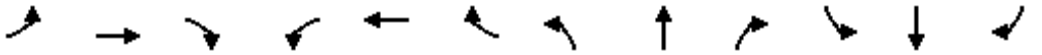
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	221	1867	1089	85	271	173
Future Volume (vph)	221	1867	1089	85	271	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3467		1752	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3467		1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	221	1867	1089	85	271	173
RTOR Reduction (vph)	0	0	7	0	0	137
Lane Group Flow (vph)	221	1867	1167	0	271	36
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	10.4	59.2	44.8		16.6	16.6
Effective Green, g (s)	10.4	59.2	44.8		16.6	16.6
Actuated g/C Ratio	0.12	0.71	0.53		0.20	0.20
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	217	2476	1853		347	310
v/s Ratio Prot	c0.13	c0.53	0.34		c0.15	
v/s Ratio Perm						0.02
v/c Ratio	1.02	0.75	0.63		0.78	0.12
Uniform Delay, d1	36.7	7.7	13.7		31.9	27.6
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	65.9	1.3	0.7		10.9	0.2
Delay (s)	102.6	9.1	14.4		42.7	27.7
Level of Service	F	A	B		D	C
Approach Delay (s)		19.0	14.4		36.9	
Approach LOS		B	B		D	

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	83.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	656	259	244	735	531	241	904	190	786	1656	91
Future Volume (veh/h)	74	656	259	244	735	531	241	904	190	786	1656	91
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1827	1827	1827	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	74	656	259	244	735	531	241	904	190	786	1656	91
Adj No. of Lanes	1	2	0	1	1	1	1	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	4	4	4	4	4	4
Cap, veh/h	97	639	252	255	642	546	232	744	156	534	1762	549
Arrive On Green	0.06	0.26	0.26	0.15	0.35	0.35	0.13	0.18	0.18	0.31	0.35	0.35
Sat Flow, veh/h	1757	2456	970	1740	1827	1553	1740	4134	865	1740	4988	1553
Grp Volume(v), veh/h	74	468	447	244	735	531	241	726	368	786	1656	91
Grp Sat Flow(s),veh/h/ln	1757	1752	1674	1740	1827	1553	1740	1663	1674	1740	1663	1553
Q Serve(g_s), s	6.2	39.0	39.0	20.9	52.7	22.5	20.0	27.0	27.0	46.0	48.2	6.0
Cycle Q Clear(g_c), s	6.2	39.0	39.0	20.9	52.7	22.5	20.0	27.0	27.0	46.0	48.2	6.0
Prop In Lane	1.00		0.58	1.00		1.00	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	97	456	435	255	642	546	232	599	301	534	1762	549
V/C Ratio(X)	0.76	1.03	1.03	0.96	1.15	0.97	1.04	1.21	1.22	1.47	0.94	0.17
Avail Cap(c_a), veh/h	187	456	435	255	642	546	232	599	301	534	1762	549
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.9	55.5	55.5	63.5	48.7	9.5	65.0	61.5	61.5	52.0	47.0	33.3
Incr Delay (d2), s/veh	11.5	49.2	50.3	44.2	82.8	31.7	69.6	110.9	125.2	222.9	10.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	25.1	24.1	13.2	41.3	14.3	14.1	21.6	23.0	55.1	23.8	2.6
LnGrp Delay(d),s/veh	81.3	104.7	105.8	107.7	131.5	41.2	134.6	172.4	186.7	274.9	57.4	33.5
LnGrp LOS	F	F	F	F	F	D	F	F	F	F	E	C
Approach Vol, veh/h		989			1510			1335			2533	
Approach Delay, s/veh		103.5			95.9			169.5			124.0	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	50.0	31.0	26.0	43.0	24.0	57.0	12.3	56.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	46.0	27.0	22.0	39.0	20.0	53.0	16.0	45.0
Max Q Clear Time (g_c+I1), s	48.0	29.0	22.9	41.0	22.0	50.2	8.2	54.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	2.6	0.1	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		123.7
HCM 2010 LOS		F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	251	644	101	184	868	221	108	827	22	508	1217	469
Future Volume (veh/h)	251	644	101	184	868	221	108	827	22	508	1217	469
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	251	644	101	184	868	221	108	827	22	508	1217	469
Adj No. of Lanes	1	2	0	1	2	1	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	254	838	131	219	896	401	150	919	24	525	1310	586
Arrive On Green	0.14	0.28	0.28	0.12	0.26	0.26	0.04	0.27	0.27	0.16	0.38	0.38
Sat Flow, veh/h	1757	3037	476	1757	3505	1568	3375	3454	92	3375	3471	1553
Grp Volume(v), veh/h	251	371	374	184	868	221	108	415	434	508	1217	469
Grp Sat Flow(s),veh/h/ln	1757	1752	1761	1757	1752	1568	1688	1736	1811	1688	1736	1553
Q Serve(g_s), s	12.8	17.5	17.6	9.2	22.0	11.0	2.8	20.8	20.8	13.5	30.2	24.2
Cycle Q Clear(g_c), s	12.8	17.5	17.6	9.2	22.0	11.0	2.8	20.8	20.8	13.5	30.2	24.2
Prop In Lane	1.00		0.27	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	254	484	486	219	896	401	150	462	482	525	1310	586
V/C Ratio(X)	0.99	0.77	0.77	0.84	0.97	0.55	0.72	0.90	0.90	0.97	0.93	0.80
Avail Cap(c_a), veh/h	254	484	486	254	896	401	150	463	483	525	1312	587
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.4	29.9	29.9	38.5	33.1	29.0	42.4	31.8	31.8	37.7	26.8	25.0
Incr Delay (d2), s/veh	53.1	7.3	7.4	19.6	22.6	1.6	15.3	20.2	19.6	30.8	11.7	7.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.9	9.4	9.5	5.6	13.4	4.9	1.6	12.5	13.0	8.5	16.5	11.6
LnGrp Delay(d),s/veh	91.5	37.2	37.3	58.1	55.7	30.6	57.8	52.1	51.4	68.6	38.5	32.7
LnGrp LOS	F	D	D	E	E	C	E	D	D	E	D	C
Approach Vol, veh/h		996			1273			957			2194	
Approach Delay, s/veh		50.9			51.7			52.4			44.3	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	27.9	15.2	28.8	8.0	37.9	17.0	27.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	14.0	24.0	13.0	23.0	4.0	34.0	13.0	23.0
Max Q Clear Time (g_c+I1), s	15.5	22.8	11.2	19.6	4.8	32.2	14.8	24.0
Green Ext Time (p_c), s	0.0	1.2	0.1	2.8	0.0	1.7	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	48.7
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	1593	122	228	1309	130	57	761	252	57	312	1
Future Volume (veh/h)	19	1593	122	228	1309	130	57	761	252	57	312	1
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1900	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	19	1593	122	228	1309	130	57	761	252	57	312	1
Adj No. of Lanes	1	2	2	1	2	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	28	1533	1207	222	1765	175	73	771	345	70	783	3
Arrive On Green	0.02	0.45	0.45	0.13	0.56	0.56	0.04	0.22	0.22	0.04	0.22	0.22
Sat Flow, veh/h	1707	3406	2682	1707	3131	310	1757	3505	1568	1757	3584	11
Grp Volume(v), veh/h	19	1593	122	228	710	729	57	761	252	57	153	160
Grp Sat Flow(s),veh/h/ln	1707	1703	1341	1707	1703	1738	1757	1752	1568	1757	1752	1843
Q Serve(g_s), s	1.1	45.0	2.6	13.0	31.2	31.6	3.2	21.6	14.9	3.2	7.5	7.5
Cycle Q Clear(g_c), s	1.1	45.0	2.6	13.0	31.2	31.6	3.2	21.6	14.9	3.2	7.5	7.5
Prop In Lane	1.00		1.00	1.00		0.18	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	28	1533	1207	222	960	979	73	771	345	70	383	402
V/C Ratio(X)	0.68	1.04	0.10	1.03	0.74	0.74	0.78	0.99	0.73	0.81	0.40	0.40
Avail Cap(c_a), veh/h	85	1533	1207	222	960	979	141	771	345	70	383	402
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.9	27.5	15.8	43.5	16.3	16.4	47.5	38.9	36.2	47.6	33.5	33.5
Incr Delay (d2), s/veh	25.0	33.9	0.0	67.7	3.1	3.1	16.2	29.1	7.7	49.1	0.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	28.3	1.0	10.3	15.4	15.8	1.9	13.6	7.2	2.5	3.7	3.9
LnGrp Delay(d),s/veh	73.9	61.4	15.9	111.3	19.4	19.5	63.7	67.9	43.9	96.7	34.1	34.1
LnGrp LOS	E	F	B	F	B	B	E	E	D	F	C	C
Approach Vol, veh/h		1734			1667			1070			370	
Approach Delay, s/veh		58.4			32.0			62.0			43.8	
Approach LOS		E			C			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	26.0	17.0	49.0	8.2	25.8	5.6	60.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	22.0	13.0	45.0	8.0	18.0	5.0	53.0
Max Q Clear Time (g_c+I1), s	5.2	23.6	15.0	47.0	5.2	9.5	3.1	33.6
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	4.9	0.0	17.9

Intersection Summary	
HCM 2010 Ctrl Delay	49.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	771	550	142	765	118	152	741	266	65	502	84
Future Volume (veh/h)	16	771	550	142	765	118	152	741	266	65	502	84
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	16	771	550	142	765	118	152	741	266	65	502	84
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	28	976	437	153	1065	164	183	1087	486	81	882	395
Arrive On Green	0.02	0.28	0.28	0.09	0.35	0.35	0.10	0.31	0.31	0.05	0.25	0.25
Sat Flow, veh/h	1757	3505	1568	1757	3045	470	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	16	771	550	142	440	443	152	741	266	65	502	84
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1762	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	0.5	11.7	16.0	4.6	12.5	12.5	4.9	10.6	8.1	2.1	7.2	2.4
Cycle Q Clear(g_c), s	0.5	11.7	16.0	4.6	12.5	12.5	4.9	10.6	8.1	2.1	7.2	2.4
Prop In Lane	1.00		1.00	1.00		0.27	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	28	976	437	153	613	616	183	1087	486	81	882	395
V/C Ratio(X)	0.58	0.79	1.26	0.93	0.72	0.72	0.83	0.68	0.55	0.80	0.57	0.21
Avail Cap(c_a), veh/h	122	976	437	153	613	616	183	1159	518	122	1037	464
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.1	19.2	20.7	26.1	16.2	16.2	25.2	17.3	16.5	27.1	18.8	17.0
Incr Delay (d2), s/veh	17.8	4.5	134.4	52.1	4.1	4.0	26.0	1.5	1.1	19.6	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	6.2	23.1	4.4	6.7	6.7	3.7	5.4	3.6	1.5	3.6	1.1
LnGrp Delay(d),s/veh	45.9	23.6	155.1	78.1	20.3	20.3	51.2	18.9	17.5	46.7	19.4	17.3
LnGrp LOS	D	C	F	E	C	C	D	B	B	D	B	B
Approach Vol, veh/h		1337			1025			1159			651	
Approach Delay, s/veh		78.0			28.3			22.8			21.8	
Approach LOS		E			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.7	21.8	9.0	20.0	10.0	18.5	4.9	24.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	19.0	5.0	16.0	6.0	17.0	4.0	17.0
Max Q Clear Time (g_c+I1), s	4.1	12.6	6.6	18.0	6.9	9.2	2.5	14.5
Green Ext Time (p_c), s	0.0	4.5	0.0	0.0	0.0	5.3	0.0	2.2

Intersection Summary	
HCM 2010 Ctrl Delay	41.7
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	758	68	193	828	239	86	315	125	282	958	104
Future Volume (veh/h)	135	758	68	193	828	239	86	315	125	282	958	104
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	135	758	68	193	828	239	86	315	125	282	958	104
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	169	837	375	223	945	423	110	784	351	324	1213	542
Arrive On Green	0.10	0.24	0.24	0.13	0.27	0.27	0.06	0.22	0.22	0.18	0.35	0.35
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	135	758	68	193	828	239	86	315	125	282	958	104
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1568	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	5.3	14.9	2.4	7.6	16.0	9.3	3.4	5.4	4.8	11.1	17.4	3.3
Cycle Q Clear(g_c), s	5.3	14.9	2.4	7.6	16.0	9.3	3.4	5.4	4.8	11.1	17.4	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	169	837	375	223	945	423	110	784	351	324	1213	542
V/C Ratio(X)	0.80	0.91	0.18	0.87	0.88	0.57	0.78	0.40	0.36	0.87	0.79	0.19
Avail Cap(c_a), veh/h	173	840	376	223	945	423	149	939	420	347	1335	597
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.4	26.2	21.5	30.4	24.8	22.3	32.8	23.5	23.2	28.1	20.9	16.2
Incr Delay (d2), s/veh	22.2	13.3	0.2	28.0	9.3	1.7	17.1	0.3	0.6	19.6	3.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	8.7	1.1	5.4	8.9	4.2	2.2	2.7	2.1	7.1	8.9	1.5
LnGrp Delay(d),s/veh	53.5	39.5	21.7	58.3	34.1	24.1	49.8	23.8	23.8	47.6	23.9	16.4
LnGrp LOS	D	D	C	E	C	C	D	C	C	D	C	B
Approach Vol, veh/h		961			1260			526			1344	
Approach Delay, s/veh		40.2			35.9			28.1			28.3	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.1	19.9	13.0	20.9	8.4	28.5	10.8	23.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	14.0	19.0	9.0	17.0	6.0	27.0	7.0	19.0
Max Q Clear Time (g_c+I1), s	13.1	7.4	9.6	16.9	5.4	19.4	7.3	18.0
Green Ext Time (p_c), s	0.1	7.0	0.0	0.0	0.0	5.1	0.0	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	33.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	265	500	145	479	516	787	128	3116	288	670	3104	403
Future Volume (veh/h)	265	500	145	479	516	787	128	3116	288	670	3104	403
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	265	500	145	479	516	787	128	3116	288	670	3104	403
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	170	869	389	260	962	602	101	2147	669	370	2545	792
Arrive On Green	0.05	0.25	0.25	0.08	0.27	0.27	0.03	0.43	0.43	0.11	0.51	0.51
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	265	500	145	479	516	787	128	3116	288	670	3104	403
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	7.5	18.8	11.5	11.5	18.9	41.3	4.5	64.8	19.5	16.5	76.8	25.8
Cycle Q Clear(g_c), s	7.5	18.8	11.5	11.5	18.9	41.3	4.5	64.8	19.5	16.5	76.8	25.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	170	869	389	260	962	602	101	2147	669	370	2545	792
V/C Ratio(X)	1.56	0.58	0.37	1.84	0.54	1.31	1.27	1.45	0.43	1.81	1.22	0.51
Avail Cap(c_a), veh/h	170	869	389	260	962	602	101	2147	669	370	2545	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.5	49.7	46.9	69.5	46.5	46.4	73.0	42.8	30.0	67.0	36.8	24.4
Incr Delay (d2), s/veh	278.8	0.6	0.2	392.3	0.3	149.8	177.9	205.6	0.2	375.3	102.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.1	9.2	5.0	19.6	9.1	50.1	4.6	70.5	8.4	26.9	59.3	11.1
LnGrp Delay(d),s/veh	350.3	50.3	47.1	461.8	46.8	196.2	250.9	248.5	30.1	442.3	139.4	24.6
LnGrp LOS	F	D	D	F	D	F	F	F	C	F	F	C
Approach Vol, veh/h		910			1782			3532			4177	
Approach Delay, s/veh		137.1			224.3			230.8			176.9	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	81.6	13.0	45.9	22.0	69.6	17.0	41.9
Change Period (Y+Rc), s	5.5	4.8	5.5	* 4.6	5.5	* 4.8	5.5	4.6
Max Green Setting (Gmax), s	4.5	76.6	7.5	* 41	16.5	* 65	11.5	37.0
Max Q Clear Time (g_c+I1), s	6.5	78.8	9.5	43.3	18.5	66.8	13.5	20.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3

Intersection Summary	
HCM 2010 Ctrl Delay	199.9
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	0	1	75	0	70	0	2753	28	25	3161	4
Future Volume (veh/h)	1	0	1	75	0	70	0	2753	28	25	3161	4
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	1	0	1	75	0	70	0	2753	28	25	3161	4
Adj No. of Lanes	0	1	0	1	0	2	1	3	1	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	1	0	1	106	0	189	2	3609	1124	30	4057	5
Arrive On Green	0.00	0.00	0.00	0.06	0.00	0.06	0.00	0.72	0.72	0.02	0.79	0.79
Sat Flow, veh/h	828	0	828	1757	0	3136	1740	4988	1553	1740	5144	7
Grp Volume(v), veh/h	2	0	0	75	0	70	0	2753	28	25	2043	1122
Grp Sat Flow(s),veh/h/ln	1657	0	0	1757	0	1568	1740	1663	1553	1740	1663	1826
Q Serve(g_s), s	0.1	0.0	0.0	4.5	0.0	2.3	0.0	36.4	0.5	1.5	36.0	36.1
Cycle Q Clear(g_c), s	0.1	0.0	0.0	4.5	0.0	2.3	0.0	36.4	0.5	1.5	36.0	36.1
Prop In Lane	0.50		0.50	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	3	0	0	106	0	189	2	3609	1124	30	2622	1440
V/C Ratio(X)	0.75	0.00	0.00	0.71	0.00	0.37	0.00	0.76	0.02	0.83	0.78	0.78
Avail Cap(c_a), veh/h	46	0	0	197	0	352	49	3783	1178	49	2622	1440
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.4	0.0	0.0	49.3	0.0	48.3	0.0	9.1	4.2	52.4	6.2	6.2
Incr Delay (d2), s/veh	88.8	0.0	0.0	3.2	0.0	0.4	0.0	1.3	0.0	23.0	2.1	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	2.3	0.0	1.0	0.0	16.8	0.2	0.9	16.9	19.3
LnGrp Delay(d),s/veh	142.1	0.0	0.0	52.6	0.0	48.7	0.0	10.4	4.2	75.3	8.3	9.9
LnGrp LOS	F			D		D		B	A	E	A	A
Approach Vol, veh/h		2			145			2781			3190	
Approach Delay, s/veh		142.1			50.7			10.4			9.4	
Approach LOS		F			D			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	89.3		5.7	7.0	82.4		11.9
Change Period (Y+Rc), s	* 4.6	5.0		5.5	* 5.1	* 5		5.5
Max Green Setting (Gmax), s	* 3	81.4		3.0	* 3	* 81		12.0
Max Q Clear Time (g_c+I1), s	0.0	38.1		2.1	3.5	38.4		6.5
Green Ext Time (p_c), s	0.0	43.2		0.0	0.0	38.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	10.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	580	23	194	198	704	9	2256	129	749	2558	1
Future Volume (veh/h)	0	580	23	194	198	704	9	2256	129	749	2558	1
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1845	1845	1845	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	0	580	23	194	198	704	9	2256	129	749	2558	1
Adj No. of Lanes	2	2	1	2	2	1	2	3	0	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	2	627	280	173	941	712	21	2096	119	628	3160	1
Arrive On Green	0.00	0.18	0.18	0.05	0.27	0.27	0.01	0.43	0.43	0.19	0.61	0.61
Sat Flow, veh/h	3375	3471	1553	3408	3505	1568	3375	4829	274	3375	5150	2
Grp Volume(v), veh/h	0	580	23	194	198	704	9	1548	837	749	1652	907
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1704	1752	1568	1688	1663	1779	1688	1663	1827
Q Serve(g_s), s	0.0	24.3	1.8	7.5	6.5	39.7	0.4	64.2	64.2	27.5	56.4	56.4
Cycle Q Clear(g_c), s	0.0	24.3	1.8	7.5	6.5	39.7	0.4	64.2	64.2	27.5	56.4	56.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.15	1.00		0.00
Lane Grp Cap(c), veh/h	2	627	280	173	941	712	21	1443	772	628	2041	1121
V/C Ratio(X)	0.00	0.93	0.08	1.12	0.21	0.99	0.43	1.07	1.08	1.19	0.81	0.81
Avail Cap(c_a), veh/h	68	681	304	173	941	712	68	1443	772	628	2041	1121
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	59.6	50.4	70.2	41.9	40.0	73.2	41.9	41.9	60.2	21.9	21.9
Incr Delay (d2), s/veh	0.0	17.2	0.0	105.2	0.0	30.6	4.9	45.8	57.6	102.1	2.4	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	13.2	0.8	6.0	3.1	34.4	0.2	38.4	43.7	21.6	26.4	29.5
LnGrp Delay(d),s/veh	0.0	76.8	50.5	175.4	42.0	70.6	78.2	87.7	99.5	162.3	24.3	26.1
LnGrp LOS		E	D	F	D	E	E	F	F	F	C	C
Approach Vol, veh/h		603			1096			2394			3308	
Approach Delay, s/veh		75.8			83.9			91.7			56.1	
Approach LOS		E			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	96.1	0.0	45.4	33.0	69.5	13.0	32.4
Change Period (Y+Rc), s	5.5	5.3	5.5	* 5.7	5.5	* 5.3	5.5	* 5.7
Max Green Setting (Gmax), s	3.0	88.6	3.0	* 33	27.5	* 64	7.5	* 29
Max Q Clear Time (g_c+I1), s	2.4	58.4	0.0	41.7	29.5	66.2	9.5	26.3
Green Ext Time (p_c), s	0.0	24.1	0.0	0.0	0.0	0.0	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	73.3
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	13	34	2343	23	79	2694
Future Volume (veh/h)	13	34	2343	23	79	2694
Number	3	18	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1827	1900	1827	1827
Adj Flow Rate, veh/h	13	34	2343	23	79	2694
Adj No. of Lanes	1	1	3	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	4	4	4	4
Cap, veh/h	53	47	3640	36	101	2896
Arrive On Green	0.03	0.03	0.71	0.71	0.06	0.83
Sat Flow, veh/h	1757	1568	5258	50	1740	3563
Grp Volume(v), veh/h	13	34	1529	837	79	2694
Grp Sat Flow(s),veh/h/ln	1757	1568	1663	1818	1740	1736
Q Serve(g_s), s	0.5	1.6	18.4	18.5	3.4	43.6
Cycle Q Clear(g_c), s	0.5	1.6	18.4	18.5	3.4	43.6
Prop In Lane	1.00	1.00		0.03	1.00	
Lane Grp Cap(c), veh/h	53	47	2376	1299	101	2896
V/C Ratio(X)	0.25	0.72	0.64	0.64	0.79	0.93
Avail Cap(c_a), veh/h	69	62	2376	1299	213	3047
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	36.5	5.7	5.7	35.3	4.7
Incr Delay (d2), s/veh	0.9	15.0	0.5	0.9	5.0	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.9	8.4	9.4	1.8	21.7
LnGrp Delay(d),s/veh	36.9	51.6	6.2	6.6	40.3	10.2
LnGrp LOS	D	D	A	A	D	B
Approach Vol, veh/h	47		2366			2773
Approach Delay, s/veh	47.5		6.3			11.1
Approach LOS	D		A			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		68.2			9.1	59.1		7.8
Change Period (Y+Rc), s		4.8			* 4.7	4.8		5.5
Max Green Setting (Gmax), s		66.7			* 9.3	52.7		3.0
Max Q Clear Time (g_c+I1), s		45.6			5.4	20.5		3.6
Green Ext Time (p_c), s		17.8			0.0	27.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	9.2
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	153	1828	773	61	1518	875	613	1675	106	935	1669	126
Future Volume (veh/h)	153	1828	773	61	1518	875	613	1675	106	935	1669	126
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	153	1828	773	61	1518	875	613	1675	106	935	1669	126
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	4	4	4	4	4	4
Cap, veh/h	114	1392	623	68	1357	607	402	1311	408	569	1552	483
Arrive On Green	0.03	0.41	0.41	0.02	0.40	0.40	0.12	0.26	0.26	0.17	0.31	0.31
Sat Flow, veh/h	3312	3406	1524	3312	3406	1524	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	153	1828	773	61	1518	875	613	1675	106	935	1669	126
Grp Sat Flow(s),veh/h/ln	1656	1703	1524	1656	1703	1524	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	5.0	59.4	59.4	2.7	57.9	57.9	17.3	38.2	7.8	24.5	45.2	8.8
Cycle Q Clear(g_c), s	5.0	59.4	59.4	2.7	57.9	57.9	17.3	38.2	7.8	24.5	45.2	8.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	114	1392	623	68	1357	607	402	1311	408	569	1552	483
V/C Ratio(X)	1.34	1.31	1.24	0.89	1.12	1.44	1.53	1.28	0.26	1.64	1.08	0.26
Avail Cap(c_a), veh/h	114	1392	623	68	1357	607	402	1311	408	569	1552	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.1	43.0	43.0	71.0	43.7	43.7	64.0	53.6	42.4	60.4	50.0	37.5
Incr Delay (d2), s/veh	201.5	146.1	121.7	70.9	63.8	207.8	248.7	130.9	0.1	297.1	46.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	56.1	46.0	1.9	39.2	59.4	21.9	33.4	3.4	34.9	27.3	3.8
LnGrp Delay(d),s/veh	271.6	189.0	164.7	141.9	107.5	251.5	312.7	184.4	42.5	357.5	96.3	37.6
LnGrp LOS	F	F	F	F	F	F	F	F	D	F	F	D
Approach Vol, veh/h		2754			2454			2394			2730	
Approach Delay, s/veh		186.8			159.7			211.0			183.0	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	63.3	22.0	50.0	8.5	64.8	29.0	43.0
Change Period (Y+Rc), s	5.0	* 5.4	* 4.7	4.8	5.5	* 5.4	4.5	4.8
Max Green Setting (Gmax), s	5.0	* 58	* 17	45.2	3.0	* 59	24.5	38.2
Max Q Clear Time (g_c+I1), s	7.0	59.9	19.3	47.2	4.7	61.4	26.5	40.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	185.0
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	444	839	252	373	704	219	108	1704	446	182	2034	203
Future Volume (veh/h)	444	839	252	373	704	219	108	1704	446	182	2034	203
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1845	1845	1827	1827
Adj Flow Rate, veh/h	444	839	252	373	704	219	108	1704	446	182	2034	203
Adj No. of Lanes	1	1	1	2	2	1	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	3	3	4	4
Cap, veh/h	433	674	573	310	727	325	92	1567	493	146	1744	543
Arrive On Green	0.25	0.37	0.37	0.09	0.21	0.21	0.05	0.31	0.31	0.08	0.35	0.35
Sat Flow, veh/h	1757	1845	1568	3408	3505	1568	1740	4988	1568	1757	4988	1553
Grp Volume(v), veh/h	444	839	252	373	704	219	108	1704	446	182	2034	203
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1752	1568	1740	1663	1568	1757	1663	1553
Q Serve(g_s), s	34.7	51.4	17.1	12.8	28.0	18.1	7.4	44.2	38.4	11.7	49.2	13.8
Cycle Q Clear(g_c), s	34.7	51.4	17.1	12.8	28.0	18.1	7.4	44.2	38.4	11.7	49.2	13.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	433	674	573	310	727	325	92	1567	493	146	1744	543
V/C Ratio(X)	1.02	1.25	0.44	1.20	0.97	0.67	1.18	1.09	0.91	1.25	1.17	0.37
Avail Cap(c_a), veh/h	433	674	573	310	727	325	92	1567	493	146	1744	543
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.0	44.7	33.8	63.9	55.3	51.4	66.7	48.3	46.2	64.5	45.8	34.2
Incr Delay (d2), s/veh	49.7	122.5	0.2	118.0	25.4	4.4	150.5	50.5	19.7	155.1	81.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.7	48.9	7.4	11.1	16.2	8.2	7.4	27.5	19.2	11.9	35.6	5.9
LnGrp Delay(d),s/veh	102.7	167.1	34.0	181.9	80.7	55.8	217.2	98.8	66.0	219.6	127.2	34.4
LnGrp LOS	F	F	C	F	F	E	F	F	E	F	F	C
Approach Vol, veh/h		1535			1296			2258			2419	
Approach Delay, s/veh		126.6			105.6			98.0			126.4	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	54.0	40.2	34.5	17.0	49.0	18.0	56.7
Change Period (Y+Rc), s	* 4.6	4.8	5.5	* 5.3	* 5.3	4.8	* 5.2	* 5.3
Max Green Setting (Gmax), s	* 7.4	49.2	34.7	* 29	* 12	44.2	* 13	* 51
Max Q Clear Time (g_c+I1), s	9.4	51.2	36.7	30.0	13.7	46.2	14.8	53.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	114.3
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	358	942	343	220	961	684	137	1213	18	844	1837	238
Future Volume (veh/h)	358	942	343	220	961	684	137	1213	18	844	1837	238
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1845	1845	1827	1827
Adj Flow Rate, veh/h	358	942	343	220	961	684	137	1213	18	844	1837	238
Adj No. of Lanes	2	1	1	1	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	3	3	4	4
Cap, veh/h	403	726	617	164	1291	578	135	1097	345	636	1829	569
Arrive On Green	0.12	0.39	0.39	0.09	0.37	0.37	0.04	0.22	0.22	0.19	0.37	0.37
Sat Flow, veh/h	3408	1845	1568	1757	3505	1568	3375	4988	1568	3408	4988	1553
Grp Volume(v), veh/h	358	942	343	220	961	684	137	1213	18	844	1837	238
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1757	1752	1568	1688	1663	1568	1704	1663	1553
Q Serve(g_s), s	15.5	59.0	25.5	14.0	35.8	55.3	6.0	33.0	1.4	28.0	55.0	17.2
Cycle Q Clear(g_c), s	15.5	59.0	25.5	14.0	35.8	55.3	6.0	33.0	1.4	28.0	55.0	17.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	403	726	617	164	1291	578	135	1097	345	636	1829	569
V/C Ratio(X)	0.89	1.30	0.56	1.34	0.74	1.18	1.01	1.11	0.05	1.33	1.00	0.42
Avail Cap(c_a), veh/h	432	726	617	164	1291	578	135	1097	345	636	1829	569
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.2	45.5	35.3	68.0	41.2	47.4	72.0	58.5	46.2	61.0	47.5	35.5
Incr Delay (d2), s/veh	18.9	144.3	1.1	188.9	2.4	99.5	81.4	60.9	0.1	157.7	22.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	59.1	11.2	15.4	17.8	39.8	4.3	21.3	0.6	27.1	29.0	7.5
LnGrp Delay(d),s/veh	84.1	189.8	36.4	256.9	43.6	146.9	153.5	119.4	46.2	218.7	69.6	36.0
LnGrp LOS	F	F	D	F	D	F	F	F	D	F	F	D
Approach Vol, veh/h		1643			1865			1368			2919	
Approach Delay, s/veh		134.7			106.6			121.8			110.0	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	59.0	21.7	59.3	32.0	37.0	18.0	63.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	55.0	19.0	54.0	28.0	33.0	14.0	59.0
Max Q Clear Time (g_c+I1), s	8.0	57.0	17.5	57.3	30.0	35.0	16.0	61.0
Green Ext Time (p_c), s	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	116.5
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	821	455	804	91	557	9	188	1038	11	22	1978	1340
Future Volume (veh/h)	821	455	804	91	557	9	188	1038	11	22	1978	1340
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	821	455	804	91	557	9	188	1038	11	22	1978	1340
Adj No. of Lanes	1	2	1	1	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	545	1410	631	87	493	221	171	1907	594	42	1737	541
Arrive On Green	0.31	0.41	0.41	0.05	0.14	0.14	0.05	0.38	0.38	0.01	0.35	0.35
Sat Flow, veh/h	1740	3471	1553	1740	3471	1553	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	821	455	804	91	557	9	188	1038	11	22	1978	1340
Grp Sat Flow(s),veh/h/ln	1740	1736	1553	1740	1736	1553	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	43.9	12.6	56.9	7.0	19.9	0.7	7.1	22.7	0.6	0.9	48.8	48.8
Cycle Q Clear(g_c), s	43.9	12.6	56.9	7.0	19.9	0.7	7.1	22.7	0.6	0.9	48.8	48.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	545	1410	631	87	493	221	171	1907	594	42	1737	541
V/C Ratio(X)	1.51	0.32	1.27	1.05	1.13	0.04	1.10	0.54	0.02	0.53	1.14	2.48
Avail Cap(c_a), veh/h	545	1410	631	87	493	221	171	1907	594	133	1737	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.1	28.4	41.6	66.6	60.1	51.9	66.5	33.7	26.9	68.8	45.7	45.7
Incr Delay (d2), s/veh	237.1	0.6	135.7	109.8	81.2	0.3	97.8	1.1	0.1	3.8	69.9	670.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	57.0	6.1	48.2	6.0	15.1	0.3	5.6	10.7	0.3	0.4	33.6	121.6
LnGrp Delay(d),s/veh	285.2	29.0	177.3	177.3	141.3	52.2	164.3	34.9	27.0	72.6	115.6	716.0
LnGrp LOS	F	C	F	F	F	D	F	C	C	E	F	F
Approach Vol, veh/h		2080			657			1237			3340	
Approach Delay, s/veh		187.5			145.1			54.5			356.2	
Approach LOS		F			F			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	54.0	49.0	25.1	7.2	58.8	12.0	62.1
Change Period (Y+Rc), s	* 4.9	* 5.2	* 5.1	* 5.2	5.5	* 5.2	5.0	* 5.2
Max Green Setting (Gmax), s	* 7.1	* 49	* 44	* 20	5.5	* 50	7.0	* 57
Max Q Clear Time (g_c+I1), s	9.1	50.8	45.9	21.9	2.9	24.7	9.0	58.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	25.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	238.2
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	796	483	151	694	40	334	1197	103	240	2471	99
Future Volume (veh/h)	97	796	483	151	694	40	334	1197	103	240	2471	99
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	97	796	483	151	694	40	334	1197	103	240	2471	99
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	120	762	341	160	803	359	337	2490	775	285	2413	751
Arrive On Green	0.04	0.22	0.22	0.05	0.23	0.23	0.10	0.50	0.50	0.08	0.48	0.48
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	97	796	483	151	694	40	334	1197	103	240	2471	99
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	4.1	31.6	31.6	6.4	27.7	2.9	14.4	23.0	5.2	10.2	70.3	5.1
Cycle Q Clear(g_c), s	4.1	31.6	31.6	6.4	27.7	2.9	14.4	23.0	5.2	10.2	70.3	5.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	120	762	341	160	803	359	337	2490	775	285	2413	751
V/C Ratio(X)	0.81	1.04	1.42	0.95	0.86	0.11	0.99	0.48	0.13	0.84	1.02	0.13
Avail Cap(c_a), veh/h	120	762	341	160	803	359	337	2490	775	390	2413	751
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.6	56.9	56.9	69.1	53.8	44.3	65.3	24.0	19.5	65.6	37.5	20.7
Incr Delay (d2), s/veh	30.9	44.7	203.9	54.9	11.1	0.4	46.6	0.5	0.2	8.7	24.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	20.0	33.0	4.2	14.6	1.3	8.9	10.6	2.3	5.1	37.7	2.3
LnGrp Delay(d),s/veh	100.5	101.6	260.7	124.0	64.9	44.7	111.9	24.4	19.8	74.3	62.2	20.9
LnGrp LOS	F	F	F	F	E	D	F	C	B	E	F	C
Approach Vol, veh/h		1376			885			1634			2810	
Approach Delay, s/veh		157.4			74.1			42.0			61.8	
Approach LOS		F			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	75.8	10.6	38.9	17.8	78.0	12.3	37.2
Change Period (Y+Rc), s	5.5	* 5.5	5.5	5.6	5.5	* 5.5	5.5	* 5.6
Max Green Setting (Gmax), s	14.5	* 70	5.1	33.1	16.8	* 68	6.8	* 32
Max Q Clear Time (g_c+I1), s	16.4	72.3	6.1	29.7	12.2	25.0	8.4	33.6
Green Ext Time (p_c), s	0.0	0.0	0.0	3.4	0.1	42.8	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	78.2
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	1202	100	124	1046	30	112	80	104	92	410	19
Future Volume (veh/h)	31	1202	100	124	1046	30	112	80	104	92	410	19
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	31	1202	100	124	1046	30	112	80	104	92	410	19
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	38	1295	108	145	1589	46	141	490	417	118	467	397
Arrive On Green	0.02	0.40	0.40	0.08	0.46	0.46	0.08	0.27	0.27	0.07	0.25	0.25
Sat Flow, veh/h	1757	3277	272	1757	3480	100	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	31	642	660	124	527	549	112	80	104	92	410	19
Grp Sat Flow(s),veh/h/ln	1757	1752	1797	1757	1752	1827	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	1.5	29.6	29.7	5.9	19.8	19.8	5.3	2.8	4.4	4.4	18.1	0.8
Cycle Q Clear(g_c), s	1.5	29.6	29.7	5.9	19.8	19.8	5.3	2.8	4.4	4.4	18.1	0.8
Prop In Lane	1.00		0.15	1.00		0.05	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	38	692	710	145	800	834	141	490	417	118	467	397
V/C Ratio(X)	0.83	0.93	0.93	0.85	0.66	0.66	0.80	0.16	0.25	0.78	0.88	0.05
Avail Cap(c_a), veh/h	104	725	743	145	800	834	145	490	417	208	545	463
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.2	24.4	24.5	38.3	17.9	17.9	38.2	23.8	24.4	38.9	30.4	23.9
Incr Delay (d2), s/veh	34.3	17.6	17.7	35.9	2.0	1.9	25.1	0.2	0.3	10.6	13.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	17.7	18.2	4.3	10.0	10.4	3.6	1.4	1.9	2.5	11.0	0.3
LnGrp Delay(d),s/veh	75.6	42.0	42.2	74.2	19.9	19.8	63.4	24.0	24.7	49.4	44.0	24.0
LnGrp LOS	E	D	D	E	B	B	E	C	C	D	D	C
Approach Vol, veh/h		1333			1200			296			521	
Approach Delay, s/veh		42.9			25.4			39.1			44.2	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	26.5	11.0	37.4	10.8	25.4	5.8	42.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	22.0	7.0	35.0	7.0	25.0	5.0	37.0
Max Q Clear Time (g_c+I1), s	6.4	6.4	7.9	31.7	7.3	20.1	3.5	21.8
Green Ext Time (p_c), s	0.1	3.1	0.0	1.7	0.0	1.3	0.0	12.4

Intersection Summary	
HCM 2010 Ctrl Delay	36.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	1249	518	91	1235	265	575	191	8	318	374	87
Future Volume (veh/h)	77	1249	518	91	1235	265	575	191	8	318	374	87
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	77	1249	518	91	1235	265	575	191	8	318	374	87
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	47	1145	454	35	1324	281	480	480	408	258	246	209
Arrive On Green	0.03	0.47	0.47	0.02	0.46	0.46	0.27	0.26	0.26	0.15	0.13	0.13
Sat Flow, veh/h	1757	2453	972	1757	2878	611	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	77	876	891	91	747	753	575	191	8	318	374	87
Grp Sat Flow(s),veh/h/ln	1757	1752	1673	1757	1752	1737	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	4.0	70.0	70.0	3.0	60.2	62.0	41.0	12.8	0.6	22.0	20.0	7.6
Cycle Q Clear(g_c), s	4.0	70.0	70.0	3.0	60.2	62.0	41.0	12.8	0.6	22.0	20.0	7.6
Prop In Lane	1.00		0.58	1.00		0.35	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	47	818	781	35	806	799	480	480	408	258	246	209
V/C Ratio(X)	1.64	1.07	1.14	2.59	0.93	0.94	1.20	0.40	0.02	1.23	1.52	0.42
Avail Cap(c_a), veh/h	47	818	781	35	806	799	480	480	408	258	246	209
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.0	40.0	40.0	73.5	38.1	38.6	54.5	45.8	41.3	64.0	65.0	59.6
Incr Delay (d2), s/veh	367.0	52.2	78.7	790.9	16.6	19.3	107.6	0.5	0.0	134.3	254.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	45.7	49.4	9.2	32.8	34.0	34.2	6.6	0.2	20.3	27.5	3.4
LnGrp Delay(d),s/veh	440.0	92.2	118.7	864.4	54.7	57.9	162.1	46.3	41.3	198.3	319.0	61.0
LnGrp LOS	F	F	F	F	D	E	F	D	D	F	F	E
Approach Vol, veh/h		1844			1591			774			779	
Approach Delay, s/veh		119.5			102.5			132.3			240.9	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	43.0	7.0	74.0	45.0	24.0	8.0	73.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	22.0	39.0	3.0	70.0	41.0	20.0	4.0	69.0
Max Q Clear Time (g_c+I1), s	24.0	14.8	5.0	72.0	43.0	22.0	6.0	64.0
Green Ext Time (p_c), s	0.0	3.9	0.0	0.0	0.0	0.0	0.0	4.9

Intersection Summary		
HCM 2010 Ctrl Delay		135.0
HCM 2010 LOS		F

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	506	9	68	580	3	10	46	63	56	132	66
Future Volume (veh/h)	0	506	9	68	580	3	10	46	63	56	132	66
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1900	1845	1900	1900	1845	1900
Adj Flow Rate, veh/h	0	506	9	68	580	3	10	46	63	56	132	66
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	3	3	3	3	3	3
Cap, veh/h	6	1597	28	580	1621	8	158	179	218	222	244	107
Arrive On Green	0.00	0.46	0.46	0.46	0.46	0.46	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1740	3490	62	865	3541	18	61	717	876	244	982	431
Grp Volume(v), veh/h	0	251	264	68	284	299	119	0	0	254	0	0
Grp Sat Flow(s),veh/h/ln	1740	1736	1816	865	1736	1824	1655	0	0	1657	0	0
Q Serve(g_s), s	0.0	2.5	2.5	1.5	2.9	2.9	0.0	0.0	0.0	1.5	0.0	0.0
Cycle Q Clear(g_c), s	0.0	2.5	2.5	4.0	2.9	2.9	1.6	0.0	0.0	3.6	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.01	0.08		0.53	0.22		0.26
Lane Grp Cap(c), veh/h	6	794	831	580	794	835	555	0	0	573	0	0
V/C Ratio(X)	0.00	0.32	0.32	0.12	0.36	0.36	0.21	0.00	0.00	0.44	0.00	0.00
Avail Cap(c_a), veh/h	511	1910	1998	756	1146	1204	864	0	0	881	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	4.7	4.7	6.0	4.8	4.8	8.3	0.0	0.0	9.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.2	0.1	0.3	0.3	0.2	0.0	0.0	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.2	1.3	0.4	1.4	1.5	0.7	0.0	0.0	1.7	0.0	0.0
LnGrp Delay(d),s/veh	0.0	4.9	4.9	6.0	5.1	5.1	8.5	0.0	0.0	9.5	0.0	0.0
LnGrp LOS		A	A	A	A	A	A			A		
Approach Vol, veh/h		515			651			119			254	
Approach Delay, s/veh		4.9			5.2			8.5			9.5	
Approach LOS		A			A			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		10.8		16.5		10.8	0.0	16.5
Change Period (Y+Rc), s		4.0		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		12.0		30.0		12.0	8.0	18.0
Max Q Clear Time (g_c+I1), s		3.6		4.5		5.6	0.0	6.0
Green Ext Time (p_c), s		1.4		8.0		1.2	0.0	5.6

Intersection Summary	
HCM 2010 Ctrl Delay	6.1
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	853	161	196	828	364	131	430	116	356	520	22
Future Volume (veh/h)	65	853	161	196	828	364	131	430	116	356	520	22
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	65	853	161	196	828	364	131	430	116	356	520	22
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	82	897	169	201	881	386	153	433	368	361	650	553
Arrive On Green	0.05	0.30	0.30	0.11	0.37	0.37	0.09	0.23	0.23	0.21	0.35	0.35
Sat Flow, veh/h	1757	2944	556	1757	2374	1040	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	65	508	506	196	610	582	131	430	116	356	520	22
Grp Sat Flow(s),veh/h/ln	1757	1752	1747	1757	1752	1661	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	5.1	39.7	39.7	15.5	47.0	47.4	10.3	32.5	8.5	28.2	35.5	1.3
Cycle Q Clear(g_c), s	5.1	39.7	39.7	15.5	47.0	47.4	10.3	32.5	8.5	28.2	35.5	1.3
Prop In Lane	1.00		0.32	1.00		0.63	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	82	534	532	201	650	616	153	433	368	361	650	553
V/C Ratio(X)	0.79	0.95	0.95	0.97	0.94	0.94	0.85	0.99	0.32	0.99	0.80	0.04
Avail Cap(c_a), veh/h	83	539	537	201	652	618	178	433	368	361	650	553
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.0	47.6	47.6	61.7	42.4	42.6	62.9	53.4	44.2	55.4	40.8	29.7
Incr Delay (d2), s/veh	35.9	26.5	26.6	55.8	21.2	22.9	25.2	41.5	0.2	43.7	6.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	23.1	23.0	10.6	26.6	25.6	6.1	21.5	3.7	18.0	19.2	0.6
LnGrp Delay(d),s/veh	101.8	74.1	74.1	117.5	63.7	65.5	88.1	94.9	44.4	99.1	47.3	29.7
LnGrp LOS	F	E	E	F	E	E	F	F	D	F	D	C
Approach Vol, veh/h		1079			1388			677			898	
Approach Delay, s/veh		75.8			72.0			84.9			67.4	
Approach LOS		E			E			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.7	56.7	17.7	53.7	21.0	47.4	34.2	37.2
Change Period (Y+Rc), s	* 5.2	4.8	5.5	* 4.4	5.0	* 4.8	5.5	* 4.4
Max Green Setting (Gmax), s	* 6.6	52.0	14.2	* 47	16.0	* 43	28.7	* 33
Max Q Clear Time (g_c+I1), s	7.1	49.4	12.3	37.5	17.5	41.7	30.2	34.5
Green Ext Time (p_c), s	0.0	1.7	0.0	1.9	0.0	1.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	74.2
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	286	2049	114	324	1944	1	229	1489	258	30	1589	212
Future Volume (veh/h)	286	2049	114	324	1944	1	229	1489	258	30	1589	212
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1792	1845	1845	1792	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	286	2049	114	324	1944	1	229	1489	258	30	1589	212
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	6	3	3	6	3	3	3	3	3	3	3
Cap, veh/h	250	1729	554	273	1762	564	182	1557	697	54	1425	638
Arrive On Green	0.07	0.35	0.35	0.08	0.36	0.36	0.05	0.44	0.44	0.02	0.41	0.41
Sat Flow, veh/h	3408	4893	1568	3408	4893	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	286	2049	114	324	1944	1	229	1489	258	30	1589	212
Grp Sat Flow(s),veh/h/ln	1704	1631	1568	1704	1631	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	11.0	53.0	7.6	12.0	54.0	0.1	8.0	61.6	16.4	1.3	61.0	13.9
Cycle Q Clear(g_c), s	11.0	53.0	7.6	12.0	54.0	0.1	8.0	61.6	16.4	1.3	61.0	13.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	250	1729	554	273	1762	564	182	1557	697	54	1425	638
V/C Ratio(X)	1.14	1.19	0.21	1.19	1.10	0.00	1.26	0.96	0.37	0.56	1.11	0.33
Avail Cap(c_a), veh/h	250	1729	554	273	1762	564	182	1557	697	91	1425	638
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.5	48.5	33.8	69.0	48.0	30.7	71.0	40.3	27.7	73.3	44.5	30.5
Incr Delay (d2), s/veh	101.5	89.5	0.2	115.3	55.7	0.0	153.5	13.8	0.3	8.8	61.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	38.2	3.3	10.0	33.4	0.0	7.6	32.8	7.2	0.7	41.8	6.1
LnGrp Delay(d),s/veh	171.0	138.0	34.0	184.3	103.7	30.7	224.5	54.1	28.1	82.1	106.4	30.8
LnGrp LOS	F	F	C	F	F	C	F	D	C	F	F	C
Approach Vol, veh/h		2449			2269			1976			1831	
Approach Delay, s/veh		137.0			115.2			70.5			97.3	
Approach LOS		F			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	70.6	16.0	57.0	12.0	65.0	15.0	58.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	65.0	12.0	53.0	8.0	61.0	11.0	54.0
Max Q Clear Time (g_c+I1), s	3.3	63.6	14.0	55.0	10.0	63.0	13.0	56.0
Green Ext Time (p_c), s	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	107.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	240	805	124	512	971	135	71	1129	660	205	1386	442
Future Volume (veh/h)	240	805	124	512	971	135	71	1129	660	205	1386	442
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1900	1845	1900	1900	1845	1845
Adj Flow Rate, veh/h	240	805	124	512	971	135	71	1129	660	205	1386	442
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	82	467	72	164	618	86	21	337	197	77	522	512
Arrive On Green	0.05	0.15	0.15	0.09	0.20	0.20	0.32	0.32	0.32	0.33	0.33	0.33
Sat Flow, veh/h	1757	3045	469	1757	3092	430	66	1052	615	236	1597	1568
Grp Volume(v), veh/h	240	463	466	512	550	556	1860	0	0	1591	0	442
Grp Sat Flow(s),veh/h/ln	1757	1752	1762	1757	1752	1769	1733	0	0	1833	0	1568
Q Serve(g_s), s	7.0	23.0	23.0	14.0	30.0	30.0	48.0	0.0	0.0	49.0	0.0	39.6
Cycle Q Clear(g_c), s	7.0	23.0	23.0	14.0	30.0	30.0	48.0	0.0	0.0	49.0	0.0	39.6
Prop In Lane	1.00		0.27	1.00		0.24	0.04		0.35	0.13		1.00
Lane Grp Cap(c), veh/h	82	269	270	164	350	354	555	0	0	599	0	512
V/C Ratio(X)	2.93	1.72	1.72	3.12	1.57	1.57	3.35	0.00	0.00	2.66	0.00	0.86
Avail Cap(c_a), veh/h	82	269	270	164	350	354	555	0	0	599	0	512
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	71.5	63.5	63.5	68.0	60.0	60.0	51.0	0.0	0.0	50.5	0.0	47.4
Incr Delay (d2), s/veh	899.5	341.0	341.0	971.0	269.9	270.3	1064.0	0.0	0.0	750.6	0.0	14.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	23.9	36.6	36.8	51.0	40.8	41.2	186.8	0.0	0.0	149.6	0.0	19.2
LnGrp Delay(d),s/veh	971.0	404.5	404.5	1039.0	329.9	330.3	1115.0	0.0	0.0	801.1	0.0	61.5
LnGrp LOS	F	F	F	F	F	F	F			F		E
Approach Vol, veh/h		1169			1618			1860			2033	
Approach Delay, s/veh		520.8			554.4			1115.0			640.3	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		52.0	18.0	27.0		53.0	11.0	34.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		48.0	14.0	23.0		49.0	7.0	30.0
Max Q Clear Time (g_c+I1), s		50.0	16.0	25.0		51.0	9.0	32.0
Green Ext Time (p_c), s		0.0	0.0	0.0		0.0	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		730.8
HCM 2010 LOS		F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1247	0	468	0	657	1700	0	1194	804
Future Volume (veh/h)	0	0	0	1247	0	468	0	657	1700	0	1194	804
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1827	0	1827	0	1827	1827	0	1827	1827
Adj Flow Rate, veh/h				1247	0	468	0	657	0	0	1194	0
Adj No. of Lanes				2	0	2	0	3	1	0	3	1
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				4	0	4	0	4	4	0	4	4
Cap, veh/h				1412	0	1143	0	1807	563	0	1807	563
Arrive On Green				0.42	0.00	0.42	0.00	0.36	0.00	0.00	0.36	0.00
Sat Flow, veh/h				3375	0	2733	0	5152	1553	0	5152	1553
Grp Volume(v), veh/h				1247	0	468	0	657	0	0	1194	0
Grp Sat Flow(s),veh/h/ln				1688	0	1367	0	1663	1553	0	1663	1553
Q Serve(g_s), s				15.1	0.0	5.3	0.0	4.3	0.0	0.0	8.9	0.0
Cycle Q Clear(g_c), s				15.1	0.0	5.3	0.0	4.3	0.0	0.0	8.9	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1412	0	1143	0	1807	563	0	1807	563
V/C Ratio(X)				0.88	0.00	0.41	0.00	0.36	0.00	0.00	0.66	0.00
Avail Cap(c_a), veh/h				2015	0	1632	0	2876	895	0	2696	839
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				11.9	0.0	9.0	0.0	10.4	0.0	0.0	11.8	0.0
Incr Delay (d2), s/veh				2.7	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.5	0.0	2.0	0.0	2.0	0.0	0.0	4.0	0.0
LnGrp Delay(d),s/veh				14.6	0.0	9.1	0.0	10.4	0.0	0.0	12.0	0.0
LnGrp LOS				B		A		B			B	
Approach Vol, veh/h					1715			657			1194	
Approach Delay, s/veh					13.1			10.4			12.0	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		21.1		23.1		21.1		
Change Period (Y+Rc), s		5.1		4.6		* 5.1		
Max Green Setting (Gmax), s		23.9		26.4		* 26		
Max Q Clear Time (g_c+I1), s		10.9		17.1		6.3		
Green Ext Time (p_c), s		5.2		1.4		6.0		

Intersection Summary	
HCM 2010 Ctrl Delay	12.2
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	31	17	472	44	537	48	2143	294	530	2550	59
Future Volume (veh/h)	73	31	17	472	44	537	48	2143	294	530	2550	59
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	73	31	17	472	44	537	48	2143	294	530	2550	59
Adj No. of Lanes	1	1	0	2	1	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	66	42	23	560	303	258	61	2396	746	570	3095	71
Arrive On Green	0.04	0.04	0.04	0.16	0.16	0.16	0.04	0.48	0.48	0.17	0.62	0.62
Sat Flow, veh/h	1757	1121	615	3408	1845	1568	1740	4988	1553	3375	5016	116
Grp Volume(v), veh/h	73	0	48	472	44	537	48	2143	294	530	1686	923
Grp Sat Flow(s),veh/h/ln	1757	0	1736	1704	1845	1568	1740	1663	1553	1688	1663	1807
Q Serve(g_s), s	5.5	0.0	4.0	19.6	3.0	24.0	4.0	57.2	17.7	22.6	57.6	58.4
Cycle Q Clear(g_c), s	5.5	0.0	4.0	19.6	3.0	24.0	4.0	57.2	17.7	22.6	57.6	58.4
Prop In Lane	1.00		0.35	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	66	0	65	560	303	258	61	2396	746	570	2051	1115
V/C Ratio(X)	1.10	0.00	0.73	0.84	0.15	2.08	0.78	0.89	0.39	0.93	0.82	0.83
Avail Cap(c_a), veh/h	66	0	65	560	303	258	126	2503	779	589	2051	1115
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.3	0.0	69.6	59.2	52.2	61.0	69.9	34.6	24.3	59.8	21.7	21.9
Incr Delay (d2), s/veh	141.8	0.0	30.9	10.6	0.1	501.0	7.8	4.3	0.1	20.5	2.6	5.0
Initial Q Delay(d3),s/veh	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.0	2.5	10.1	1.5	46.2	2.1	27.1	7.6	12.2	27.0	30.5
LnGrp Delay(d),s/veh	213.0	0.0	100.4	69.8	52.3	562.0	77.7	38.8	24.4	80.4	24.4	26.9
LnGrp LOS	F		F	E	D	F	E	D	C	F	C	C
Approach Vol, veh/h		121			1053			2485			3139	
Approach Delay, s/veh		168.4			320.1			37.9			34.6	
Approach LOS		F			F			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.2	95.3		11.0	30.2	75.4		29.5
Change Period (Y+Rc), s	* 5.1	* 5.2		5.5	5.5	* 5.2		5.5
Max Green Setting (Gmax), s	* 11	* 89		5.5	25.5	* 73		24.0
Max Q Clear Time (g_c+I1), s	6.0	60.4		7.5	24.6	59.2		26.0
Green Ext Time (p_c), s	0.0	23.1		0.0	0.1	11.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	82.4
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

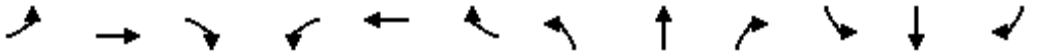
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	1261	464	577	1079	740	495	1079	154	825	1824	181
Future Volume (veh/h)	184	1261	464	577	1079	740	495	1079	154	825	1824	181
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	184	1261	464	577	1079	740	495	1079	154	825	1824	181
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	208	1064	476	419	1280	573	370	1245	388	594	1576	491
Arrive On Green	0.06	0.30	0.30	0.12	0.37	0.37	0.11	0.25	0.25	0.18	0.32	0.32
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	184	1261	464	577	1079	740	495	1079	154	825	1824	181
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	8.1	45.7	44.1	18.5	42.5	55.0	16.5	31.2	12.4	26.5	47.6	13.6
Cycle Q Clear(g_c), s	8.1	45.7	44.1	18.5	42.5	55.0	16.5	31.2	12.4	26.5	47.6	13.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	208	1064	476	419	1280	573	370	1245	388	594	1576	491
V/C Ratio(X)	0.88	1.19	0.98	1.38	0.84	1.29	1.34	0.87	0.40	1.39	1.16	0.37
Avail Cap(c_a), veh/h	208	1064	476	419	1280	573	370	1245	388	594	1576	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.2	52.5	51.9	66.1	43.8	47.8	67.1	54.1	47.1	62.1	51.5	39.9
Incr Delay (d2), s/veh	32.0	93.2	34.6	184.6	5.0	144.2	169.6	6.4	0.2	185.3	78.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	35.8	23.6	19.4	21.4	46.7	16.4	15.1	5.4	27.6	33.2	5.9
LnGrp Delay(d),s/veh	102.2	145.7	86.5	250.7	48.9	192.0	236.7	60.5	47.3	247.3	129.8	40.0
LnGrp LOS	F	F	F	F	D	F	F	E	D	F	F	D
Approach Vol, veh/h		1909			2396			1728			2830	
Approach Delay, s/veh		127.1			141.7			109.8			158.3	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	53.2	14.7	60.7	32.0	43.2	24.0	51.4
Change Period (Y+Rc), s	5.5	* 5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	16.5	* 48	9.2	* 55	26.5	* 37	18.5	* 45
Max Q Clear Time (g_c+I1), s	18.5	49.6	10.1	57.0	28.5	33.2	20.5	47.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	137.6
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	2208	58	290	1548	492	476	1059	118	521	2559	161
Future Volume (veh/h)	260	2208	58	290	1548	492	476	1059	118	521	2559	161
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1845	1845	1792	1792	1845	1845	1845	1827	1845	1827
Adj Flow Rate, veh/h	260	2208	58	290	1548	492	476	1059	118	521	2559	0
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	3	3	6	6	3	3	3	4	3	4
Cap, veh/h	297	1655	530	231	1564	487	331	1466	456	563	1804	556
Arrive On Green	0.09	0.34	0.34	0.07	0.32	0.32	0.10	0.29	0.29	0.17	0.36	0.00
Sat Flow, veh/h	3312	4893	1568	3408	4893	1524	3408	5036	1568	3375	5036	1553
Grp Volume(v), veh/h	260	2208	58	290	1548	492	476	1059	118	521	2559	0
Grp Sat Flow(s),veh/h/ln	1656	1631	1568	1704	1631	1524	1704	1679	1568	1688	1679	1553
Q Serve(g_s), s	11.7	50.9	3.8	10.2	47.4	48.1	14.6	28.4	8.7	22.9	53.9	0.0
Cycle Q Clear(g_c), s	11.7	50.9	3.8	10.2	47.4	48.1	14.6	28.4	8.7	22.9	53.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	297	1655	530	231	1564	487	331	1466	456	563	1804	556
V/C Ratio(X)	0.88	1.33	0.11	1.26	0.99	1.01	1.44	0.72	0.26	0.93	1.42	0.00
Avail Cap(c_a), veh/h	297	1655	530	231	1564	487	331	1466	456	628	1804	556
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	67.7	49.8	34.2	70.2	51.0	51.2	67.9	47.9	40.9	61.8	48.3	0.0
Incr Delay (d2), s/veh	23.2	154.6	0.0	145.3	20.3	43.4	214.3	1.8	0.3	17.9	191.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	46.5	1.7	9.4	24.3	26.1	16.7	13.4	3.8	12.1	56.9	0.0
LnGrp Delay(d),s/veh	90.8	204.4	34.3	215.4	71.2	94.6	282.3	49.7	41.2	79.7	240.1	0.0
LnGrp LOS	F	F	C	F	E	F	F	D	D	E	F	
Approach Vol, veh/h		2526			2330			1653			3080	
Approach Delay, s/veh		188.8			94.1			116.0			213.0	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	59.0	17.8	53.7	30.1	48.9	15.0	56.5
Change Period (Y+Rc), s	* 5.4	5.1	* 4.3	5.6	5.0	5.1	* 4.8	* 5.6
Max Green Setting (Gmax), s	* 15	53.9	* 14	47.6	28.0	40.9	* 10	* 51
Max Q Clear Time (g_c+I1), s	16.6	55.9	13.7	50.1	24.9	30.4	12.2	52.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.2	9.5	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	161.0
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	990	322	121	782	54	118	1246	458	17	2647	150
Future Volume (veh/h)	46	990	322	121	782	54	118	1246	458	17	2647	150
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	46	990	322	121	782	54	118	1246	458	17	2647	150
Adj No. of Lanes	2	1	0	2	2	1	1	3	0	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	78	585	190	80	1539	689	76	1405	515	35	1779	554
Arrive On Green	0.02	0.44	0.44	0.02	0.44	0.44	0.04	0.39	0.39	0.01	0.35	0.35
Sat Flow, veh/h	3408	1334	434	3408	3505	1568	1757	3635	1332	3408	5036	1568
Grp Volume(v), veh/h	46	0	1312	121	782	54	118	1150	554	17	2647	150
Grp Sat Flow(s),veh/h/ln	1704	0	1768	1704	1752	1568	1757	1679	1610	1704	1679	1568
Q Serve(g_s), s	2.0	0.0	65.8	3.5	24.2	3.0	6.5	48.0	48.2	0.7	53.0	10.3
Cycle Q Clear(g_c), s	2.0	0.0	65.8	3.5	24.2	3.0	6.5	48.0	48.2	0.7	53.0	10.3
Prop In Lane	1.00		0.25	1.00		1.00	1.00		0.83	1.00		1.00
Lane Grp Cap(c), veh/h	78	0	776	80	1539	689	76	1298	622	35	1779	554
V/C Ratio(X)	0.59	0.00	1.69	1.52	0.51	0.08	1.55	0.89	0.89	0.49	1.49	0.27
Avail Cap(c_a), veh/h	123	0	776	80	1539	689	76	1298	622	68	1779	554
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.6	0.0	42.1	73.2	30.4	24.4	71.8	42.9	43.0	73.9	48.5	34.7
Incr Delay (d2), s/veh	7.0	0.0	316.8	288.4	0.3	0.0	302.1	7.7	14.9	10.4	222.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	100.4	4.8	11.8	1.3	9.5	23.6	23.9	0.4	61.2	4.5
LnGrp Delay(d),s/veh	79.6	0.0	358.9	361.7	30.6	24.5	373.8	50.7	57.9	84.2	271.0	34.8
LnGrp LOS	E		F	F	C	C	F	D	E	F	F	C
Approach Vol, veh/h		1358			957			1822			2814	
Approach Delay, s/veh		349.4			72.1			73.8			257.3	
Approach LOS		F			E			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	58.0	9.0	71.0	7.0	63.0	8.9	71.1
Change Period (Y+Rc), s	5.5	5.0	5.5	* 5.2	5.5	5.0	5.5	* 5.2
Max Green Setting (Gmax), s	6.5	53.0	3.5	* 66	3.0	56.5	5.4	* 64
Max Q Clear Time (g_c+I1), s	8.5	55.0	5.5	67.8	2.7	50.2	4.0	26.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	6.1	0.0	28.2

Intersection Summary	
HCM 2010 Ctrl Delay	201.7
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

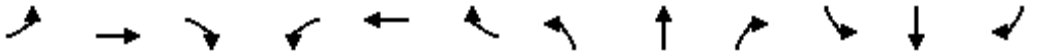
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	372	863	364	95	966	107	228	1076	100	201	2253	584
Future Volume (veh/h)	372	863	364	95	966	107	228	1076	100	201	2253	584
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1832	1900	1845	1798	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	372	863	364	95	966	107	228	1076	100	201	2253	584
Adj No. of Lanes	2	2	0	2	2	0	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	4	4	3	6	6	3	3	3	3	3	3
Cap, veh/h	352	802	337	118	827	92	216	2097	653	249	2145	668
Arrive On Green	0.10	0.34	0.34	0.03	0.27	0.27	0.06	0.42	0.42	0.07	0.43	0.43
Sat Flow, veh/h	3408	2392	1004	3408	3101	343	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	372	627	600	95	532	541	228	1076	100	201	2253	584
Grp Sat Flow(s),veh/h/ln	1704	1741	1655	1704	1708	1737	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	15.5	50.3	50.3	4.2	40.0	40.0	9.5	23.8	6.0	8.7	63.9	51.1
Cycle Q Clear(g_c), s	15.5	50.3	50.3	4.2	40.0	40.0	9.5	23.8	6.0	8.7	63.9	51.1
Prop In Lane	1.00		0.61	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	352	584	555	118	455	463	216	2097	653	249	2145	668
V/C Ratio(X)	1.06	1.07	1.08	0.80	1.17	1.17	1.06	0.51	0.15	0.81	1.05	0.87
Avail Cap(c_a), veh/h	352	584	555	118	455	463	216	2097	653	332	2145	668
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.3	49.8	49.9	71.9	55.0	55.0	70.3	32.5	27.3	68.5	43.1	39.4
Incr Delay (d2), s/veh	63.5	58.7	62.0	31.8	97.0	96.9	76.9	0.2	0.1	10.4	34.2	12.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.4	33.7	32.5	2.5	31.1	31.6	6.8	11.1	2.6	4.5	36.4	24.4
LnGrp Delay(d),s/veh	130.8	108.6	111.9	103.7	152.0	151.9	147.1	32.7	27.4	78.9	77.2	51.7
LnGrp LOS	F	F	F	F	F	F	F	C	C	E	F	D
Approach Vol, veh/h		1599			1168			1404			3038	
Approach Delay, s/veh		115.0			148.0			50.9			72.4	
Approach LOS		F			F			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.4	67.6	21.0	45.0	15.0	69.0	10.7	55.3
Change Period (Y+Rc), s	5.5	* 5.1	5.5	* 5	5.5	* 5.1	5.5	* 5
Max Green Setting (Gmax), s	14.6	* 59	15.5	* 40	9.5	* 64	5.2	* 50
Max Q Clear Time (g_c+I1), s	10.7	25.8	17.5	42.0	11.5	65.9	6.2	52.3
Green Ext Time (p_c), s	0.2	31.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	89.9
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



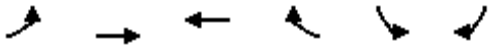
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	276	408	167	409	447	207	46	1147	112	437	2031	378
Future Volume (veh/h)	276	408	167	409	447	207	46	1147	112	437	2031	378
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1845	1827	1845	1845	1845
Adj Flow Rate, veh/h	276	408	167	409	447	207	46	1147	112	437	2031	378
Adj No. of Lanes	2	2	1	1	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	3	4	3	3	3
Cap, veh/h	334	507	227	429	1020	456	76	1564	482	483	2156	671
Arrive On Green	0.10	0.14	0.14	0.24	0.29	0.29	0.02	0.31	0.31	0.14	0.43	0.43
Sat Flow, veh/h	3408	3505	1568	1757	3505	1568	3375	5036	1553	3408	5036	1568
Grp Volume(v), veh/h	276	408	167	409	447	207	46	1147	112	437	2031	378
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1757	1752	1568	1688	1679	1553	1704	1679	1568
Q Serve(g_s), s	10.6	15.0	13.6	30.5	13.8	14.3	1.8	27.0	7.1	16.8	51.4	24.1
Cycle Q Clear(g_c), s	10.6	15.0	13.6	30.5	13.8	14.3	1.8	27.0	7.1	16.8	51.4	24.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	334	507	227	429	1020	456	76	1564	482	483	2156	671
V/C Ratio(X)	0.83	0.80	0.74	0.95	0.44	0.45	0.60	0.73	0.23	0.91	0.94	0.56
Avail Cap(c_a), veh/h	472	817	366	430	1197	536	76	1564	482	503	2167	675
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.8	55.0	54.4	49.5	38.3	38.5	64.4	40.9	34.0	56.2	36.4	28.6
Incr Delay (d2), s/veh	8.1	1.2	1.7	31.2	0.1	0.3	9.3	1.8	0.2	18.8	9.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	7.3	6.0	18.5	6.7	6.3	0.9	12.8	3.1	9.1	25.5	10.6
LnGrp Delay(d),s/veh	66.9	56.2	56.2	80.7	38.4	38.8	73.6	42.7	34.3	74.9	45.5	29.7
LnGrp LOS	E	E	E	F	D	D	E	D	C	E	D	C
Approach Vol, veh/h		851			1063			1305			2846	
Approach Delay, s/veh		59.6			54.7			43.1			47.9	
Approach LOS		E			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.9	46.4	18.5	44.1	8.3	62.0	38.0	24.6
Change Period (Y+Rc), s	* 5.1	5.1	5.5	* 5.4	* 5.3	5.1	5.5	* 5.4
Max Green Setting (Gmax), s	* 20	40.8	18.4	* 45	* 3	57.2	32.5	* 31
Max Q Clear Time (g_c+I1), s	18.8	29.0	12.6	16.3	3.8	53.4	32.5	17.0
Green Ext Time (p_c), s	0.0	11.4	0.5	2.4	0.0	3.5	0.0	2.3

Intersection Summary	
HCM 2010 Ctrl Delay	49.7
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	141	2274	1641	657	777	316
Future Volume (veh/h)	141	2274	1641	657	777	316
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845
Adj Flow Rate, veh/h	141	2274	1641	657	777	316
Adj No. of Lanes	1	3	3	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	132	2644	1493	573	717	640
Arrive On Green	0.08	0.52	0.42	0.42	0.41	0.41
Sat Flow, veh/h	1757	5202	3749	1376	1757	1568
Grp Volume(v), veh/h	141	2274	1533	765	777	316
Grp Sat Flow(s),veh/h/ln	1757	1679	1679	1602	1757	1568
Q Serve(g_s), s	9.0	46.9	50.0	50.0	49.0	17.9
Cycle Q Clear(g_c), s	9.0	46.9	50.0	50.0	49.0	17.9
Prop In Lane	1.00			0.86	1.00	1.00
Lane Grp Cap(c), veh/h	132	2644	1399	667	717	640
V/C Ratio(X)	1.07	0.86	1.10	1.15	1.08	0.49
Avail Cap(c_a), veh/h	132	2644	1399	667	717	640
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.5	24.7	35.0	35.0	35.5	26.3
Incr Delay (d2), s/veh	98.4	3.1	54.8	82.5	58.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	22.4	33.8	37.4	35.3	16.8
LnGrp Delay(d),s/veh	153.9	27.8	89.8	117.5	93.9	26.9
LnGrp LOS	F	C	F	F	F	C
Approach Vol, veh/h		2415	2298		1093	
Approach Delay, s/veh		35.2	99.0		74.5	
Approach LOS		D	F		E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				67.0		53.0	13.0	54.0
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				63.0		49.0	9.0	50.0
Max Q Clear Time (g_c+I1), s				48.9		51.0	11.0	52.0
Green Ext Time (p_c), s				14.0		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	67.8
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1409	47	57	1016	0	19	0	135	0	148	0
Future Volume (veh/h)	0	1409	47	57	1016	0	19	0	135	0	148	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	0	1409	47	57	1016	0	19	0	135	0	148	0
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	4	1675	56	69	2125	0	25	420	357	4	241	205
Arrive On Green	0.00	0.48	0.48	0.04	0.61	0.00	0.01	0.00	0.23	0.00	0.13	0.00
Sat Flow, veh/h	1757	3461	115	1757	3597	0	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	0	712	744	57	1016	0	19	0	135	0	148	0
Grp Sat Flow(s),veh/h/ln	1757	1752	1824	1757	1752	0	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	0.0	17.0	17.1	1.6	7.7	0.0	0.5	0.0	3.5	0.0	3.7	0.0
Cycle Q Clear(g_c), s	0.0	17.0	17.1	1.6	7.7	0.0	0.5	0.0	3.5	0.0	3.7	0.0
Prop In Lane	1.00		0.06	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	4	848	883	69	2125	0	25	420	357	4	241	205
V/C Ratio(X)	0.00	0.84	0.84	0.82	0.48	0.00	0.77	0.00	0.38	0.00	0.61	0.00
Avail Cap(c_a), veh/h	109	945	984	109	2125	0	109	498	423	73	459	390
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	10.8	10.8	23.0	5.3	0.0	23.7	0.0	15.7	0.0	19.8	0.0
Incr Delay (d2), s/veh	0.0	6.3	6.2	23.5	0.2	0.0	39.1	0.0	0.7	0.0	2.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	9.6	10.0	1.2	3.7	0.0	0.5	0.0	1.6	0.0	2.0	0.0
LnGrp Delay(d),s/veh	0.0	17.1	17.0	46.5	5.4	0.0	62.8	0.0	16.4	0.0	22.3	0.0
LnGrp LOS		B	B	D	A		E		B		C	
Approach Vol, veh/h		1456			1073			154			148	
Approach Delay, s/veh		17.0			7.6			22.1			22.3	
Approach LOS		B			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	15.0	5.9	27.3	4.7	10.3	0.0	33.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	2.0	13.0	3.0	26.0	3.0	12.0	3.0	26.0
Max Q Clear Time (g_c+I1), s	0.0	5.5	3.6	19.1	2.5	5.7	0.0	9.7
Green Ext Time (p_c), s	0.0	0.7	0.0	4.2	0.0	0.6	0.0	13.7

Intersection Summary	
HCM 2010 Ctrl Delay	14.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	283	1805	98	956	1148	361	89	625	769	411	838	82
Future Volume (veh/h)	283	1805	98	956	1148	361	89	625	769	411	838	82
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1792	1845	1845	1792	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	283	1805	98	956	1148	361	89	625	769	411	838	82
Adj No. of Lanes	2	3	1	2	3	1	1	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	6	3	3	6	3	3	3	3	3	3	3
Cap, veh/h	326	1259	403	477	1476	473	109	317	389	204	1464	655
Arrive On Green	0.10	0.26	0.26	0.14	0.30	0.30	0.06	0.42	0.42	0.06	0.42	0.42
Sat Flow, veh/h	3408	4893	1568	3408	4893	1568	1757	754	927	3408	3505	1568
Grp Volume(v), veh/h	283	1805	98	956	1148	361	89	0	1394	411	838	82
Grp Sat Flow(s),veh/h/ln	1704	1631	1568	1704	1631	1568	1757	0	1681	1704	1752	1568
Q Serve(g_s), s	12.3	38.6	7.4	21.0	32.1	31.3	7.5	0.0	63.0	9.0	27.4	4.8
Cycle Q Clear(g_c), s	12.3	38.6	7.4	21.0	32.1	31.3	7.5	0.0	63.0	9.0	27.4	4.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.55	1.00		1.00
Lane Grp Cap(c), veh/h	326	1259	403	477	1476	473	109	0	706	204	1464	655
V/C Ratio(X)	0.87	1.43	0.24	2.00	0.78	0.76	0.81	0.00	1.97	2.01	0.57	0.13
Avail Cap(c_a), veh/h	341	1259	403	477	1476	473	164	0	706	204	1464	655
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.9	55.7	44.1	64.5	47.8	47.5	69.5	0.0	43.5	70.5	33.4	26.8
Incr Delay (d2), s/veh	19.9	199.7	0.4	459.0	2.9	7.7	17.0	0.0	443.6	471.3	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	40.7	3.3	40.3	14.8	14.6	4.2	0.0	116.2	17.6	13.4	2.1
LnGrp Delay(d),s/veh	86.7	255.4	44.6	523.5	50.7	55.2	86.4	0.0	487.1	541.8	34.0	26.9
LnGrp LOS	F	F	D	F	D	E	F		F	F	C	C
Approach Vol, veh/h		2186			2465			1483			1331	
Approach Delay, s/veh		224.1			234.7			463.1			190.3	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	45.0	13.3	66.7	18.4	51.6	13.0	67.0
Change Period (Y+Rc), s	4.0	6.4	4.0	4.0	4.0	6.4	4.0	4.0
Max Green Setting (Gmax), s	21.0	38.6	14.0	58.0	15.0	44.6	9.0	63.0
Max Q Clear Time (g_c+I1), s	23.0	40.6	9.5	29.4	14.3	34.1	11.0	65.0
Green Ext Time (p_c), s	0.0	0.0	0.1	24.5	0.1	10.3	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	269.1
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	577	37	168	638	12	39	299	157	2	657	123
Future Volume (veh/h)	9	577	37	168	638	12	39	299	157	2	657	123
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1759	1759	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	9	577	37	168	638	12	39	299	157	2	657	123
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	8	8	8	3	3	3	3	3	3
Cap, veh/h	48	579	37	166	720	14	64	470	247	50	611	114
Arrive On Green	0.03	0.35	0.35	0.10	0.42	0.42	0.04	0.41	0.41	0.03	0.40	0.40
Sat Flow, veh/h	1707	1667	107	1675	1721	32	1757	1140	599	1757	1512	283
Grp Volume(v), veh/h	9	0	614	168	0	650	39	0	456	2	0	780
Grp Sat Flow(s),veh/h/ln	1707	0	1774	1675	0	1754	1757	0	1739	1757	0	1795
Q Serve(g_s), s	0.7	0.0	48.8	14.0	0.0	48.4	3.1	0.0	29.5	0.2	0.0	57.0
Cycle Q Clear(g_c), s	0.7	0.0	48.8	14.0	0.0	48.4	3.1	0.0	29.5	0.2	0.0	57.0
Prop In Lane	1.00		0.06	1.00		0.02	1.00		0.34	1.00		0.16
Lane Grp Cap(c), veh/h	48	0	616	166	0	733	64	0	716	50	0	725
V/C Ratio(X)	0.19	0.00	1.00	1.01	0.00	0.89	0.61	0.00	0.64	0.04	0.00	1.08
Avail Cap(c_a), veh/h	169	0	616	166	0	733	174	0	716	174	0	725
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	67.0	0.0	46.0	63.6	0.0	38.0	67.0	0.0	33.1	66.7	0.0	42.1
Incr Delay (d2), s/veh	1.8	0.0	35.5	72.6	0.0	12.6	9.1	0.0	1.9	0.3	0.0	55.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	29.9	9.8	0.0	26.0	1.7	0.0	14.6	0.1	0.0	39.4
LnGrp Delay(d),s/veh	68.8	0.0	81.5	136.3	0.0	50.6	76.2	0.0	35.0	67.0	0.0	97.8
LnGrp LOS	E		F	F		D	E		C	E		F
Approach Vol, veh/h		623			818			495			782	
Approach Delay, s/veh		81.3			68.2			38.2			97.7	
Approach LOS		F			E			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	62.1	18.0	53.0	9.1	61.0	8.0	63.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	14.0	57.0	14.0	49.0	14.0	57.0	14.0	49.0
Max Q Clear Time (g_c+I1), s	2.2	31.5	16.0	50.8	5.1	59.0	2.7	50.4
Green Ext Time (p_c), s	0.0	10.2	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	74.2
HCM 2010 LOS	E

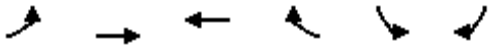
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1059	44	925	27	77	110	645	2110	17	146	1045	974
Future Volume (veh/h)	1059	44	925	27	77	110	645	2110	17	146	1045	974
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1900	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	1090	0	925	27	77	110	645	2110	17	146	1045	0
Adj No. of Lanes	2	0	1	0	1	1	1	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	982	0	438	22	62	72	427	2249	18	111	1279	398
Arrive On Green	0.28	0.00	0.28	0.05	0.05	0.05	0.25	0.44	0.44	0.06	0.26	0.00
Sat Flow, veh/h	3480	0	1553	473	1348	1568	1740	5104	41	1740	4988	1553
Grp Volume(v), veh/h	1090	0	925	104	0	110	645	1374	753	146	1045	0
Grp Sat Flow(s),veh/h/ln	1740	0	1553	1821	0	1568	1740	1663	1820	1740	1663	1553
Q Serve(g_s), s	33.7	0.0	33.7	5.5	0.0	5.5	29.3	47.1	47.1	7.6	23.5	0.0
Cycle Q Clear(g_c), s	33.7	0.0	33.7	5.5	0.0	5.5	29.3	47.1	47.1	7.6	23.5	0.0
Prop In Lane	1.00		1.00	0.26		1.00	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	982	0	438	84	0	72	427	1465	802	111	1279	398
V/C Ratio(X)	1.11	0.00	2.11	1.24	0.00	1.52	1.51	0.94	0.94	1.32	0.82	0.00
Avail Cap(c_a), veh/h	982	0	438	84	0	72	427	1487	814	111	1303	406
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	42.9	0.0	42.9	57.0	0.0	57.0	45.1	31.8	31.9	55.9	41.8	0.0
Incr Delay (d2), s/veh	63.9	0.0	507.6	176.1	0.0	293.7	241.8	11.4	18.0	193.3	3.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.8	0.0	76.2	6.9	0.0	8.3	42.7	23.9	27.6	9.6	11.3	0.0
LnGrp Delay(d),s/veh	106.7	0.0	550.5	233.0	0.0	350.7	286.9	43.2	49.8	249.2	45.6	0.0
LnGrp LOS	F		F	F		F	F	D	D	F	D	
Approach Vol, veh/h		2015			214			2772			1191	
Approach Delay, s/veh		310.4			293.5			101.7			70.5	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	34.0	35.4		11.0	12.0	57.4		39.0
Change Period (Y+Rc), s	* 4.7	4.8		5.5	* 4.4	* 4.8		5.3
Max Green Setting (Gmax), s	* 29	31.2		5.5	* 7.6	* 53		33.7
Max Q Clear Time (g_c+I1), s	31.3	25.5		7.5	9.6	49.1		35.7
Green Ext Time (p_c), s	0.0	4.5		0.0	0.0	3.5		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		170.3
HCM 2010 LOS		F

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	28	1254	1204	269	661	254
Future Volume (veh/h)	28	1254	1204	269	661	254
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845
Adj Flow Rate, veh/h	28	1254	1204	269	661	254
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	56	1895	1360	301	694	620
Arrive On Green	0.03	0.54	0.48	0.48	0.40	0.40
Sat Flow, veh/h	1757	3597	2946	631	1757	1568
Grp Volume(v), veh/h	28	1254	735	738	661	254
Grp Sat Flow(s),veh/h/ln	1757	1752	1752	1733	1757	1568
Q Serve(g_s), s	2.0	31.9	47.1	48.5	45.5	14.6
Cycle Q Clear(g_c), s	2.0	31.9	47.1	48.5	45.5	14.6
Prop In Lane	1.00			0.36	1.00	1.00
Lane Grp Cap(c), veh/h	56	1895	835	826	694	620
V/C Ratio(X)	0.50	0.66	0.88	0.89	0.95	0.41
Avail Cap(c_a), veh/h	225	2220	835	826	747	666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.4	20.5	29.4	29.8	36.6	27.2
Incr Delay (d2), s/veh	6.6	0.6	10.7	12.2	21.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	15.5	25.1	26.0	26.1	14.1
LnGrp Delay(d),s/veh	66.0	21.1	40.1	42.0	57.8	27.7
LnGrp LOS	E	C	D	D	E	C
Approach Vol, veh/h		1282	1473		915	
Approach Delay, s/veh		22.1	41.1		49.4	
Approach LOS		C	D		D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		71.4		53.3	8.0	63.4		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		79.0		53.0	16.0	59.0		
Max Q Clear Time (g_c+I1), s		33.9		47.5	4.0	50.5		
Green Ext Time (p_c), s		33.5		1.8	0.0	7.9		

Intersection Summary	
HCM 2010 Ctrl Delay	36.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	521	376	31	107	300	760	56	2176	59	876	1674	466
Future Volume (veh/h)	521	376	31	107	300	760	56	2176	59	876	1674	466
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	521	376	31	107	300	760	56	2176	59	876	1674	466
Adj No. of Lanes	2	3	0	2	1	2	2	3	0	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	374	1263	103	151	368	1198	91	1816	49	623	2599	809
Arrive On Green	0.11	0.27	0.27	0.04	0.20	0.20	0.03	0.36	0.36	0.18	0.52	0.52
Sat Flow, veh/h	3408	4748	386	3514	1845	3136	3408	5042	136	3408	5036	1568
Grp Volume(v), veh/h	521	264	143	107	300	760	56	1447	788	876	1674	466
Grp Sat Flow(s),veh/h/ln	1704	1679	1777	1757	1845	1568	1704	1679	1821	1704	1679	1568
Q Serve(g_s), s	16.5	9.4	9.6	4.5	23.4	29.7	2.4	54.2	54.2	27.5	36.3	30.8
Cycle Q Clear(g_c), s	16.5	9.4	9.6	4.5	23.4	29.7	2.4	54.2	54.2	27.5	36.3	30.8
Prop In Lane	1.00		0.22	1.00		1.00	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	374	893	473	151	368	1198	91	1209	656	623	2599	809
V/C Ratio(X)	1.39	0.30	0.30	0.71	0.82	0.63	0.61	1.20	1.20	1.41	0.64	0.58
Avail Cap(c_a), veh/h	374	893	473	212	368	1198	134	1209	656	623	2599	809
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.0	44.0	44.1	71.1	57.6	37.9	72.5	48.2	48.2	61.5	26.4	25.1
Incr Delay (d2), s/veh	193.1	0.1	0.1	2.5	12.5	0.8	2.5	96.9	104.8	192.5	0.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.8	4.4	4.8	2.3	13.2	13.0	1.2	41.3	46.2	29.5	16.8	13.5
LnGrp Delay(d),s/veh	260.1	44.1	44.2	73.6	70.1	38.8	75.0	145.1	153.0	254.0	26.8	25.7
LnGrp LOS	F	D	D	E	E	D	E	F	F	F	C	C
Approach Vol, veh/h		928			1167			2291			3016	
Approach Delay, s/veh		165.4			50.0			146.1			92.6	
Approach LOS		F			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	83.3	22.0	35.7	33.0	59.8	12.0	45.7
Change Period (Y+Rc), s	5.5	5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	5.9	75.5	16.5	* 30	27.5	* 54	9.1	* 37
Max Q Clear Time (g_c+I1), s	4.4	38.3	18.5	31.7	29.5	56.2	6.5	11.6
Green Ext Time (p_c), s	0.0	22.3	0.0	0.0	0.0	0.0	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	111.6
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	311	103	44	69	49	159	17	1678	31	71	1666	51
Future Volume (veh/h)	311	103	44	69	49	159	17	1678	31	71	1666	51
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	229	218	44	59	63	159	17	1678	31	71	1666	51
Adj No. of Lanes	1	1	0	1	1	1	1	3	0	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	301	255	52	218	229	195	20	2072	38	110	2288	70
Arrive On Green	0.17	0.17	0.17	0.12	0.12	0.12	0.01	0.41	0.41	0.06	0.46	0.46
Sat Flow, veh/h	1757	1491	301	1757	1845	1568	1757	5091	94	1757	5021	154
Grp Volume(v), veh/h	229	0	262	59	63	159	17	1106	603	71	1114	603
Grp Sat Flow(s),veh/h/ln	1757	0	1792	1757	1845	1568	1757	1679	1828	1757	1679	1818
Q Serve(g_s), s	10.8	0.0	12.3	2.6	2.7	8.6	0.8	25.3	25.3	3.4	23.5	23.5
Cycle Q Clear(g_c), s	10.8	0.0	12.3	2.6	2.7	8.6	0.8	25.3	25.3	3.4	23.5	23.5
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.05	1.00		0.08
Lane Grp Cap(c), veh/h	301	0	307	218	229	195	20	1366	744	110	1530	828
V/C Ratio(X)	0.76	0.00	0.85	0.27	0.28	0.82	0.83	0.81	0.81	0.65	0.73	0.73
Avail Cap(c_a), veh/h	569	0	580	549	576	490	65	1493	813	117	1586	859
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.3	0.0	34.9	34.4	34.5	37.0	42.8	22.8	22.8	39.7	19.2	19.2
Incr Delay (d2), s/veh	1.5	0.0	2.6	0.2	0.2	3.2	26.1	2.8	5.1	7.8	1.4	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.0	6.3	1.3	1.4	3.9	0.5	12.2	13.8	1.9	11.1	12.3
LnGrp Delay(d),s/veh	35.8	0.0	37.5	34.7	34.7	40.2	68.9	25.6	27.9	47.5	20.7	21.8
LnGrp LOS	D		D	C	C	D	E	C	C	D	C	C
Approach Vol, veh/h		491			281			1726			1788	
Approach Delay, s/veh		36.7			37.8			26.8			22.1	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.8	44.3		16.3	10.0	40.1		20.4
Change Period (Y+Rc), s	* 4.8	4.8		5.5	* 4.6	4.8		5.5
Max Green Setting (Gmax), s	* 3.2	41.0		27.1	* 5.8	38.6		28.1
Max Q Clear Time (g_c+I1), s	2.8	25.5		10.6	5.4	27.3		14.3
Green Ext Time (p_c), s	0.0	10.0		0.2	0.0	8.0		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	26.7
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	1491	529	262	1266	290	535	1243	144	487	1212	62
Future Volume (veh/h)	83	1491	529	262	1266	290	535	1243	144	487	1212	62
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	83	1491	529	262	1266	290	535	1243	144	487	1212	62
Adj No. of Lanes	2	3	0	2	3	1	2	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	124	1357	474	266	2063	642	520	1309	408	493	1236	63
Arrive On Green	0.04	0.37	0.37	0.08	0.41	0.41	0.15	0.26	0.26	0.14	0.25	0.25
Sat Flow, veh/h	3408	3688	1287	3408	5036	1568	3408	5036	1568	3408	4907	251
Grp Volume(v), veh/h	83	1355	665	262	1266	290	535	1243	144	487	829	445
Grp Sat Flow(s),veh/h/ln	1704	1679	1618	1704	1679	1568	1704	1679	1568	1704	1679	1800
Q Serve(g_s), s	3.6	55.2	55.2	11.5	29.7	20.1	22.9	36.4	11.2	21.4	36.8	36.8
Cycle Q Clear(g_c), s	3.6	55.2	55.2	11.5	29.7	20.1	22.9	36.4	11.2	21.4	36.8	36.8
Prop In Lane	1.00		0.80	1.00		1.00	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	124	1235	595	266	2063	642	520	1309	408	493	846	454
V/C Ratio(X)	0.67	1.10	1.12	0.99	0.61	0.45	1.03	0.95	0.35	0.99	0.98	0.98
Avail Cap(c_a), veh/h	170	1235	595	266	2063	642	520	1309	408	493	846	454
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.4	47.4	47.4	69.1	34.9	32.1	63.5	54.5	45.2	64.0	55.7	55.7
Incr Delay (d2), s/veh	2.3	56.3	73.4	50.9	0.4	0.2	46.9	14.3	0.2	37.2	25.9	36.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	35.2	36.8	7.3	13.9	8.7	14.2	18.7	4.9	12.6	20.1	22.9
LnGrp Delay(d),s/veh	73.7	103.7	120.8	120.0	35.3	32.2	110.4	68.9	45.4	101.2	81.6	92.6
LnGrp LOS	E	F	F	F	D	C	F	E	D	F	F	F
Approach Vol, veh/h		2103			1818			1922			1761	
Approach Delay, s/veh		107.9			47.0			78.7			89.8	
Approach LOS		F			D			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.4	43.4	10.9	67.3	27.2	44.6	17.2	61.0
Change Period (Y+Rc), s	5.5	* 5.6	5.5	5.8	5.5	* 5.6	5.5	5.8
Max Green Setting (Gmax), s	22.9	* 38	7.5	59.4	21.7	* 39	11.7	55.2
Max Q Clear Time (g_c+I1), s	24.9	38.8	5.6	31.7	23.4	38.4	13.5	57.2
Green Ext Time (p_c), s	0.0	0.0	0.0	14.9	0.0	0.5	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	81.8
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	1594	135	456	1143	436	80	503	412	624	692	266
Future Volume (veh/h)	159	1594	135	456	1143	436	80	503	412	624	692	266
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	159	1594	135	456	1143	436	80	503	412	624	692	266
Adj No. of Lanes	1	2	0	2	2	1	1	1	0	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	156	1153	97	232	1152	515	92	324	266	316	712	605
Arrive On Green	0.09	0.35	0.35	0.07	0.33	0.33	0.05	0.35	0.35	0.09	0.39	0.39
Sat Flow, veh/h	1757	3274	275	3408	3505	1568	1757	939	769	3408	1845	1568
Grp Volume(v), veh/h	159	847	882	456	1143	436	80	0	915	624	692	266
Grp Sat Flow(s),veh/h/ln	1757	1752	1796	1704	1752	1568	1757	0	1709	1704	1845	1568
Q Serve(g_s), s	12.9	51.2	51.2	9.9	47.2	37.6	6.6	0.0	50.2	13.5	53.6	18.2
Cycle Q Clear(g_c), s	12.9	51.2	51.2	9.9	47.2	37.6	6.6	0.0	50.2	13.5	53.6	18.2
Prop In Lane	1.00		0.15	1.00		1.00	1.00		0.45	1.00		1.00
Lane Grp Cap(c), veh/h	156	617	632	232	1152	515	92	0	590	316	712	605
V/C Ratio(X)	1.02	1.37	1.39	1.97	0.99	0.85	0.87	0.00	1.55	1.97	0.97	0.44
Avail Cap(c_a), veh/h	156	617	632	232	1152	515	92	0	590	316	712	605
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.3	47.1	47.1	67.8	48.6	45.4	68.4	0.0	47.6	66.0	43.9	33.0
Incr Delay (d2), s/veh	77.5	177.7	187.1	449.5	24.5	11.7	52.9	0.0	256.2	448.6	26.8	0.2
Initial Q Delay(d3),s/veh	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	55.2	58.2	19.1	26.8	18.0	4.5	0.0	65.6	26.0	32.6	8.0
LnGrp Delay(d),s/veh	143.9	224.8	234.2	517.3	73.1	57.1	121.3	0.0	303.8	514.6	70.6	33.2
LnGrp LOS	F	F	F	F	E	E	F		F	F	E	C
Approach Vol, veh/h		1888			2035			995			1582	
Approach Delay, s/veh		222.4			169.2			289.1			239.4	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.4	52.7	13.1	61.2	15.0	56.1	19.0	55.3
Change Period (Y+Rc), s	5.5	* 4.9	5.5	* 5.1	* 5.1	* 4.9	5.5	* 5.1
Max Green Setting (Gmax), s	12.9	* 48	7.6	* 56	* 9.9	* 51	13.5	* 50
Max Q Clear Time (g_c+I1), s	14.9	49.2	8.6	55.6	11.9	53.2	15.5	52.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	220.1
HCM 2010 LOS	F

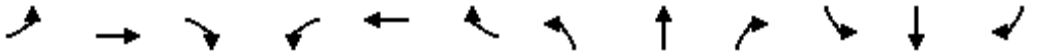
Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	449	1253	66	173	928	83	74	236	81	143	458	418
Future Volume (veh/h)	449	1253	66	173	928	83	74	236	81	143	458	418
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	449	1253	66	173	928	83	74	236	81	143	458	418
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	564	1541	689	285	1253	561	147	690	309	191	735	329
Arrive On Green	0.17	0.44	0.44	0.08	0.36	0.36	0.04	0.20	0.20	0.06	0.21	0.21
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	449	1253	66	173	928	83	74	236	81	143	458	418
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	9.0	22.3	1.8	3.5	16.5	2.6	1.5	4.1	3.1	3.0	8.5	15.0
Cycle Q Clear(g_c), s	9.0	22.3	1.8	3.5	16.5	2.6	1.5	4.1	3.1	3.0	8.5	15.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	564	1541	689	285	1253	561	147	690	309	191	735	329
V/C Ratio(X)	0.80	0.81	0.10	0.61	0.74	0.15	0.50	0.34	0.26	0.75	0.62	1.27
Avail Cap(c_a), veh/h	763	1541	689	715	1422	636	191	735	329	191	735	329
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.7	17.5	11.7	31.6	20.1	15.6	33.5	24.7	24.3	33.2	25.7	28.2
Incr Delay (d2), s/veh	4.2	3.5	0.1	2.1	1.8	0.1	2.7	0.3	0.4	15.1	1.6	143.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	11.4	0.8	1.7	8.3	1.1	0.8	2.0	1.4	1.8	4.2	19.6
LnGrp Delay(d),s/veh	32.9	20.9	11.8	33.7	21.9	15.7	36.1	25.0	24.7	48.4	27.3	171.7
LnGrp LOS	C	C	B	C	C	B	D	C	C	D	C	F
Approach Vol, veh/h		1768			1184			391			1019	
Approach Delay, s/veh		23.6			23.2			27.1			89.5	
Approach LOS		C			C			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	18.1	10.0	35.4	7.1	19.0	15.8	29.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	15.0	15.0	30.0	4.0	15.0	16.0	29.0
Max Q Clear Time (g_c+I1), s	5.0	6.1	5.5	24.3	3.5	17.0	11.0	18.5
Green Ext Time (p_c), s	0.0	3.6	0.5	5.1	0.0	0.0	0.8	7.0

Intersection Summary	
HCM 2010 Ctrl Delay	39.2
HCM 2010 LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	208	1912	35	60	1070	141	57	299	29	147	526	112
Future Volume (veh/h)	208	1912	35	60	1070	141	57	299	29	147	526	112
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1759	1845	1845	1759	1845
Adj Flow Rate, veh/h	208	1912	35	60	1070	141	57	299	29	147	526	112
Adj No. of Lanes	2	2	0	1	2	1	1	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	8	3	3	8	3
Cap, veh/h	257	1836	34	63	1688	755	63	478	426	193	515	459
Arrive On Green	0.08	0.52	0.52	0.04	0.48	0.48	0.04	0.27	0.27	0.06	0.29	0.29
Sat Flow, veh/h	3408	3521	64	1757	3505	1568	1757	1759	1568	3408	1759	1568
Grp Volume(v), veh/h	208	949	998	60	1070	141	57	299	29	147	526	112
Grp Sat Flow(s),veh/h/ln	1704	1752	1833	1757	1752	1568	1757	1759	1568	1704	1759	1568
Q Serve(g_s), s	8.4	73.0	73.0	4.8	31.9	7.2	4.5	20.9	1.9	6.0	41.0	7.6
Cycle Q Clear(g_c), s	8.4	73.0	73.0	4.8	31.9	7.2	4.5	20.9	1.9	6.0	41.0	7.6
Prop In Lane	1.00		0.04	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	257	914	956	63	1688	755	63	478	426	193	515	459
V/C Ratio(X)	0.81	1.04	1.04	0.96	0.63	0.19	0.91	0.62	0.07	0.76	1.02	0.24
Avail Cap(c_a), veh/h	316	914	956	63	1688	755	63	478	426	195	515	459
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.7	33.5	33.5	67.4	27.1	20.7	67.3	44.7	37.8	65.1	49.5	37.7
Incr Delay (d2), s/veh	11.9	40.1	41.4	97.8	0.8	0.1	81.7	2.5	0.1	16.0	45.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	45.2	47.6	4.0	15.6	3.1	3.6	10.5	0.8	3.2	26.3	3.3
LnGrp Delay(d),s/veh	75.7	73.6	74.9	165.2	27.9	20.8	149.0	47.2	37.9	81.1	94.6	38.0
LnGrp LOS	E	F	F	F	C	C	F	D	D	F	F	D
Approach Vol, veh/h		2155			1271			385			785	
Approach Delay, s/veh		74.4			33.6			61.6			84.0	
Approach LOS		E			C			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	42.1	9.0	77.0	9.0	45.0	14.6	71.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	38.0	5.0	73.0	5.0	41.0	13.0	65.0
Max Q Clear Time (g_c+I1), s	8.0	22.9	6.8	75.0	6.5	43.0	10.4	33.9
Green Ext Time (p_c), s	0.0	5.2	0.0	0.0	0.0	0.0	0.2	27.9

Intersection Summary	
HCM 2010 Ctrl Delay	63.7
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	272	559	267	206	270	335	137	2083	118	359	1373	326
Future Volume (veh/h)	272	559	267	206	270	335	137	2083	118	359	1373	326
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	272	559	267	206	268	336	137	2083	118	359	1373	326
Adj No. of Lanes	2	2	1	2	1	2	2	4	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	290	917	410	271	467	1143	196	2124	525	375	1950	607
Arrive On Green	0.09	0.26	0.26	0.08	0.25	0.25	0.06	0.34	0.34	0.11	0.39	0.39
Sat Flow, veh/h	3408	3505	1568	3514	1845	3136	3375	6285	1553	3375	4988	1553
Grp Volume(v), veh/h	272	559	267	206	268	336	137	2083	118	359	1373	326
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1757	1845	1568	1688	1571	1553	1688	1663	1553
Q Serve(g_s), s	8.3	14.6	15.8	6.0	13.3	8.0	4.2	34.3	5.7	11.1	24.2	16.9
Cycle Q Clear(g_c), s	8.3	14.6	15.8	6.0	13.3	8.0	4.2	34.3	5.7	11.1	24.2	16.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	290	917	410	271	467	1143	196	2124	525	375	1950	607
V/C Ratio(X)	0.94	0.61	0.65	0.76	0.57	0.29	0.70	0.98	0.22	0.96	0.70	0.54
Avail Cap(c_a), veh/h	290	983	440	394	565	1309	217	2124	525	375	1950	607
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.5	33.9	34.3	47.3	34.1	23.6	48.3	34.2	24.8	46.2	26.7	24.5
Incr Delay (d2), s/veh	35.9	1.3	3.7	2.6	3.0	0.4	6.6	15.2	0.1	35.2	1.8	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	7.2	7.3	3.0	7.2	3.5	2.1	17.1	2.4	7.0	11.4	7.6
LnGrp Delay(d),s/veh	83.4	35.1	38.1	49.8	37.1	24.0	54.9	49.4	24.9	81.4	28.6	27.1
LnGrp LOS	F	D	D	D	D	C	D	D	C	F	C	C
Approach Vol, veh/h		1098			810			2338			2058	
Approach Delay, s/veh		47.8			34.9			48.5			37.6	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.6	46.2	14.4	32.3	17.1	40.7	13.5	33.1
Change Period (Y+Rc), s	5.5	* 5.4	5.5	5.8	5.5	* 5.4	5.5	* 5.8
Max Green Setting (Gmax), s	6.7	* 40	8.9	32.0	11.6	* 35	11.7	* 29
Max Q Clear Time (g_c+I1), s	6.2	26.2	10.3	15.3	13.1	36.3	8.0	17.8
Green Ext Time (p_c), s	0.0	13.7	0.0	11.2	0.0	0.0	0.1	8.3

Intersection Summary	
HCM 2010 Ctrl Delay	43.1
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	514	1177	760	530	696	131	549	1039	666	70	1670	162
Future Volume (veh/h)	514	1177	760	530	696	131	549	1039	666	70	1670	162
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1827	1827	1827	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	514	1177	760	530	696	131	549	1039	666	70	1670	162
Adj No. of Lanes	2	2	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	4	4	4	4	4	4
Cap, veh/h	558	1073	480	393	1292	402	416	1979	616	97	1508	469
Arrive On Green	0.16	0.31	0.31	0.12	0.26	0.26	0.12	0.40	0.40	0.03	0.30	0.30
Sat Flow, veh/h	3408	3505	1568	3375	4988	1553	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	514	1177	760	530	696	131	549	1039	666	70	1670	162
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1688	1663	1553	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	22.3	46.0	46.0	17.5	18.1	10.3	18.5	23.8	59.6	3.1	45.4	12.2
Cycle Q Clear(g_c), s	22.3	46.0	46.0	17.5	18.1	10.3	18.5	23.8	59.6	3.1	45.4	12.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	558	1073	480	393	1292	402	416	1979	616	97	1508	469
V/C Ratio(X)	0.92	1.10	1.58	1.35	0.54	0.33	1.32	0.52	1.08	0.72	1.11	0.35
Avail Cap(c_a), veh/h	715	1073	480	393	1292	402	416	1979	616	97	1508	469
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.8	52.1	52.1	66.4	47.9	45.0	65.9	34.5	45.3	72.4	52.4	40.8
Incr Delay (d2), s/veh	13.2	57.8	272.0	172.5	1.2	1.6	160.3	0.5	60.0	20.7	58.6	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.5	30.8	56.2	17.6	8.5	4.6	17.9	11.1	35.7	1.7	29.0	5.4
LnGrp Delay(d),s/veh	75.0	109.9	324.1	238.9	49.2	46.6	226.1	35.0	105.3	93.0	111.0	41.7
LnGrp LOS	E	F	F	F	D	D	F	C	F	F	F	D
Approach Vol, veh/h		2451			1357			2254			1902	
Approach Delay, s/veh		169.0			123.0			102.3			104.5	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.0	51.2	30.1	44.9	9.8	65.4	23.0	52.0
Change Period (Y+Rc), s	5.5	* 5.8	5.5	* 6	5.5	* 5.8	5.5	6.0
Max Green Setting (Gmax), s	18.5	* 45	31.5	* 32	4.3	* 60	17.5	46.0
Max Q Clear Time (g_c+I1), s	20.5	47.4	24.3	20.1	5.1	61.6	19.5	48.0
Green Ext Time (p_c), s	0.0	0.0	0.3	11.9	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		126.9
HCM 2010 LOS		F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	706	1569	392	42	860	300	283	1290	46	729	1761	372
Future Volume (veh/h)	706	1569	392	42	860	300	283	1290	46	729	1761	372
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	706	1569	392	42	860	300	283	1290	46	729	1761	372
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	625	1923	599	72	1106	344	277	1230	383	664	1801	561
Arrive On Green	0.18	0.38	0.38	0.02	0.22	0.22	0.08	0.25	0.25	0.20	0.36	0.36
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	706	1569	392	42	860	300	283	1290	46	729	1761	372
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	27.5	42.0	30.9	1.8	24.1	27.7	12.3	37.0	3.5	29.5	52.3	30.2
Cycle Q Clear(g_c), s	27.5	42.0	30.9	1.8	24.1	27.7	12.3	37.0	3.5	29.5	52.3	30.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	625	1923	599	72	1106	344	277	1230	383	664	1801	561
V/C Ratio(X)	1.13	0.82	0.65	0.58	0.78	0.87	1.02	1.05	0.12	1.10	0.98	0.66
Avail Cap(c_a), veh/h	625	1923	599	84	1141	355	277	1230	383	664	1801	561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.3	41.7	38.2	72.8	55.1	56.5	68.9	56.5	43.9	60.3	47.3	40.3
Incr Delay (d2), s/veh	77.5	2.7	2.1	2.8	3.0	19.0	60.1	39.5	0.1	65.0	16.1	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.7	19.9	13.7	0.9	11.5	13.8	8.0	21.5	1.5	19.7	26.7	13.3
LnGrp Delay(d),s/veh	138.8	44.3	40.3	75.6	58.1	75.5	129.0	96.0	43.9	125.3	63.4	42.6
LnGrp LOS	F	D	D	E	E	E	F	F	D	F	E	D
Approach Vol, veh/h		2667			1202			1619			2862	
Approach Delay, s/veh		68.7			63.1			100.3			76.5	
Approach LOS		E			E			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.8	60.2	33.0	39.1	35.0	43.0	8.7	63.4
Change Period (Y+Rc), s	5.5	6.0	5.5	* 6.1	5.5	* 6	5.5	* 6.1
Max Green Setting (Gmax), s	12.3	53.6	27.5	* 34	29.5	* 37	3.7	* 57
Max Q Clear Time (g_c+I1), s	14.3	54.3	29.5	29.7	31.5	39.0	3.8	44.0
Green Ext Time (p_c), s	0.0	0.0	0.0	3.2	0.0	0.0	0.0	7.5

Intersection Summary	
HCM 2010 Ctrl Delay	76.7
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	677	1598	347	112	865	360	264	1249	102	701	1858	829
Future Volume (veh/h)	677	1598	347	112	865	360	264	1249	102	701	1858	829
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1759	1759	1759	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	677	1598	347	112	865	360	264	1249	102	701	1858	829
Adj No. of Lanes	2	3	0	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	8	8	8	4	4	4	4	4	4
Cap, veh/h	701	1479	319	132	919	286	263	1243	387	663	1835	571
Arrive On Green	0.21	0.36	0.36	0.04	0.19	0.19	0.08	0.25	0.25	0.20	0.37	0.37
Sat Flow, veh/h	3408	4150	894	3250	4803	1495	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	677	1290	655	112	865	360	264	1249	102	701	1858	829
Grp Sat Flow(s),veh/h/ln	1704	1679	1687	1625	1601	1495	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	27.6	49.9	49.9	4.8	24.9	26.8	10.9	34.9	7.4	27.5	51.5	51.5
Cycle Q Clear(g_c), s	27.6	49.9	49.9	4.8	24.9	26.8	10.9	34.9	7.4	27.5	51.5	51.5
Prop In Lane	1.00		0.53	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	701	1197	601	132	919	286	263	1243	387	663	1835	571
V/C Ratio(X)	0.97	1.08	1.09	0.85	0.94	1.26	1.00	1.00	0.26	1.06	1.01	1.45
Avail Cap(c_a), veh/h	701	1197	601	132	919	286	263	1243	387	663	1835	571
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.1	45.0	45.1	66.7	55.8	56.6	64.6	52.5	42.2	56.3	44.3	44.3
Incr Delay (d2), s/veh	25.5	49.9	63.1	35.5	17.0	141.1	56.7	26.6	0.1	51.1	24.2	212.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.5	31.4	33.8	2.8	12.4	22.3	7.1	19.1	3.2	17.5	27.7	55.7
LnGrp Delay(d),s/veh	80.6	95.0	108.2	102.2	72.8	197.7	121.2	79.2	42.4	107.3	68.4	257.0
LnGrp LOS	F	F	F	F	E	F	F	F	D	F	F	F
Approach Vol, veh/h		2622			1337			1615			3388	
Approach Delay, s/veh		94.6			108.9			83.7			122.6	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.4	57.0	34.3	32.3	33.0	40.4	11.2	55.4
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	10.9	51.5	28.8	26.8	27.5	34.9	5.7	49.9
Max Q Clear Time (g_c+I1), s	12.9	53.5	29.6	28.8	29.5	36.9	6.8	51.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	105.4
HCM 2010 LOS	F

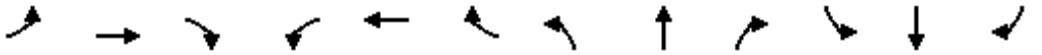
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	759	1164	161	178	787	163	130	885	308	239	1459	455
Future Volume (veh/h)	759	1164	161	178	787	163	130	885	308	239	1459	455
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845	1845	1827	1827	1827	1831	1900
Adj Flow Rate, veh/h	759	1164	161	178	787	163	130	885	308	239	1459	455
Adj No. of Lanes	2	2	1	0	1	1	1	2	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	4	4	4	4	4
Cap, veh/h	718	738	330	99	437	460	82	1009	451	259	864	257
Arrive On Green	0.21	0.21	0.21	0.29	0.29	0.29	0.05	0.29	0.29	0.08	0.33	0.33
Sat Flow, veh/h	3408	3505	1568	337	1491	1568	1757	3471	1553	3375	2645	787
Grp Volume(v), veh/h	759	1164	161	965	0	163	130	885	308	239	935	979
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1828	0	1568	1757	1736	1553	1688	1740	1692
Q Serve(g_s), s	31.6	31.6	13.5	44.0	0.0	12.3	7.0	36.4	26.3	10.6	49.0	49.0
Cycle Q Clear(g_c), s	31.6	31.6	13.5	44.0	0.0	12.3	7.0	36.4	26.3	10.6	49.0	49.0
Prop In Lane	1.00		1.00	0.18		1.00	1.00		1.00	1.00		0.46
Lane Grp Cap(c), veh/h	718	738	330	536	0	460	82	1009	451	259	568	553
V/C Ratio(X)	1.06	1.58	0.49	1.80	0.00	0.35	1.59	0.88	0.68	0.92	1.65	1.77
Avail Cap(c_a), veh/h	718	738	330	536	0	460	82	1009	451	259	568	553
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.2	59.2	52.1	53.0	0.0	41.8	71.5	50.7	47.1	68.8	50.5	50.5
Incr Delay (d2), s/veh	49.7	265.9	1.1	367.3	0.0	0.5	313.5	8.9	4.2	36.1	298.3	354.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.8	42.5	6.0	76.9	0.0	5.4	10.5	18.7	11.8	6.2	70.6	77.3
LnGrp Delay(d),s/veh	108.9	325.1	53.2	420.3	0.0	42.3	385.0	59.5	51.3	104.9	348.8	404.7
LnGrp LOS	F	F	D	F		D	F	E	D	F	F	F
Approach Vol, veh/h		2084			1128			1323			2153	
Approach Delay, s/veh		225.4			365.7			89.6			347.2	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.0	54.0		37.0	16.4	48.6		48.0
Change Period (Y+Rc), s	4.0	5.0		* 5.4	* 4.9	5.0		4.0
Max Green Setting (Gmax), s	7.0	49.0		* 32	* 12	43.6		44.0
Max Q Clear Time (g_c+I1), s	9.0	51.0		33.6	12.6	38.4		46.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	5.0		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		261.4
HCM 2010 LOS		F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	364	1698	102	333	951	262	66	704	336	307	1186	293
Future Volume (veh/h)	364	1698	102	333	951	262	66	704	336	307	1186	293
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1792	1845	1845	1845	1827	1845	1845
Adj Flow Rate, veh/h	364	1698	102	333	951	262	66	704	336	307	1186	293
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	6	3	3	3	4	3	3
Cap, veh/h	420	1547	692	306	1429	779	71	798	357	349	1088	680
Arrive On Green	0.12	0.44	0.44	0.09	0.41	0.41	0.02	0.23	0.23	0.10	0.31	0.31
Sat Flow, veh/h	3408	3505	1568	3408	3505	1524	3408	3505	1568	3375	3505	1568
Grp Volume(v), veh/h	364	1698	102	333	951	262	66	704	336	307	1186	293
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1524	1704	1752	1568	1688	1752	1568
Q Serve(g_s), s	15.2	64.0	5.6	13.0	32.0	14.7	2.8	28.2	30.5	13.0	45.0	18.9
Cycle Q Clear(g_c), s	15.2	64.0	5.6	13.0	32.0	14.7	2.8	28.2	30.5	13.0	45.0	18.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	420	1547	692	306	1429	779	71	798	357	349	1088	680
V/C Ratio(X)	0.87	1.10	0.15	1.09	0.67	0.34	0.94	0.88	0.94	0.88	1.09	0.43
Avail Cap(c_a), veh/h	541	1547	692	306	1429	779	71	798	357	349	1088	680
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.4	40.5	24.2	66.0	34.9	20.9	70.9	54.1	55.1	64.1	50.0	28.6
Incr Delay (d2), s/veh	11.4	54.5	0.1	77.6	1.2	0.3	85.0	11.4	32.8	21.0	55.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	42.6	2.5	9.4	15.7	6.2	2.2	14.9	16.5	7.1	30.1	8.2
LnGrp Delay(d),s/veh	73.8	95.0	24.3	143.6	36.1	21.2	155.9	65.5	87.9	85.1	105.3	29.0
LnGrp LOS	E	F	C	F	D	C	F	E	F	F	F	C
Approach Vol, veh/h		2164			1546			1106			1786	
Approach Delay, s/veh		88.1			56.7			77.7			89.3	
Approach LOS		F			E			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	70.0	7.0	51.0	21.9	65.1	19.0	39.0
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	13.0	64.0	3.0	45.0	23.0	54.0	15.0	33.0
Max Q Clear Time (g_c+I1), s	15.0	66.0	4.8	47.0	17.2	34.0	15.0	32.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.7	18.0	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	79.3
HCM 2010 LOS	E

Notes

User approved changes to right turn type.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	554	16	20	545	1141	484
Future Volume (veh/h)	554	16	20	545	1141	484
Number	7	14	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1900	1827	1827	1827	1900
Adj Flow Rate, veh/h	554	16	20	545	1141	484
Adj No. of Lanes	0	0	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	4	4	4	4
Cap, veh/h	554	16	24	1969	1215	499
Arrive On Green	0.35	0.35	0.01	0.57	0.51	0.51
Sat Flow, veh/h	1591	46	1740	3563	2493	987
Grp Volume(v), veh/h	571	0	20	545	815	810
Grp Sat Flow(s),veh/h/ln	1640	0	1740	1736	1736	1653
Q Serve(g_s), s	40.0	0.0	1.3	9.3	50.2	54.6
Cycle Q Clear(g_c), s	40.0	0.0	1.3	9.3	50.2	54.6
Prop In Lane	0.97	0.03	1.00			0.60
Lane Grp Cap(c), veh/h	571	0	24	1969	878	836
V/C Ratio(X)	1.00	0.00	0.84	0.28	0.93	0.97
Avail Cap(c_a), veh/h	571	0	92	2137	887	845
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.4	0.0	56.5	12.8	26.4	27.5
Incr Delay (d2), s/veh	37.7	0.0	24.3	0.0	15.3	23.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	23.9	0.0	0.8	4.4	27.7	30.2
LnGrp Delay(d),s/veh	75.1	0.0	80.9	12.8	41.7	50.9
LnGrp LOS	F		F	B	D	D
Approach Vol, veh/h	571			565	1625	
Approach Delay, s/veh	75.1			15.2	46.3	
Approach LOS	E			B	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	7.1	63.8		44.0		70.9		
Change Period (Y+Rc), s	5.5	* 5.7		4.0		* 5.7		
Max Green Setting (Gmax), s	6.1	* 59		40.0		* 71		
Max Q Clear Time (g_c+I1), s	3.3	56.6		42.0		11.3		
Green Ext Time (p_c), s	0.0	1.5		0.0		8.1		

Intersection Summary	
HCM 2010 Ctrl Delay	45.9
HCM 2010 LOS	D

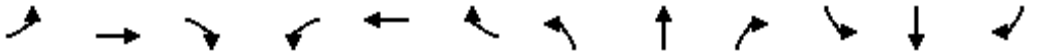
Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	369	51	11	20	27	12	45	1604	3	27	1260	291
Future Volume (veh/h)	369	51	11	20	27	12	45	1604	3	27	1260	291
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1583	1845	1845	1845	1845	1810	1845	1845	1845
Adj Flow Rate, veh/h	369	51	11	20	27	12	45	1604	3	27	1260	291
Adj No. of Lanes	2	1	1	1	1	1	2	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	20	3	3	3	3	5	3	3	3
Cap, veh/h	452	302	257	27	91	78	111	2029	891	40	1996	893
Arrive On Green	0.13	0.16	0.16	0.02	0.05	0.05	0.03	0.58	0.58	0.02	0.57	0.57
Sat Flow, veh/h	3408	1845	1568	1508	1845	1568	3408	3505	1538	1757	3505	1568
Grp Volume(v), veh/h	369	51	11	20	27	12	45	1604	3	27	1260	291
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1508	1845	1568	1704	1752	1538	1757	1752	1568
Q Serve(g_s), s	7.8	1.8	0.4	1.0	1.0	0.5	1.0	26.3	0.1	1.1	17.9	7.3
Cycle Q Clear(g_c), s	7.8	1.8	0.4	1.0	1.0	0.5	1.0	26.3	0.1	1.1	17.9	7.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	452	302	257	27	91	78	111	2029	891	40	1996	893
V/C Ratio(X)	0.82	0.17	0.04	0.73	0.30	0.15	0.41	0.79	0.00	0.67	0.63	0.33
Avail Cap(c_a), veh/h	460	498	423	122	398	338	184	2080	913	95	2080	931
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.3	26.6	26.1	36.2	34.0	33.7	35.2	12.1	6.6	35.9	10.7	8.4
Incr Delay (d2), s/veh	10.8	0.3	0.1	30.4	1.8	0.9	2.4	2.1	0.0	17.3	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.9	0.2	0.6	0.6	0.3	0.5	13.1	0.0	0.7	8.7	3.2
LnGrp Delay(d),s/veh	42.1	26.9	26.2	66.6	35.8	34.7	37.5	14.2	6.6	53.3	11.3	8.6
LnGrp LOS	D	C	C	E	D	C	D	B	A	D	B	A
Approach Vol, veh/h		431			59			1652			1578	
Approach Delay, s/veh		39.9			46.0			14.8			11.5	
Approach LOS		D			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.7	46.9	5.4	16.2	6.4	46.2	13.8	7.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	44.0	6.0	20.0	4.0	44.0	10.0	16.0
Max Q Clear Time (g_c+I1), s	3.1	28.3	3.0	3.8	3.0	19.9	9.8	3.0
Green Ext Time (p_c), s	0.0	14.6	0.0	0.3	0.0	21.8	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	16.8
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	976	768	4	64	442	80	54	847	73	86	686	690
Future Volume (veh/h)	976	768	4	64	442	80	54	847	73	86	686	690
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1810	1810	1810	1810	1810	1810
Adj Flow Rate, veh/h	976	768	4	64	442	80	54	847	73	86	686	690
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	5	5	5	5	5	5
Cap, veh/h	989	1672	748	107	765	342	93	837	375	116	861	385
Arrive On Green	0.30	0.49	0.49	0.03	0.22	0.22	0.03	0.24	0.24	0.03	0.25	0.25
Sat Flow, veh/h	3312	3406	1524	3312	3406	1524	3343	3438	1538	3343	3438	1538
Grp Volume(v), veh/h	976	768	4	64	442	80	54	847	73	86	686	690
Grp Sat Flow(s),veh/h/ln	1656	1703	1524	1656	1703	1524	1672	1719	1538	1672	1719	1538
Q Serve(g_s), s	31.3	15.8	0.1	2.0	12.3	4.6	1.7	26.0	4.0	2.7	19.9	26.7
Cycle Q Clear(g_c), s	31.3	15.8	0.1	2.0	12.3	4.6	1.7	26.0	4.0	2.7	19.9	26.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	989	1672	748	107	765	342	93	837	375	116	861	385
V/C Ratio(X)	0.99	0.46	0.01	0.60	0.58	0.23	0.58	1.01	0.19	0.74	0.80	1.79
Avail Cap(c_a), veh/h	989	1706	763	174	868	388	94	837	375	116	861	385
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.2	17.9	13.9	51.0	36.9	33.9	51.3	40.4	32.1	51.1	37.5	40.0
Incr Delay (d2), s/veh	25.2	0.4	0.0	2.0	1.5	0.7	5.7	34.0	0.3	20.1	5.3	366.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.7	7.5	0.1	1.0	5.9	2.0	0.9	16.2	1.7	1.6	10.1	50.5
LnGrp Delay(d),s/veh	62.4	18.3	13.9	53.0	38.4	34.6	57.0	74.4	32.3	71.1	42.7	406.3
LnGrp LOS	E	B	B	D	D	C	E	F	C	E	D	F
Approach Vol, veh/h		1748			586			974			1462	
Approach Delay, s/veh		42.9			39.5			70.3			216.0	
Approach LOS		D			D			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	36.5	30.0	7.6	32.7	8.0	58.4	8.3	32.0
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	31.9	27.2	3.0	26.7	5.6	53.5	3.7	26.0
Max Q Clear Time (g_c+I1), s	33.3	14.3	3.7	28.7	4.0	17.8	4.7	28.0
Green Ext Time (p_c), s	0.0	9.6	0.0	0.0	0.0	20.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	101.1
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	812	25	409	961	99	90	558	169	125	918	186
Future Volume (veh/h)	126	812	25	409	961	99	90	558	169	125	918	186
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	126	812	25	409	961	99	90	558	169	125	918	186
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	158	824	25	395	1307	585	110	871	390	156	964	431
Arrive On Green	0.09	0.24	0.24	0.22	0.37	0.37	0.06	0.25	0.25	0.09	0.28	0.28
Sat Flow, veh/h	1757	3471	107	1757	3505	1568	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	126	410	427	409	961	99	90	558	169	125	918	186
Grp Sat Flow(s),veh/h/ln	1757	1752	1826	1757	1752	1568	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	5.6	18.6	18.6	18.0	19.0	3.4	4.0	11.4	7.3	5.6	20.6	7.8
Cycle Q Clear(g_c), s	5.6	18.6	18.6	18.0	19.0	3.4	4.0	11.4	7.3	5.6	20.6	7.8
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	158	416	434	395	1307	585	110	871	390	156	964	431
V/C Ratio(X)	0.80	0.98	0.98	1.03	0.74	0.17	0.82	0.64	0.43	0.80	0.95	0.43
Avail Cap(c_a), veh/h	176	416	434	395	1307	585	110	871	390	176	964	431
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.7	30.4	30.4	31.0	21.7	16.8	37.1	26.9	25.3	35.7	28.5	23.9
Incr Delay (d2), s/veh	20.7	40.0	39.1	54.5	2.2	0.1	36.8	1.6	0.8	20.5	18.5	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	13.6	14.1	14.7	9.5	1.5	3.1	5.7	3.2	3.6	12.4	3.4
LnGrp Delay(d),s/veh	56.4	70.3	69.5	85.5	23.9	16.9	73.8	28.5	26.1	56.2	47.0	24.5
LnGrp LOS	E	E	E	F	C	B	E	C	C	E	D	C
Approach Vol, veh/h		963			1469			817			1229	
Approach Delay, s/veh		68.1			40.6			33.0			44.6	
Approach LOS		E			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.1	23.9	22.0	23.0	9.0	26.0	11.2	33.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	19.0	18.0	19.0	5.0	22.0	8.0	29.0
Max Q Clear Time (g_c+I1), s	7.6	13.4	20.0	20.6	6.0	22.6	7.6	21.0
Green Ext Time (p_c), s	0.0	4.4	0.0	0.0	0.0	0.0	0.0	6.3

Intersection Summary	
HCM 2010 Ctrl Delay	46.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	644	162	118	701	123	267	766	131	149	1232	190
Future Volume (veh/h)	70	644	162	118	701	123	267	766	131	149	1232	190
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	70	644	162	118	701	123	267	766	131	149	1232	190
Adj No. of Lanes	1	2	1	1	2	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	78	701	314	137	696	122	271	1303	223	183	1174	180
Arrive On Green	0.04	0.20	0.20	0.08	0.23	0.23	0.16	0.44	0.44	0.11	0.39	0.39
Sat Flow, veh/h	1757	3505	1568	1757	2982	523	1740	2966	507	1740	3018	463
Grp Volume(v), veh/h	70	644	162	118	412	412	267	448	449	149	706	716
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1752	1740	1736	1737	1740	1736	1745
Q Serve(g_s), s	3.6	16.2	8.3	6.0	21.0	21.0	13.8	17.6	17.6	7.5	35.0	35.0
Cycle Q Clear(g_c), s	3.6	16.2	8.3	6.0	21.0	21.0	13.8	17.6	17.6	7.5	35.0	35.0
Prop In Lane	1.00		1.00	1.00		0.30	1.00		0.29	1.00		0.27
Lane Grp Cap(c), veh/h	78	701	314	137	409	409	271	762	763	183	675	679
V/C Ratio(X)	0.90	0.92	0.52	0.86	1.01	1.01	0.99	0.59	0.59	0.81	1.05	1.06
Avail Cap(c_a), veh/h	78	701	314	137	409	409	271	762	763	290	675	679
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.8	35.3	32.1	41.0	34.5	34.5	37.9	19.1	19.1	39.4	27.5	27.5
Incr Delay (d2), s/veh	68.0	17.2	1.5	39.8	46.3	46.6	50.8	1.2	1.2	9.2	47.1	50.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	9.5	3.7	4.4	15.4	15.4	10.4	8.6	8.6	4.1	25.5	26.2
LnGrp Delay(d),s/veh	110.8	52.5	33.6	80.8	80.8	81.1	88.7	20.3	20.3	48.6	74.6	77.6
LnGrp LOS	F	D	C	F	F	F	F	C	C	D	F	F
Approach Vol, veh/h		876			942			1164			1571	
Approach Delay, s/veh		53.7			80.9			36.0			73.5	
Approach LOS		D			F			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.5	43.5	11.0	22.0	18.0	39.0	8.0	25.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	15.0	34.0	7.0	18.0	14.0	35.0	4.0	21.0
Max Q Clear Time (g_c+I1), s	9.5	19.6	8.0	18.2	15.8	37.0	5.6	23.0
Green Ext Time (p_c), s	0.2	11.8	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	61.6
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	1214	465	44	1647	192	186	747	77	53	1388	148
Future Volume (veh/h)	185	1214	465	44	1647	192	186	747	77	53	1388	148
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1827	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	185	1214	465	44	1647	192	186	747	77	53	1388	148
Adj No. of Lanes	1	3	0	1	3	1	1	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	174	1308	499	56	1496	466	174	1359	140	68	1273	569
Arrive On Green	0.10	0.37	0.37	0.03	0.30	0.30	0.10	0.43	0.43	0.04	0.37	0.37
Sat Flow, veh/h	1740	3555	1358	1740	4988	1553	1740	3177	327	1740	3471	1553
Grp Volume(v), veh/h	185	1135	544	44	1647	192	186	408	416	53	1388	148
Grp Sat Flow(s),veh/h/ln	1740	1663	1587	1740	1663	1553	1740	1736	1769	1740	1736	1553
Q Serve(g_s), s	12.0	39.3	39.5	3.0	36.0	11.9	12.0	21.1	21.1	3.6	44.0	8.0
Cycle Q Clear(g_c), s	12.0	39.3	39.5	3.0	36.0	11.9	12.0	21.1	21.1	3.6	44.0	8.0
Prop In Lane	1.00		0.86	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	174	1223	584	56	1496	466	174	742	757	68	1273	569
V/C Ratio(X)	1.06	0.93	0.93	0.79	1.10	0.41	1.07	0.55	0.55	0.78	1.09	0.26
Avail Cap(c_a), veh/h	174	1223	584	58	1496	466	174	742	757	130	1273	569
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.0	36.4	36.5	57.7	42.0	33.5	54.0	25.7	25.7	57.2	38.0	26.6
Incr Delay (d2), s/veh	86.0	12.2	21.8	48.9	56.0	0.6	87.8	0.9	0.9	17.4	53.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.9	20.1	20.8	2.2	24.2	5.1	10.0	10.3	10.5	2.1	30.5	3.5
LnGrp Delay(d),s/veh	140.0	48.7	58.3	106.6	98.0	34.1	141.8	26.6	26.6	74.5	91.7	26.8
LnGrp LOS	F	D	E	F	F	C	F	C	C	E	F	C
Approach Vol, veh/h		1864			1883			1010			1589	
Approach Delay, s/veh		60.5			91.7			47.8			85.1	
Approach LOS		E			F			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	55.3	7.9	48.1	16.0	48.0	16.0	40.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	9.0	47.0	4.0	44.0	12.0	44.0	12.0	36.0
Max Q Clear Time (g_c+I1), s	5.6	23.1	5.0	41.5	14.0	46.0	14.0	38.0
Green Ext Time (p_c), s	0.0	17.9	0.0	2.5	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	73.9
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	1425	143	276	1418	12	227	286	139	321	1114	150
Future Volume (veh/h)	154	1425	143	276	1418	12	227	286	139	321	1114	150
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1827	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	154	1425	143	276	1418	12	227	286	139	321	1114	150
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	3	3	3	3	3	3
Cap, veh/h	104	1233	123	209	1550	694	176	667	298	345	1005	449
Arrive On Green	0.06	0.39	0.39	0.12	0.45	0.45	0.10	0.19	0.19	0.20	0.29	0.29
Sat Flow, veh/h	1740	3188	318	1740	3471	1553	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	154	772	796	276	1418	12	227	286	139	321	1114	150
Grp Sat Flow(s),veh/h/ln	1740	1736	1771	1740	1736	1553	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	9.0	58.0	58.0	18.0	57.3	0.6	15.0	10.8	11.8	26.9	43.0	11.3
Cycle Q Clear(g_c), s	9.0	58.0	58.0	18.0	57.3	0.6	15.0	10.8	11.8	26.9	43.0	11.3
Prop In Lane	1.00		0.18	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	104	671	685	209	1550	694	176	667	298	345	1005	449
V/C Ratio(X)	1.48	1.15	1.16	1.32	0.91	0.02	1.29	0.43	0.47	0.93	1.11	0.33
Avail Cap(c_a), veh/h	104	671	685	209	1550	694	176	667	298	410	1005	449
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.5	46.0	46.0	66.0	38.8	23.1	67.5	53.6	54.0	59.2	53.5	42.2
Incr Delay (d2), s/veh	258.2	83.9	88.9	174.3	8.8	0.0	167.1	0.4	1.1	25.3	63.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.8	43.4	45.2	18.7	29.3	0.3	15.4	5.3	5.2	15.5	29.6	5.0
LnGrp Delay(d),s/veh	328.7	129.9	134.9	240.3	47.6	23.2	234.6	54.0	55.1	84.6	116.6	42.6
LnGrp LOS	F	F	F	F	D	C	F	D	E	F	F	D
Approach Vol, veh/h		1722			1706			652			1585	
Approach Delay, s/veh		150.0			78.6			117.1			103.1	
Approach LOS		F			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	33.5	32.5	22.0	62.0	19.0	47.0	13.0	71.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	35.0	23.0	18.0	58.0	15.0	43.0	9.0	67.0
Max Q Clear Time (g_c+I1), s	28.9	13.8	20.0	60.0	17.0	45.0	11.0	59.3
Green Ext Time (p_c), s	0.5	6.5	0.0	0.0	0.0	0.0	0.0	7.3

Intersection Summary	
HCM 2010 Ctrl Delay	111.6
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	592	40	80	605	50	59	939	85	182	1396	637
Future Volume (veh/h)	155	592	40	80	605	50	59	939	85	182	1396	637
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1827	1827	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	155	592	40	80	605	50	59	939	85	182	1396	637
Adj No. of Lanes	2	3	1	2	3	1	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	204	1088	339	157	1018	317	135	1329	120	271	1572	703
Arrive On Green	0.06	0.22	0.22	0.05	0.20	0.20	0.04	0.41	0.41	0.08	0.45	0.45
Sat Flow, veh/h	3375	4988	1553	3375	4988	1553	3375	3220	291	3375	3471	1553
Grp Volume(v), veh/h	155	592	40	80	605	50	59	506	518	182	1396	637
Grp Sat Flow(s),veh/h/ln	1688	1663	1553	1688	1663	1553	1688	1736	1775	1688	1736	1553
Q Serve(g_s), s	3.0	7.0	1.4	1.5	7.3	1.7	1.1	16.0	16.0	3.5	24.3	25.1
Cycle Q Clear(g_c), s	3.0	7.0	1.4	1.5	7.3	1.7	1.1	16.0	16.0	3.5	24.3	25.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	204	1088	339	157	1018	317	135	716	733	271	1572	703
V/C Ratio(X)	0.76	0.54	0.12	0.51	0.59	0.16	0.44	0.71	0.71	0.67	0.89	0.91
Avail Cap(c_a), veh/h	204	1208	376	204	1208	376	204	736	753	307	1577	705
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	22.9	20.7	30.7	23.8	21.6	31.0	16.1	16.1	29.5	16.5	16.8
Incr Delay (d2), s/veh	15.0	0.4	0.2	2.5	0.6	0.2	2.2	3.0	3.0	4.8	6.6	15.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	3.2	0.6	0.8	3.4	0.8	0.6	8.2	8.4	1.8	12.9	13.6
LnGrp Delay(d),s/veh	45.6	23.3	20.9	33.3	24.4	21.8	33.2	19.1	19.0	34.3	23.1	32.1
LnGrp LOS	D	C	C	C	C	C	C	B	B	C	C	C
Approach Vol, veh/h		787			735			1083			2215	
Approach Delay, s/veh		27.6			25.2			19.8			26.6	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.3	31.3	7.1	18.4	6.6	33.9	8.0	17.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	28.0	4.0	16.0	4.0	30.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	5.5	18.0	3.5	9.0	3.1	27.1	5.0	9.3
Green Ext Time (p_c), s	0.0	9.3	0.0	4.4	0.0	2.8	0.0	4.2

Intersection Summary	
HCM 2010 Ctrl Delay	25.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	396	187	32	429	3	77	226	14	18	447	87
Future Volume (veh/h)	36	396	187	32	429	3	77	226	14	18	447	87
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1827	1827	1827	1845	1845	1845
Adj Flow Rate, veh/h	36	396	187	32	429	3	77	226	14	18	447	87
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	3	3	3
Cap, veh/h	55	611	285	50	928	6	95	647	550	31	585	497
Arrive On Green	0.03	0.27	0.27	0.03	0.26	0.26	0.05	0.35	0.35	0.02	0.32	0.32
Sat Flow, veh/h	1740	2300	1073	1740	3533	25	1740	1827	1553	1757	1845	1568
Grp Volume(v), veh/h	36	298	285	32	211	221	77	226	14	18	447	87
Grp Sat Flow(s),veh/h/ln	1740	1736	1638	1740	1736	1823	1740	1827	1553	1757	1845	1568
Q Serve(g_s), s	1.0	7.3	7.4	0.9	4.9	4.9	2.1	4.4	0.3	0.5	10.5	1.9
Cycle Q Clear(g_c), s	1.0	7.3	7.4	0.9	4.9	4.9	2.1	4.4	0.3	0.5	10.5	1.9
Prop In Lane	1.00		0.66	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	55	461	435	50	456	479	95	647	550	31	585	497
V/C Ratio(X)	0.65	0.65	0.66	0.64	0.46	0.46	0.81	0.35	0.03	0.58	0.76	0.18
Avail Cap(c_a), veh/h	145	579	547	145	579	608	145	762	648	147	770	654
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.9	15.6	15.7	23.0	14.8	14.8	22.4	11.4	10.1	23.4	14.8	11.8
Incr Delay (d2), s/veh	12.2	1.7	2.0	12.5	0.7	0.7	17.4	0.3	0.0	15.6	3.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.7	3.6	0.6	2.4	2.6	1.5	2.3	0.1	0.4	5.8	0.8
LnGrp Delay(d),s/veh	35.1	17.3	17.6	35.5	15.6	15.5	39.8	11.7	10.1	39.0	18.1	12.0
LnGrp LOS	D	B	B	D	B	B	D	B	B	D	B	B
Approach Vol, veh/h		619			464			317			552	
Approach Delay, s/veh		18.5			16.9			18.5			17.8	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.9	21.0	5.4	16.7	6.6	19.2	5.5	16.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	20.0	4.0	16.0	4.0	20.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	2.5	6.4	2.9	9.4	4.1	12.5	3.0	6.9
Green Ext Time (p_c), s	0.0	3.9	0.0	3.3	0.0	2.7	0.0	4.2

Intersection Summary	
HCM 2010 Ctrl Delay	17.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	6	262	50	9	1	194	1515	55	1	1895	0
Future Volume (veh/h)	1	6	262	50	9	1	194	1515	55	1	1895	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1759	1900	1845	1845	1900	1792	1792	1792	1792	1792	1900
Adj Flow Rate, veh/h	1	6	262	50	9	1	194	1515	55	1	1895	0
Adj No. of Lanes	0	1	0	1	1	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	8	8	8	3	3	3	6	6	6	6	6	6
Cap, veh/h	1	4	182	78	72	8	212	1793	802	309	1986	0
Arrive On Green	0.12	0.12	0.12	0.04	0.04	0.04	0.12	0.53	0.53	0.18	0.58	0.00
Sat Flow, veh/h	6	33	1462	1757	1631	181	1707	3406	1524	1707	3495	0
Grp Volume(v), veh/h	269	0	0	50	0	10	194	1515	55	1	1895	0
Grp Sat Flow(s),veh/h/ln	1501	0	0	1757	0	1813	1707	1703	1524	1707	1703	0
Q Serve(g_s), s	16.0	0.0	0.0	3.6	0.0	0.7	14.5	48.9	2.3	0.1	67.3	0.0
Cycle Q Clear(g_c), s	16.0	0.0	0.0	3.6	0.0	0.7	14.5	48.9	2.3	0.1	67.3	0.0
Prop In Lane	0.00		0.97	1.00		0.10	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	187	0	0	78	0	80	212	1793	802	309	1986	0
V/C Ratio(X)	1.44	0.00	0.00	0.64	0.00	0.12	0.91	0.85	0.07	0.00	0.95	0.00
Avail Cap(c_a), veh/h	187	0	0	218	0	225	212	2327	1041	309	2010	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.4	0.0	0.0	60.5	0.0	59.2	55.7	26.0	15.0	43.2	25.2	0.0
Incr Delay (d2), s/veh	226.7	0.0	0.0	8.6	0.0	0.7	39.0	2.4	0.0	0.0	11.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.3	0.0	0.0	1.9	0.0	0.4	9.1	23.5	1.0	0.0	34.4	0.0
LnGrp Delay(d),s/veh	283.1	0.0	0.0	69.2	0.0	59.8	94.8	28.4	15.0	43.2	36.4	0.0
LnGrp LOS	F			E		E	F	C	B	D	D	
Approach Vol, veh/h		269			60			1764			1896	
Approach Delay, s/veh		283.1			67.6			35.3			36.4	
Approach LOS		F			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	27.3	71.8		20.0	20.0	79.1		9.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	88.0		16.0	16.0	76.0		16.0
Max Q Clear Time (g_c+I1), s	2.1	50.9		18.0	16.5	69.3		5.6
Green Ext Time (p_c), s	1.8	16.9		0.0	0.0	5.7		0.1

Intersection Summary		
HCM 2010 Ctrl Delay		53.0
HCM 2010 LOS		D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	13	43	148	6	202	38	1451	183	714	1482	1
Future Volume (veh/h)	12	13	43	148	6	202	38	1451	183	714	1482	1
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	12	13	43	148	6	202	38	1451	183	714	1482	1
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	19	32	107	120	7	219	49	1241	155	599	2549	2
Arrive On Green	0.01	0.09	0.09	0.07	0.14	0.14	0.03	0.40	0.40	0.34	0.71	0.71
Sat Flow, veh/h	1757	377	1247	1757	45	1529	1757	3136	392	1757	3594	2
Grp Volume(v), veh/h	12	0	56	148	0	208	38	805	829	714	723	760
Grp Sat Flow(s),veh/h/ln	1757	0	1625	1757	0	1575	1757	1752	1776	1757	1752	1844
Q Serve(g_s), s	1.0	0.0	4.8	10.0	0.0	19.1	3.2	58.0	58.0	50.0	29.9	29.9
Cycle Q Clear(g_c), s	1.0	0.0	4.8	10.0	0.0	19.1	3.2	58.0	58.0	50.0	29.9	29.9
Prop In Lane	1.00		0.77	1.00		0.97	1.00		0.22	1.00		0.00
Lane Grp Cap(c), veh/h	19	0	139	120	0	226	49	694	703	599	1243	1308
V/C Ratio(X)	0.65	0.00	0.40	1.23	0.00	0.92	0.78	1.16	1.18	1.19	0.58	0.58
Avail Cap(c_a), veh/h	60	0	177	120	0	226	96	694	703	599	1243	1308
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.2	0.0	63.5	68.3	0.0	62.0	70.8	44.3	44.3	48.3	10.5	10.5
Incr Delay (d2), s/veh	32.1	0.0	1.9	158.3	0.0	39.1	23.0	87.5	95.4	101.8	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	2.2	10.1	0.0	10.8	1.8	44.8	46.9	41.1	14.5	15.2
LnGrp Delay(d),s/veh	104.3	0.0	65.3	226.5	0.0	101.0	93.8	131.7	139.7	150.1	11.2	11.2
LnGrp LOS	F		E	F		F	F	F	F	F	B	B
Approach Vol, veh/h		68			356			1672			2197	
Approach Delay, s/veh		72.2			153.2			134.8			56.4	
Approach LOS		E			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	54.0	62.0	14.0	16.5	8.1	107.9	5.5	25.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	50.0	58.0	10.0	16.0	8.0	100.0	5.0	21.0
Max Q Clear Time (g_c+I1), s	52.0	60.0	12.0	6.8	5.2	31.9	3.0	21.1
Green Ext Time (p_c), s	0.0	0.0	0.0	1.0	0.0	52.7	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	95.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	332	12	14	1	6	4	10	1265	0	3	1356	381
Future Volume (veh/h)	332	12	14	1	6	4	10	1265	0	3	1356	381
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1900	1845	1900	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	332	12	14	1	6	4	10	1265	0	3	1356	0
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	381	14	352	2	10	7	18	1845	0	6	1821	815
Arrive On Green	0.22	0.22	0.22	0.01	0.01	0.01	0.01	0.53	0.00	0.00	0.52	0.00
Sat Flow, veh/h	1698	61	1568	157	941	628	1757	3597	0	1757	3505	1568
Grp Volume(v), veh/h	344	0	14	11	0	0	10	1265	0	3	1356	0
Grp Sat Flow(s),veh/h/ln	1760	0	1568	1726	0	0	1757	1752	0	1757	1752	1568
Q Serve(g_s), s	12.8	0.0	0.5	0.4	0.0	0.0	0.4	18.2	0.0	0.1	20.6	0.0
Cycle Q Clear(g_c), s	12.8	0.0	0.5	0.4	0.0	0.0	0.4	18.2	0.0	0.1	20.6	0.0
Prop In Lane	0.97		1.00	0.09		0.36	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	395	0	352	19	0	0	18	1845	0	6	1821	815
V/C Ratio(X)	0.87	0.00	0.04	0.58	0.00	0.00	0.56	0.69	0.00	0.53	0.74	0.00
Avail Cap(c_a), veh/h	439	0	391	405	0	0	103	1904	0	103	1904	852
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	25.5	0.0	20.7	33.5	0.0	0.0	33.6	11.9	0.0	33.9	12.8	0.0
Incr Delay (d2), s/veh	16.0	0.0	0.0	24.7	0.0	0.0	24.9	1.0	0.0	59.5	1.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	0.0	0.2	0.3	0.0	0.0	0.3	8.9	0.0	0.1	10.2	0.0
LnGrp Delay(d),s/veh	41.5	0.0	20.7	58.2	0.0	0.0	58.5	12.9	0.0	93.4	14.4	0.0
LnGrp LOS	D		C	E			E	B		F	B	
Approach Vol, veh/h		358			11			1275			1359	
Approach Delay, s/veh		40.7			58.2			13.3			14.6	
Approach LOS		D			E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.2	39.9		19.3	4.7	39.4		4.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	37.0		17.0	4.0	37.0		16.0
Max Q Clear Time (g_c+I1), s	2.1	20.2		14.8	2.4	22.6		2.4
Green Ext Time (p_c), s	0.0	14.7		0.5	0.0	12.8		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		17.3
HCM 2010 LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	360	1103	319	76	721	6	585	1248	78	36	1015	366
Future Volume (veh/h)	360	1103	319	76	721	6	585	1248	78	36	1015	366
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	360	1103	319	76	721	6	585	1248	78	36	1015	366
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	381	1101	493	129	842	377	571	1552	694	90	1057	473
Arrive On Green	0.11	0.31	0.31	0.04	0.24	0.24	0.17	0.44	0.44	0.03	0.30	0.30
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	360	1103	319	76	721	6	585	1248	78	36	1015	366
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	9.4	28.1	15.7	2.0	17.6	0.3	15.0	27.6	2.6	0.9	25.5	19.0
Cycle Q Clear(g_c), s	9.4	28.1	15.7	2.0	17.6	0.3	15.0	27.6	2.6	0.9	25.5	19.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	381	1101	493	129	842	377	571	1552	694	90	1057	473
V/C Ratio(X)	0.95	1.00	0.65	0.59	0.86	0.02	1.02	0.80	0.11	0.40	0.96	0.77
Avail Cap(c_a), veh/h	381	1101	493	152	861	385	571	1552	694	152	1057	473
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.5	30.7	26.4	42.4	32.5	25.9	37.3	21.6	14.6	42.9	30.7	28.5
Incr Delay (d2), s/veh	32.4	27.6	3.0	4.2	8.4	0.0	44.0	3.2	0.1	2.8	18.8	7.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	17.7	7.2	1.0	9.5	0.1	10.5	13.9	1.1	0.5	15.0	9.2
LnGrp Delay(d),s/veh	71.8	58.3	29.4	46.6	40.9	25.9	81.2	24.8	14.7	45.7	49.5	36.3
LnGrp LOS	E	F	C	D	D	C	F	C	B	D	D	D
Approach Vol, veh/h		1782			803			1911			1417	
Approach Delay, s/veh		55.8			41.3			41.6			46.0	
Approach LOS		E			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	43.6	7.4	32.1	19.0	31.0	14.0	25.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	38.0	4.0	28.0	15.0	27.0	10.0	22.0
Max Q Clear Time (g_c+I1), s	2.9	29.6	4.0	30.1	17.0	27.5	11.4	19.6
Green Ext Time (p_c), s	0.0	7.6	0.0	0.0	0.0	0.0	0.0	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	46.9
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	197	2455	461	29	2171	209	136	74	18	322	185	183
Future Volume (veh/h)	197	2455	461	29	2171	209	136	74	18	322	185	183
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	197	2455	461	29	2171	209	136	74	18	322	185	183
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	145	1913	348	37	1891	179	158	158	135	241	246	209
Arrive On Green	0.08	0.65	0.65	0.02	0.58	0.58	0.09	0.09	0.09	0.14	0.13	0.13
Sat Flow, veh/h	1757	2963	539	1757	3236	307	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	197	1421	1495	29	1159	1221	136	74	18	322	185	183
Grp Sat Flow(s),veh/h/ln	1757	1752	1749	1757	1752	1791	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	12.0	94.0	94.0	2.4	85.0	85.0	11.1	5.6	1.5	20.0	14.1	16.7
Cycle Q Clear(g_c), s	12.0	94.0	94.0	2.4	85.0	85.0	11.1	5.6	1.5	20.0	14.1	16.7
Prop In Lane	1.00		0.31	1.00		0.17	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	145	1132	1130	37	1024	1046	158	158	135	241	246	209
V/C Ratio(X)	1.36	1.26	1.32	0.79	1.13	1.17	0.86	0.47	0.13	1.33	0.75	0.88
Avail Cap(c_a), veh/h	145	1132	1130	48	1024	1046	181	216	183	241	279	237
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.8	25.8	25.8	70.9	30.3	30.3	65.3	63.3	61.5	62.8	60.7	61.9
Incr Delay (d2), s/veh	199.9	122.2	151.8	46.7	72.1	85.6	29.0	2.1	0.4	175.5	9.7	26.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.8	83.4	92.5	1.6	61.5	66.7	6.7	2.9	0.7	21.4	7.9	8.8
LnGrp Delay(d),s/veh	266.6	148.0	177.6	117.7	102.3	115.9	94.3	65.5	61.9	238.3	70.4	88.4
LnGrp LOS	F	F	F	F	F	F	F	E	E	F	E	F
Approach Vol, veh/h		3113			2409			228			690	
Approach Delay, s/veh		169.7			109.4			82.4			153.5	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.0	16.5	7.0	98.0	17.1	23.4	16.0	89.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	20.0	17.0	4.0	93.0	15.0	22.0	12.0	85.0
Max Q Clear Time (g_c+I1), s	22.0	7.6	4.4	96.0	13.1	18.7	14.0	87.0
Green Ext Time (p_c), s	0.0	1.5	0.0	0.0	0.1	0.7	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	142.3
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1359	1132	620	2	717	295	606	1236	5	376	1582	768
Future Volume (veh/h)	1359	1132	620	2	717	295	606	1236	5	376	1582	768
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	1359	1132	620	2	717	295	606	1236	5	376	1582	768
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	1101	2236	696	7	620	193	498	1540	479	426	1433	446
Arrive On Green	0.32	0.44	0.44	0.00	0.12	0.12	0.15	0.31	0.31	0.12	0.28	0.28
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	1359	1132	620	2	717	295	606	1236	5	376	1582	768
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	42.0	21.0	47.3	0.1	16.0	16.0	19.0	29.4	0.3	14.1	37.0	37.0
Cycle Q Clear(g_c), s	42.0	21.0	47.3	0.1	16.0	16.0	19.0	29.4	0.3	14.1	37.0	37.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1101	2236	696	7	620	193	498	1540	479	426	1433	446
V/C Ratio(X)	1.23	0.51	0.89	0.27	1.16	1.53	1.22	0.80	0.01	0.88	1.10	1.72
Avail Cap(c_a), veh/h	1101	2236	696	105	620	193	498	1540	479	446	1433	446
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.0	25.9	33.2	64.8	57.0	57.0	55.5	41.5	31.4	55.9	46.5	46.5
Incr Delay (d2), s/veh	113.4	0.2	13.6	19.0	87.8	262.4	114.7	3.2	0.0	17.9	57.5	333.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	37.1	9.7	23.0	0.1	12.4	21.0	16.9	14.1	0.1	7.7	24.8	57.4
LnGrp Delay(d),s/veh	157.4	26.1	46.9	83.7	144.8	319.4	170.2	44.7	31.4	73.8	104.0	380.3
LnGrp LOS	F	C	D	F	F	F	F	D	C	E	F	F
Approach Vol, veh/h		3111			1014			1847			2726	
Approach Delay, s/veh		87.6			195.5			85.8			177.7	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.2	43.8	4.3	61.7	23.0	41.0	46.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	17.0	39.0	4.0	54.0	19.0	37.0	42.0	16.0
Max Q Clear Time (g_c+I1), s	16.1	31.4	2.1	49.3	21.0	39.0	44.0	18.0
Green Ext Time (p_c), s	0.1	7.4	0.0	4.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	128.0
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	986	643	205	657	673	338	490	391	785	976	0
Future Volume (veh/h)	0	986	643	205	657	673	338	490	391	785	976	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	0	986	643	205	657	673	338	490	391	785	976	0
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	5	1276	397	227	1880	585	409	794	355	818	1215	544
Arrive On Green	0.00	0.25	0.25	0.07	0.37	0.37	0.12	0.23	0.23	0.24	0.35	0.00
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	0	986	643	205	657	673	338	490	391	785	976	0
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	0.0	13.6	19.0	4.5	7.1	28.0	7.3	9.4	17.0	17.1	18.9	0.0
Cycle Q Clear(g_c), s	0.0	13.6	19.0	4.5	7.1	28.0	7.3	9.4	17.0	17.1	18.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	5	1276	397	227	1880	585	409	794	355	818	1215	544
V/C Ratio(X)	0.00	0.77	1.62	0.90	0.35	1.15	0.83	0.62	1.10	0.96	0.80	0.00
Avail Cap(c_a), veh/h	182	1276	397	227	1880	585	409	794	355	818	1215	544
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	26.0	28.0	34.8	16.9	23.5	32.2	26.1	29.0	28.1	22.2	0.0
Incr Delay (d2), s/veh	0.0	3.0	289.8	34.6	0.1	85.9	13.1	1.4	77.4	22.1	4.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.7	40.1	3.2	3.2	26.0	4.2	4.7	15.0	10.5	9.8	0.0
LnGrp Delay(d),s/veh	0.0	29.0	317.8	69.4	17.0	109.4	45.3	27.5	106.4	50.3	26.2	0.0
LnGrp LOS		C	F	E	B	F	D	C	F	D	C	
Approach Vol, veh/h		1629			1535			1219			1761	
Approach Delay, s/veh		143.0			64.5			57.8			36.9	
Approach LOS		F			E			E			D	

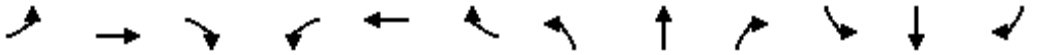
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	21.0	9.0	23.0	13.0	30.0	0.0	32.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	18.0	17.0	5.0	19.0	9.0	26.0	4.0	20.0
Max Q Clear Time (g_c+I1), s	19.1	19.0	6.5	21.0	9.3	20.9	0.0	30.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	76.1
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	211	197	25	100	88	481	17	537	147	885	912	32
Future Volume (veh/h)	211	197	25	100	88	481	17	537	147	885	912	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	211	197	25	100	88	481	17	537	147	885	912	32
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	234	840	376	167	771	345	54	729	326	966	1666	745
Arrive On Green	0.07	0.24	0.24	0.05	0.22	0.22	0.02	0.21	0.21	0.28	0.48	0.48
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	211	197	25	100	88	481	17	537	147	885	912	32
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	4.5	3.3	0.9	2.1	1.5	16.0	0.4	10.4	6.0	18.3	13.4	0.8
Cycle Q Clear(g_c), s	4.5	3.3	0.9	2.1	1.5	16.0	0.4	10.4	6.0	18.3	13.4	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	234	840	376	167	771	345	54	729	326	966	1666	745
V/C Ratio(X)	0.90	0.23	0.07	0.60	0.11	1.39	0.31	0.74	0.45	0.92	0.55	0.04
Avail Cap(c_a), veh/h	234	840	376	234	771	345	187	819	366	984	1666	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.6	22.3	21.4	33.9	22.7	28.4	35.4	26.9	25.2	25.2	13.5	10.2
Incr Delay (d2), s/veh	33.6	0.1	0.1	3.4	0.1	194.3	3.2	3.1	1.0	12.9	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	1.6	0.4	1.1	0.7	25.5	0.2	5.3	2.6	10.3	6.5	0.3
LnGrp Delay(d),s/veh	67.2	22.4	21.4	37.3	22.8	222.7	38.6	30.0	26.1	38.1	13.9	10.2
LnGrp LOS	E	C	C	D	C	F	D	C	C	D	B	B
Approach Vol, veh/h		433			669			701			1829	
Approach Delay, s/veh		44.2			168.7			29.4			25.5	
Approach LOS		D			F			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.6	19.1	7.6	21.4	5.2	38.6	9.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	21.0	17.0	5.0	16.0	4.0	34.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	20.3	12.4	4.1	5.3	2.4	15.4	6.5	18.0
Green Ext Time (p_c), s	0.3	2.7	0.0	2.9	0.0	10.5	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	54.9
HCM 2010 LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	242	687	200	27	513	115	134	352	24	228	497	147
Future Volume (veh/h)	242	687	200	27	513	115	134	352	24	228	497	147
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	242	687	200	27	513	115	134	352	24	228	497	147
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	366	1342	600	82	1051	470	223	781	349	347	909	407
Arrive On Green	0.11	0.38	0.38	0.02	0.30	0.30	0.07	0.22	0.22	0.10	0.26	0.26
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	242	687	200	27	513	115	134	352	24	228	497	147
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	4.1	9.0	5.4	0.5	7.2	3.3	2.3	5.2	0.7	3.8	7.3	4.6
Cycle Q Clear(g_c), s	4.1	9.0	5.4	0.5	7.2	3.3	2.3	5.2	0.7	3.8	7.3	4.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	366	1342	600	82	1051	470	223	781	349	347	909	407
V/C Ratio(X)	0.66	0.51	0.33	0.33	0.49	0.24	0.60	0.45	0.07	0.66	0.55	0.36
Avail Cap(c_a), veh/h	742	2056	920	228	1527	683	400	1351	604	685	1644	736
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.6	14.1	13.0	28.6	17.1	15.8	27.1	20.0	18.3	25.8	19.1	18.1
Incr Delay (d2), s/veh	2.1	0.3	0.3	2.3	0.4	0.3	2.6	0.4	0.1	2.1	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	4.4	2.4	0.2	3.5	1.5	1.2	2.5	0.3	1.9	3.6	2.0
LnGrp Delay(d),s/veh	27.6	14.4	13.3	30.9	17.5	16.1	29.7	20.4	18.4	27.9	19.6	18.6
LnGrp LOS	C	B	B	C	B	B	C	C	B	C	B	B
Approach Vol, veh/h		1129			655			510			872	
Approach Delay, s/veh		17.1			17.8			22.8			21.6	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.1	17.3	5.4	26.9	7.9	19.5	10.4	21.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	12.0	23.0	4.0	35.0	7.0	28.0	13.0	26.0
Max Q Clear Time (g_c+I1), s	5.8	7.2	2.5	11.0	4.3	9.3	6.1	9.2
Green Ext Time (p_c), s	0.4	5.7	0.0	10.5	0.1	6.2	0.5	8.7

Intersection Summary	
HCM 2010 Ctrl Delay	19.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	1083	499	43	994	98	169	48	31	202	212	51
Future Volume (veh/h)	117	1083	499	43	994	98	169	48	31	202	212	51
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	117	1083	499	43	994	98	169	48	31	202	212	51
Adj No. of Lanes	1	2	1	1	2	1	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	149	1370	613	61	1196	535	212	265	225	248	302	257
Arrive On Green	0.08	0.39	0.39	0.03	0.34	0.34	0.12	0.14	0.14	0.14	0.16	0.16
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	117	1083	499	43	994	98	169	48	31	202	212	51
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	3.6	15.1	15.7	1.3	14.4	2.4	5.2	1.3	1.0	6.2	6.0	1.6
Cycle Q Clear(g_c), s	3.6	15.1	15.7	1.3	14.4	2.4	5.2	1.3	1.0	6.2	6.0	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	149	1370	613	61	1196	535	212	265	225	248	302	257
V/C Ratio(X)	0.79	0.79	0.81	0.70	0.83	0.18	0.80	0.18	0.14	0.81	0.70	0.20
Avail Cap(c_a), veh/h	159	1370	613	127	1268	567	254	534	454	254	534	454
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.8	14.8	15.0	26.4	16.7	12.8	23.6	20.8	20.7	23.0	21.8	20.0
Incr Delay (d2), s/veh	21.4	3.2	8.3	13.4	4.6	0.2	13.7	0.3	0.3	17.8	2.9	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	7.8	8.2	0.9	7.7	1.1	3.3	0.7	0.4	4.2	3.3	0.7
LnGrp Delay(d),s/veh	46.2	18.1	23.3	39.8	21.4	13.0	37.4	21.1	21.0	40.9	24.8	20.3
LnGrp LOS	D	B	C	D	C	B	D	C	C	D	C	C
Approach Vol, veh/h		1699			1135			248			465	
Approach Delay, s/veh		21.5			21.3			32.2			31.3	
Approach LOS		C			C			C			C	

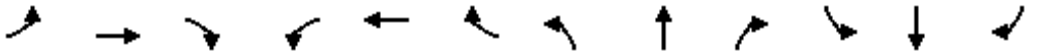
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.8	11.9	5.9	25.6	10.7	13.1	8.7	22.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	16.0	4.0	21.0	8.0	16.0	5.0	20.0
Max Q Clear Time (g_c+I1), s	8.2	3.3	3.3	17.7	7.2	8.0	5.6	16.4
Green Ext Time (p_c), s	0.0	1.4	0.0	3.1	0.0	1.1	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	23.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	308	164	132	173	31	207	71	30	230	206	18
Future Volume (veh/h)	46	308	164	132	173	31	207	71	30	230	206	18
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	46	308	164	132	173	31	207	71	30	230	206	18
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	68	444	377	151	439	79	258	209	88	283	306	27
Arrive On Green	0.04	0.24	0.24	0.09	0.29	0.29	0.15	0.17	0.17	0.16	0.18	0.18
Sat Flow, veh/h	1757	1845	1568	1757	1523	273	1757	1232	521	1757	1673	146
Grp Volume(v), veh/h	46	308	164	132	0	204	207	0	101	230	0	224
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1796	1757	0	1753	1757	0	1819
Q Serve(g_s), s	1.2	7.1	4.1	3.5	0.0	4.2	5.3	0.0	2.4	5.9	0.0	5.3
Cycle Q Clear(g_c), s	1.2	7.1	4.1	3.5	0.0	4.2	5.3	0.0	2.4	5.9	0.0	5.3
Prop In Lane	1.00		1.00	1.00		0.15	1.00		0.30	1.00		0.08
Lane Grp Cap(c), veh/h	68	444	377	151	0	517	258	0	297	283	0	333
V/C Ratio(X)	0.68	0.69	0.43	0.87	0.00	0.39	0.80	0.00	0.34	0.81	0.00	0.67
Avail Cap(c_a), veh/h	151	634	539	151	0	617	302	0	602	302	0	625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.1	16.1	15.0	21.0	0.0	13.3	19.2	0.0	17.1	18.9	0.0	17.7
Incr Delay (d2), s/veh	11.3	2.0	0.8	39.4	0.0	0.5	12.6	0.0	0.7	14.8	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	3.8	1.9	3.3	0.0	2.2	3.4	0.0	1.2	4.0	0.0	2.9
LnGrp Delay(d),s/veh	33.4	18.1	15.8	60.5	0.0	13.8	31.8	0.0	17.7	33.7	0.0	20.1
LnGrp LOS	C	B	B	E		B	C		B	C		C
Approach Vol, veh/h		518			336			308			454	
Approach Delay, s/veh		18.7			32.2			27.2			27.0	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	11.9	8.0	15.2	10.8	12.5	5.8	17.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	16.0	4.0	16.0	8.0	16.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	7.9	4.4	5.5	9.1	7.3	7.3	3.2	6.2
Green Ext Time (p_c), s	0.0	1.4	0.0	2.1	0.0	1.2	0.0	2.6

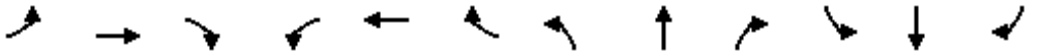
Intersection Summary	
HCM 2010 Ctrl Delay	25.4
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	258	0	0	386	193	0	0	0	547	0	0
Future Volume (veh/h)	0	258	0	0	386	193	0	0	0	547	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	0	258	0	0	386	193	0	0	0	547	0	0
Adj No. of Lanes	2	2	1	1	2	1	1	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	15	1236	553	8	1236	553	8	8	7	988	535	455
Arrive On Green	0.00	0.35	0.00	0.00	0.35	0.35	0.00	0.00	0.00	0.29	0.00	0.00
Sat Flow, veh/h	3408	3505	1568	1757	3505	1568	1757	1845	1568	3408	1845	1568
Grp Volume(v), veh/h	0	258	0	0	386	193	0	0	0	547	0	0
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1757	1752	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	0.0	1.2	0.0	0.0	1.8	2.0	0.0	0.0	0.0	3.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	1.2	0.0	0.0	1.8	2.0	0.0	0.0	0.0	3.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	15	1236	553	8	1236	553	8	8	7	988	535	455
V/C Ratio(X)	0.00	0.21	0.00	0.00	0.31	0.35	0.00	0.00	0.00	0.55	0.00	0.00
Avail Cap(c_a), veh/h	609	2505	1120	314	2505	1120	314	1401	1190	2588	2472	2101
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	5.1	0.0	0.0	5.3	5.3	0.0	0.0	0.0	6.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.1	0.4	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.6	0.0	0.0	0.9	0.9	0.0	0.0	0.0	1.4	0.0	0.0
LnGrp Delay(d),s/veh	0.0	5.1	0.0	0.0	5.4	5.7	0.0	0.0	0.0	7.2	0.0	0.0
LnGrp LOS		A			A	A				A		
Approach Vol, veh/h		258			579			0			547	
Approach Delay, s/veh		5.1			5.5			0.0			7.2	
Approach LOS		A			A						A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	0.0	0.0	11.9	0.0	10.5	0.0	11.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	17.0	17.0	4.0	16.0	4.0	30.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	5.0	0.0	0.0	3.2	0.0	0.0	0.0	4.0
Green Ext Time (p_c), s	1.7	0.0	0.0	4.1	0.0	0.0	0.0	3.9

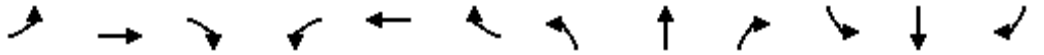
Intersection Summary	
HCM 2010 Ctrl Delay	6.1
HCM 2010 LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	5	34	162	21	69	55	1124	63	134	1213	107
Future Volume (veh/h)	48	5	34	162	21	69	55	1124	63	134	1213	107
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	48	5	34	162	21	69	55	1124	63	134	1213	107
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	58	106	90	203	258	219	67	1505	84	170	1643	145
Arrive On Green	0.03	0.06	0.06	0.12	0.14	0.14	0.04	0.45	0.45	0.10	0.50	0.50
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	3375	189	1757	3259	287
Grp Volume(v), veh/h	48	5	34	162	21	69	55	583	604	134	651	669
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1811	1757	1752	1794
Q Serve(g_s), s	1.5	0.1	1.2	5.1	0.6	2.2	1.7	15.6	15.6	4.2	16.5	16.6
Cycle Q Clear(g_c), s	1.5	0.1	1.2	5.1	0.6	2.2	1.7	15.6	15.6	4.2	16.5	16.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		0.16
Lane Grp Cap(c), veh/h	58	106	90	203	258	219	67	781	808	170	883	904
V/C Ratio(X)	0.82	0.05	0.38	0.80	0.08	0.31	0.81	0.75	0.75	0.79	0.74	0.74
Avail Cap(c_a), veh/h	187	492	418	219	525	446	94	810	837	187	903	925
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.0	25.0	25.5	24.3	21.1	21.8	26.9	12.9	13.0	24.9	11.0	11.0
Incr Delay (d2), s/veh	23.8	0.2	2.6	17.5	0.1	0.8	30.4	3.7	3.6	18.5	3.1	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.1	0.6	3.4	0.3	1.0	1.4	8.3	8.5	2.9	8.5	9.0
LnGrp Delay(d),s/veh	50.8	25.2	28.1	41.8	21.2	22.6	57.2	16.6	16.5	43.3	14.1	14.2
LnGrp LOS	D	C	C	D	C	C	E	B	B	D	B	B
Approach Vol, veh/h		87			252			1242			1454	
Approach Delay, s/veh		40.5			34.8			18.4			16.8	
Approach LOS		D			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	29.1	10.5	7.2	6.2	32.4	5.9	11.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	26.0	7.0	15.0	3.0	29.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	6.2	17.6	7.1	3.2	3.7	18.6	3.5	4.2
Green Ext Time (p_c), s	0.0	7.5	0.0	0.3	0.0	9.1	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	19.6
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	9	98	52	7	122	36	1123	108	62	1182	53
Future Volume (veh/h)	90	9	98	52	7	122	36	1123	108	62	1182	53
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	90	9	98	52	7	122	36	1123	108	62	1182	53
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	114	266	226	64	213	181	43	1656	159	78	1819	82
Arrive On Green	0.07	0.14	0.14	0.04	0.12	0.12	0.02	0.51	0.51	0.04	0.53	0.53
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	3232	310	1757	3417	153
Grp Volume(v), veh/h	90	9	98	52	7	122	36	608	623	62	606	629
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1790	1757	1752	1818
Q Serve(g_s), s	3.1	0.3	3.5	1.8	0.2	4.5	1.2	15.8	15.8	2.1	15.0	15.1
Cycle Q Clear(g_c), s	3.1	0.3	3.5	1.8	0.2	4.5	1.2	15.8	15.8	2.1	15.0	15.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.17	1.00		0.08
Lane Grp Cap(c), veh/h	114	266	226	64	213	181	43	898	917	78	933	967
V/C Ratio(X)	0.79	0.03	0.43	0.81	0.03	0.68	0.84	0.68	0.68	0.80	0.65	0.65
Avail Cap(c_a), veh/h	116	485	412	116	485	412	87	980	1001	144	1037	1076
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.0	22.4	23.8	29.1	23.9	25.8	29.6	11.1	11.1	28.8	10.2	10.2
Incr Delay (d2), s/veh	29.1	0.1	1.3	21.1	0.1	4.3	33.4	1.7	1.7	16.9	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.1	1.6	1.2	0.1	2.2	1.0	7.9	8.2	1.4	7.6	7.8
LnGrp Delay(d),s/veh	57.1	22.4	25.1	50.2	24.0	30.2	62.9	12.8	12.8	45.7	11.4	11.4
LnGrp LOS	E	C	C	D	C	C	E	B	B	D	B	B
Approach Vol, veh/h		197			181			1267			1297	
Approach Delay, s/veh		39.6			35.7			14.2			13.0	
Approach LOS		D			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.7	35.2	6.2	12.8	5.5	36.4	8.0	11.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	34.0	4.0	16.0	3.0	36.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	4.1	17.8	3.8	5.5	3.2	17.1	5.1	6.5
Green Ext Time (p_c), s	0.0	13.3	0.0	0.6	0.0	15.2	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	16.7
HCM 2010 LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1465	45	221	867	64	104
Future Volume (veh/h)	1465	45	221	867	64	104
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1900	1845	1845	1845	1845
Adj Flow Rate, veh/h	1465	45	221	867	64	104
Adj No. of Lanes	2	0	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	2922	90	314	2950	150	134
Arrive On Green	0.84	0.84	0.84	0.84	0.09	0.09
Sat Flow, veh/h	3564	106	342	3597	1757	1568
Grp Volume(v), veh/h	738	772	221	867	64	104
Grp Sat Flow(s),veh/h/ln	1752	1826	342	1752	1757	1568
Q Serve(g_s), s	12.7	12.7	55.1	5.7	3.8	7.1
Cycle Q Clear(g_c), s	12.7	12.7	67.8	5.7	3.8	7.1
Prop In Lane		0.06	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1475	1537	314	2950	150	134
V/C Ratio(X)	0.50	0.50	0.70	0.29	0.43	0.78
Avail Cap(c_a), veh/h	1533	1598	325	3067	256	229
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	2.4	2.4	11.7	1.8	47.6	49.1
Incr Delay (d2), s/veh	0.3	0.3	6.5	0.1	1.9	9.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	6.3	5.7	2.7	1.9	3.4
LnGrp Delay(d),s/veh	2.6	2.6	18.2	1.9	49.5	58.4
LnGrp LOS	A	A	B	A	D	E
Approach Vol, veh/h	1510			1088	168	
Approach Delay, s/veh	2.6			5.2	55.0	
Approach LOS	A			A	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		13.4		96.3				96.3
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		16.0		96.0				96.0
Max Q Clear Time (g_c+I1), s		9.1		14.7				69.8
Green Ext Time (p_c), s		0.2		54.3				22.6

Intersection Summary	
HCM 2010 Ctrl Delay	6.8
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	2701	0	68	2249	0	0	4	83	128	0	0
Future Volume (veh/h)	147	2701	0	68	2249	0	0	4	83	128	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	147	2701	0	68	2249	0	0	4	83	128	0	0
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	175	2950	0	87	2697	0	2	144	123	153	397	338
Arrive On Green	0.10	0.59	0.00	0.05	0.54	0.00	0.00	0.08	0.08	0.09	0.00	0.00
Sat Flow, veh/h	1757	5202	0	1757	5202	0	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	147	2701	0	68	2249	0	0	4	83	128	0	0
Grp Sat Flow(s),veh/h/ln	1757	1679	0	1757	1679	0	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	6.6	38.4	0.0	3.1	30.1	0.0	0.0	0.2	4.1	5.8	0.0	0.0
Cycle Q Clear(g_c), s	6.6	38.4	0.0	3.1	30.1	0.0	0.0	0.2	4.1	5.8	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	175	2950	0	87	2697	0	2	144	123	153	397	338
V/C Ratio(X)	0.84	0.92	0.00	0.78	0.83	0.00	0.00	0.03	0.68	0.84	0.00	0.00
Avail Cap(c_a), veh/h	175	2950	0	88	2699	0	66	368	313	153	460	391
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	35.5	14.8	0.0	37.7	15.6	0.0	0.0	34.2	36.0	36.0	0.0	0.0
Incr Delay (d2), s/veh	28.7	5.1	0.0	35.9	2.4	0.0	0.0	0.1	6.4	31.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	18.9	0.0	2.4	14.3	0.0	0.0	0.1	2.0	4.1	0.0	0.0
LnGrp Delay(d),s/veh	64.2	19.9	0.0	73.6	18.0	0.0	0.0	34.2	42.4	67.1	0.0	0.0
LnGrp LOS	E	B		E	B			C	D	E		
Approach Vol, veh/h		2848			2317			87			128	
Approach Delay, s/veh		22.2			19.7			42.0			67.1	
Approach LOS		C			B			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	10.3	8.0	51.0	0.0	21.3	12.0	47.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	16.0	4.0	47.0	3.0	20.0	8.0	43.0
Max Q Clear Time (g_c+I1), s	7.8	6.1	5.1	40.4	0.0	0.0	8.6	32.1
Green Ext Time (p_c), s	0.0	0.1	0.0	6.6	0.0	0.0	0.0	10.9

Intersection Summary	
HCM 2010 Ctrl Delay	22.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	314	1972	703	216	1299	0	621	518	228	86	613	276
Future Volume (veh/h)	314	1972	703	216	1299	0	621	518	228	86	613	276
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	314	1972	703	216	1299	0	621	518	228	86	613	276
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	365	1743	543	184	1475	459	551	767	652	107	582	495
Arrive On Green	0.11	0.35	0.35	0.05	0.29	0.00	0.16	0.42	0.42	0.06	0.32	0.32
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	314	1972	703	216	1299	0	621	518	228	86	613	276
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1845	1568	1757	1845	1568
Q Serve(g_s), s	11.8	45.0	45.0	7.0	32.0	0.0	21.0	29.6	12.9	6.3	41.0	19.0
Cycle Q Clear(g_c), s	11.8	45.0	45.0	7.0	32.0	0.0	21.0	29.6	12.9	6.3	41.0	19.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	365	1743	543	184	1475	459	551	767	652	107	582	495
V/C Ratio(X)	0.86	1.13	1.30	1.18	0.88	0.00	1.13	0.68	0.35	0.80	1.05	0.56
Avail Cap(c_a), veh/h	393	1743	543	184	1475	459	551	767	652	122	582	495
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.1	42.5	42.5	61.5	43.8	0.0	54.5	30.8	25.9	60.3	44.5	37.0
Incr Delay (d2), s/veh	16.4	66.9	146.1	122.2	6.5	0.0	78.7	2.4	0.3	28.2	52.2	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	31.6	41.5	6.4	15.7	0.0	15.9	15.6	5.6	3.9	29.3	8.4
LnGrp Delay(d),s/veh	73.5	109.4	188.6	183.7	50.3	0.0	133.2	33.2	26.3	88.4	96.7	38.4
LnGrp LOS	E	F	F	F	D		F	C	C	F	F	D
Approach Vol, veh/h		2989			1515			1367			975	
Approach Delay, s/veh		124.3			69.3			77.4			79.5	
Approach LOS		F			E			E			E	

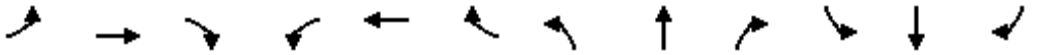
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	58.1	11.0	49.0	25.0	45.0	17.9	42.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	9.0	53.0	7.0	45.0	21.0	41.0	15.0	37.0
Max Q Clear Time (g_c+I1), s	8.3	31.6	9.0	47.0	23.0	43.0	13.8	34.0
Green Ext Time (p_c), s	0.0	10.1	0.0	0.0	0.0	0.0	0.2	3.0

Intersection Summary	
HCM 2010 Ctrl Delay	96.4
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	2103	43	46	1213	3	159	0	0	3	1	21
Future Volume (veh/h)	50	2103	43	46	1213	3	159	0	0	3	1	21
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	50	2103	43	46	1213	3	159	0	0	3	1	21
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	61	2685	55	56	2725	7	199	299	255	4	95	81
Arrive On Green	0.03	0.53	0.53	0.03	0.53	0.53	0.11	0.00	0.00	0.00	0.05	0.05
Sat Flow, veh/h	1757	5080	104	1757	5187	13	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	50	1389	757	46	785	431	159	0	0	3	1	21
Grp Sat Flow(s),veh/h/ln	1757	1679	1826	1757	1679	1842	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	1.6	19.4	19.4	1.5	8.4	8.4	5.1	0.0	0.0	0.1	0.0	0.7
Cycle Q Clear(g_c), s	1.6	19.4	19.4	1.5	8.4	8.4	5.1	0.0	0.0	0.1	0.0	0.7
Prop In Lane	1.00		0.06	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	61	1774	965	56	1764	968	199	299	255	4	95	81
V/C Ratio(X)	0.82	0.78	0.78	0.83	0.45	0.45	0.80	0.00	0.00	0.70	0.01	0.26
Avail Cap(c_a), veh/h	181	1847	1005	91	1764	968	211	666	566	91	539	458
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.9	11.0	11.0	28.0	8.6	8.6	25.2	0.0	0.0	29.0	26.2	26.5
Incr Delay (d2), s/veh	22.3	2.2	4.0	26.3	0.2	0.3	18.3	0.0	0.0	114.4	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	9.4	10.7	1.1	3.9	4.3	3.5	0.0	0.0	0.2	0.0	0.4
LnGrp Delay(d),s/veh	50.1	13.2	15.0	54.3	8.7	8.9	43.5	0.0	0.0	143.4	26.2	28.2
LnGrp LOS	D	B	B	D	A	A	D			F	C	C
Approach Vol, veh/h		2196			1262			159			25	
Approach Delay, s/veh		14.7			10.4			43.5			42.0	
Approach LOS		B			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.1	13.4	5.8	34.7	10.6	7.0	6.0	34.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	21.0	3.0	32.0	7.0	17.0	6.0	29.0
Max Q Clear Time (g_c+I1), s	2.1	0.0	3.5	21.4	7.1	2.7	3.6	10.4
Green Ext Time (p_c), s	0.0	0.0	0.0	9.3	0.0	0.0	0.0	17.4

Intersection Summary		
HCM 2010 Ctrl Delay		14.7
HCM 2010 LOS		B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	1945	77	99	1127	23	88	8	105	35	18	46
Future Volume (veh/h)	82	1945	77	99	1127	23	88	8	105	35	18	46
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	82	1945	77	99	1127	23	88	8	105	35	18	46
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	104	2452	97	126	2568	52	111	210	179	41	136	116
Arrive On Green	0.06	0.49	0.49	0.07	0.51	0.51	0.06	0.11	0.11	0.02	0.07	0.07
Sat Flow, veh/h	1757	4971	196	1757	5080	104	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	82	1312	710	99	745	405	88	8	105	35	18	46
Grp Sat Flow(s),veh/h/ln	1757	1679	1810	1757	1679	1826	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	2.5	17.5	17.5	3.0	7.6	7.6	2.7	0.2	3.4	1.1	0.5	1.5
Cycle Q Clear(g_c), s	2.5	17.5	17.5	3.0	7.6	7.6	2.7	0.2	3.4	1.1	0.5	1.5
Prop In Lane	1.00		0.11	1.00		0.06	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	104	1656	893	126	1697	923	111	210	179	41	136	116
V/C Ratio(X)	0.79	0.79	0.79	0.79	0.44	0.44	0.79	0.04	0.59	0.86	0.13	0.40
Avail Cap(c_a), veh/h	262	1751	944	164	1697	923	131	584	496	131	584	496
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.9	11.3	11.3	24.5	8.4	8.4	24.8	21.2	22.6	26.1	23.3	23.7
Incr Delay (d2), s/veh	12.2	2.5	4.5	17.2	0.2	0.3	23.8	0.1	3.1	36.4	0.4	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	8.6	9.8	2.0	3.5	3.8	2.0	0.1	1.6	0.9	0.3	0.7
LnGrp Delay(d),s/veh	37.1	13.8	15.9	41.7	8.6	8.8	48.6	21.2	25.6	62.6	23.7	25.9
LnGrp LOS	D	B	B	D	A	A	D	C	C	E	C	C
Approach Vol, veh/h		2104			1249			201			99	
Approach Delay, s/veh		15.4			11.3			35.5			38.5	
Approach LOS		B			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.2	10.1	7.8	30.5	7.4	8.0	7.2	31.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	17.0	5.0	28.0	4.0	17.0	8.0	25.0
Max Q Clear Time (g_c+I1), s	3.1	5.4	5.0	19.5	4.7	3.5	4.5	9.6
Green Ext Time (p_c), s	0.0	0.4	0.0	6.9	0.0	0.5	0.0	14.4

Intersection Summary	
HCM 2010 Ctrl Delay	15.7
HCM 2010 LOS	B



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	72	319	286	1541	2818	47
Future Volume (veh/h)	72	319	286	1541	2818	47
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	72	319	286	1541	2818	47
Adj No. of Lanes	1	1	1	3	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	293	261	293	3749	2721	45
Arrive On Green	0.17	0.17	0.17	0.74	0.53	0.53
Sat Flow, veh/h	1757	1568	1757	5202	5268	85
Grp Volume(v), veh/h	72	319	286	1541	1849	1016
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1679	1679	1830
Q Serve(g_s), s	3.2	15.0	14.6	10.1	48.0	48.0
Cycle Q Clear(g_c), s	3.2	15.0	14.6	10.1	48.0	48.0
Prop In Lane	1.00	1.00	1.00			0.05
Lane Grp Cap(c), veh/h	293	261	293	3749	1791	976
V/C Ratio(X)	0.25	1.22	0.98	0.41	1.03	1.04
Avail Cap(c_a), veh/h	293	261	293	3749	1791	976
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.6	37.5	37.3	4.2	21.0	21.0
Incr Delay (d2), s/veh	0.4	128.7	46.1	0.1	30.2	39.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	21.2	10.8	4.6	29.4	34.7
LnGrp Delay(d),s/veh	33.0	166.2	83.4	4.3	51.2	60.9
LnGrp LOS	C	F	F	A	F	F
Approach Vol, veh/h	391			1827	2865	
Approach Delay, s/veh	141.7			16.7	54.7	
Approach LOS	F			B	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		71.0		19.0	19.0	52.0		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		67.0		15.0	15.0	48.0		
Max Q Clear Time (g_c+I1), s		12.1		17.0	16.6	50.0		
Green Ext Time (p_c), s		53.2		0.0	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	47.7
HCM 2010 LOS	D

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	387	104	77	927	1355	198
Future Volume (veh/h)	387	104	77	927	1355	198
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	387	104	77	927	1355	198
Adj No. of Lanes	1	1	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	436	389	97	2156	1511	219
Arrive On Green	0.25	0.25	0.06	0.62	0.49	0.49
Sat Flow, veh/h	1757	1568	1757	3597	3166	445
Grp Volume(v), veh/h	387	104	77	927	768	785
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1752	1752	1766
Q Serve(g_s), s	12.4	3.1	2.5	8.1	23.2	23.9
Cycle Q Clear(g_c), s	12.4	3.1	2.5	8.1	23.2	23.9
Prop In Lane	1.00	1.00	1.00			0.25
Lane Grp Cap(c), veh/h	436	389	97	2156	861	868
V/C Ratio(X)	0.89	0.27	0.79	0.43	0.89	0.90
Avail Cap(c_a), veh/h	450	401	120	2212	867	874
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.2	17.7	27.4	5.9	13.5	13.6
Incr Delay (d2), s/veh	18.5	0.4	24.6	0.1	11.4	12.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	3.0	1.9	3.9	13.8	14.6
LnGrp Delay(d),s/veh	39.8	18.1	51.9	6.0	24.9	26.4
LnGrp LOS	D	B	D	A	C	C
Approach Vol, veh/h	491			1004	1553	
Approach Delay, s/veh	35.2			9.6	25.6	
Approach LOS	D			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		40.1		18.6	7.2	32.8		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		37.0		15.0	4.0	29.0		
Max Q Clear Time (g_c+I1), s		10.1		14.4	4.5	25.9		
Green Ext Time (p_c), s		21.0		0.1	0.0	2.9		

Intersection Summary	
HCM 2010 Ctrl Delay	21.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	851	822	72	1075	768	0	154	819	843	40	2036	759
Future Volume (veh/h)	851	822	72	1075	768	0	154	819	843	40	2036	759
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	851	822	72	1075	768	0	154	819	843	40	2036	759
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	839	701	314	918	782	350	105	1949	607	70	1898	591
Arrive On Green	0.25	0.20	0.20	0.27	0.22	0.00	0.03	0.39	0.39	0.02	0.38	0.38
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	851	822	72	1075	768	0	154	819	843	40	2036	759
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	32.0	26.0	5.0	35.0	28.3	0.0	4.0	15.5	50.3	1.5	49.0	49.0
Cycle Q Clear(g_c), s	32.0	26.0	5.0	35.0	28.3	0.0	4.0	15.5	50.3	1.5	49.0	49.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	839	701	314	918	782	350	105	1949	607	70	1898	591
V/C Ratio(X)	1.01	1.17	0.23	1.17	0.98	0.00	1.47	0.42	1.39	0.57	1.07	1.28
Avail Cap(c_a), veh/h	839	701	314	918	782	350	105	1949	607	79	1898	591
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.0	52.0	43.6	47.5	50.2	0.0	63.0	29.2	39.8	63.1	40.5	40.5
Incr Delay (d2), s/veh	34.7	92.4	0.4	88.8	27.7	0.0	255.3	0.1	185.1	7.5	43.3	140.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.1	21.6	2.2	27.8	16.8	0.0	5.6	7.2	52.9	0.8	30.3	44.2
LnGrp Delay(d),s/veh	83.7	144.4	44.0	136.3	78.0	0.0	318.3	29.3	224.9	70.5	83.8	181.0
LnGrp LOS	F	F	D	F	E		F	C	F	E	F	F
Approach Vol, veh/h		1745			1843			1816			2835	
Approach Delay, s/veh		110.6			112.0			144.6			109.6	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.7	54.3	39.0	30.0	8.0	53.0	36.0	33.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	50.0	35.0	26.0	4.0	49.0	32.0	29.0
Max Q Clear Time (g_c+I1), s	3.5	52.3	37.0	28.0	6.0	51.0	34.0	30.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	118.1
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	1183	77	61	1049	24	36	1	28	24	2	89
Future Volume (veh/h)	114	1183	77	61	1049	24	36	1	28	24	2	89
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	114	1183	77	61	1049	24	36	1	28	24	2	89
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	144	1606	104	74	1543	35	42	202	172	30	189	161
Arrive On Green	0.08	0.48	0.48	0.04	0.44	0.44	0.02	0.11	0.11	0.02	0.10	0.10
Sat Flow, veh/h	1757	3341	217	1757	3503	80	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	114	620	640	61	525	548	36	1	28	24	2	89
Grp Sat Flow(s),veh/h/ln	1757	1752	1806	1757	1752	1831	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	2.9	13.0	13.0	1.6	10.9	10.9	0.9	0.0	0.7	0.6	0.0	2.5
Cycle Q Clear(g_c), s	2.9	13.0	13.0	1.6	10.9	10.9	0.9	0.0	0.7	0.6	0.0	2.5
Prop In Lane	1.00		0.12	1.00		0.04	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	144	842	868	74	772	807	42	202	172	30	189	161
V/C Ratio(X)	0.79	0.74	0.74	0.82	0.68	0.68	0.85	0.00	0.16	0.79	0.01	0.55
Avail Cap(c_a), veh/h	192	883	910	115	806	842	115	606	515	115	606	515
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	9.5	9.5	21.7	10.2	10.2	22.2	18.1	18.4	22.4	18.4	19.5
Incr Delay (d2), s/veh	14.6	3.1	3.0	22.9	2.2	2.1	34.6	0.0	0.4	35.5	0.0	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	6.9	7.1	1.2	5.7	6.0	0.8	0.0	0.3	0.6	0.0	1.2
LnGrp Delay(d),s/veh	35.2	12.6	12.6	44.6	12.4	12.3	56.8	18.1	18.9	57.8	18.4	22.4
LnGrp LOS	D	B	B	D	B	B	E	B	B	E	B	C
Approach Vol, veh/h		1374			1134			65			115	
Approach Delay, s/veh		14.5			14.1			39.9			29.8	
Approach LOS		B			B			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.8	9.0	5.9	25.9	5.1	8.7	7.8	24.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	15.0	3.0	23.0	3.0	15.0	5.0	21.0
Max Q Clear Time (g_c+I1), s	2.6	2.7	3.6	15.0	2.9	4.5	4.9	12.9
Green Ext Time (p_c), s	0.0	0.2	0.0	6.9	0.0	0.2	0.0	7.0

Intersection Summary	
HCM 2010 Ctrl Delay	15.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	2098	75	56	1828	86	247	5	0	124	7	114
Future Volume (veh/h)	67	2098	75	56	1828	86	247	5	0	124	7	114
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	67	2098	75	56	1828	86	247	5	0	124	7	114
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	85	2480	88	71	2407	113	286	305	259	168	181	154
Arrive On Green	0.05	0.50	0.50	0.04	0.49	0.49	0.16	0.17	0.00	0.10	0.10	0.10
Sat Flow, veh/h	1757	4993	178	1757	4930	232	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	67	1409	764	56	1244	670	247	5	0	124	7	114
Grp Sat Flow(s),veh/h/ln	1757	1679	1813	1757	1679	1804	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	3.0	28.8	29.0	2.5	23.8	23.9	10.8	0.2	0.0	5.4	0.3	5.6
Cycle Q Clear(g_c), s	3.0	28.8	29.0	2.5	23.8	23.9	10.8	0.2	0.0	5.4	0.3	5.6
Prop In Lane	1.00		0.10	1.00		0.13	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	85	1668	901	71	1639	881	286	305	259	168	181	154
V/C Ratio(X)	0.78	0.84	0.85	0.79	0.76	0.76	0.86	0.02	0.00	0.74	0.04	0.74
Avail Cap(c_a), veh/h	133	1696	916	89	1639	881	311	396	337	288	373	317
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.2	17.3	17.3	37.7	16.5	16.5	32.3	27.6	0.0	34.8	32.3	34.7
Incr Delay (d2), s/veh	14.7	4.1	7.5	30.7	2.1	3.9	20.4	0.0	0.0	6.2	0.1	6.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	14.3	16.3	1.8	11.4	12.7	6.8	0.1	0.0	2.9	0.1	2.7
LnGrp Delay(d),s/veh	51.9	21.4	24.8	68.3	18.6	20.4	52.7	27.7	0.0	41.1	32.4	41.5
LnGrp LOS	D	C	C	E	B	C	D	C		D	C	D
Approach Vol, veh/h		2240			1970			252			245	
Approach Delay, s/veh		23.4			20.6			52.2			41.0	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.6	17.1	7.2	43.3	16.9	11.8	7.9	42.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	13.0	17.0	4.0	40.0	14.0	16.0	6.0	38.0
Max Q Clear Time (g_c+I1), s	7.4	2.2	4.5	31.0	12.8	7.6	5.0	25.9
Green Ext Time (p_c), s	0.1	0.3	0.0	8.3	0.1	0.2	0.0	11.9

Intersection Summary	
HCM 2010 Ctrl Delay	24.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	553	1543	1044	34	1123	23	851	743	59	86	732	392
Future Volume (veh/h)	553	1543	1044	34	1123	23	851	743	59	86	732	392
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	553	1543	1044	34	1123	23	851	743	59	86	732	392
Adj No. of Lanes	2	3	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	511	2134	664	61	1022	457	795	1352	605	134	672	301
Arrive On Green	0.15	0.42	0.42	0.02	0.29	0.29	0.23	0.39	0.39	0.04	0.19	0.19
Sat Flow, veh/h	3408	5036	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	553	1543	1044	34	1123	23	851	743	59	86	732	392
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	18.0	30.6	50.8	1.2	35.0	1.3	28.0	19.8	2.9	3.0	23.0	23.0
Cycle Q Clear(g_c), s	18.0	30.6	50.8	1.2	35.0	1.3	28.0	19.8	2.9	3.0	23.0	23.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	511	2134	664	61	1022	457	795	1352	605	134	672	301
V/C Ratio(X)	1.08	0.72	1.57	0.55	1.10	0.05	1.07	0.55	0.10	0.64	1.09	1.30
Avail Cap(c_a), veh/h	511	2134	664	85	1022	457	795	1352	605	170	672	301
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.0	28.7	34.6	58.4	42.5	30.6	46.0	28.7	23.5	56.8	48.5	48.5
Incr Delay (d2), s/veh	63.7	1.2	264.5	7.6	59.1	0.0	52.4	0.5	0.1	5.2	61.7	159.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.0	14.4	70.8	0.6	25.3	0.6	18.9	9.7	1.3	1.5	16.9	23.2
LnGrp Delay(d),s/veh	114.7	30.0	299.1	66.0	101.6	30.6	98.4	29.2	23.6	62.0	110.2	207.6
LnGrp LOS	F	C	F	E	F	C	F	C	C	E	F	F
Approach Vol, veh/h		3140			1180			1653			1210	
Approach Delay, s/veh		134.4			99.2			64.6			138.3	
Approach LOS		F			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	50.3	6.2	54.8	32.0	27.0	22.0	39.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	45.0	3.0	50.0	28.0	23.0	18.0	35.0
Max Q Clear Time (g_c+I1), s	5.0	21.8	3.2	52.8	30.0	25.0	20.0	37.0
Green Ext Time (p_c), s	0.0	13.4	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	113.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	431	974	91	119	569	169	47	376	36	223	960	311
Future Volume (veh/h)	431	974	91	119	569	169	47	376	36	223	960	311
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	431	974	91	119	569	169	47	376	36	223	960	311
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	471	1177	527	177	875	391	94	935	418	236	1081	484
Arrive On Green	0.14	0.34	0.34	0.05	0.25	0.25	0.03	0.27	0.27	0.07	0.31	0.31
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	431	974	91	119	569	169	47	376	36	223	960	311
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	7.2	14.8	2.4	2.0	8.4	5.2	0.8	5.1	1.0	3.8	15.1	9.9
Cycle Q Clear(g_c), s	7.2	14.8	2.4	2.0	8.4	5.2	0.8	5.1	1.0	3.8	15.1	9.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	471	1177	527	177	875	391	94	935	418	236	1081	484
V/C Ratio(X)	0.92	0.83	0.17	0.67	0.65	0.43	0.50	0.40	0.09	0.95	0.89	0.64
Avail Cap(c_a), veh/h	471	1211	542	177	908	406	177	1029	460	236	1090	488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	17.7	13.6	27.0	19.5	18.3	27.8	17.4	15.9	26.8	19.1	17.3
Incr Delay (d2), s/veh	22.5	4.8	0.2	9.6	1.6	0.8	4.1	0.3	0.1	44.0	9.1	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	7.8	1.0	1.2	4.2	2.4	0.4	2.5	0.4	3.2	8.6	4.6
LnGrp Delay(d),s/veh	47.1	22.5	13.7	36.6	21.0	19.0	31.9	17.7	16.0	70.8	28.2	20.1
LnGrp LOS	D	C	B	D	C	B	C	B	B	E	C	C
Approach Vol, veh/h		1496			857			459			1494	
Approach Delay, s/veh		29.0			22.8			19.0			32.9	
Approach LOS		C			C			B			C	

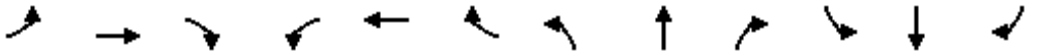
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	19.4	7.0	23.4	5.6	21.9	12.0	18.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	17.0	3.0	20.0	3.0	18.0	8.0	15.0
Max Q Clear Time (g_c+I1), s	5.8	7.1	4.0	16.8	2.8	17.1	9.2	10.4
Green Ext Time (p_c), s	0.0	6.7	0.0	2.6	0.0	0.8	0.0	3.7

Intersection Summary	
HCM 2010 Ctrl Delay	28.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	661	100	354	764	3	44	148	118	3	711	189
Future Volume (veh/h)	45	661	100	354	764	3	44	148	118	3	711	189
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	45	661	100	354	764	3	44	148	118	3	711	189
Adj No. of Lanes	2	1	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	82	725	616	417	1722	770	105	884	396	125	905	405
Arrive On Green	0.02	0.39	0.39	0.12	0.49	0.49	0.03	0.25	0.25	0.04	0.26	0.26
Sat Flow, veh/h	3408	1845	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	45	661	100	354	764	3	44	148	118	3	711	189
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	1.1	27.7	3.4	8.3	11.6	0.1	1.0	2.7	5.0	0.1	15.4	8.3
Cycle Q Clear(g_c), s	1.1	27.7	3.4	8.3	11.6	0.1	1.0	2.7	5.0	0.1	15.4	8.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	82	725	616	417	1722	770	105	884	396	125	905	405
V/C Ratio(X)	0.55	0.91	0.16	0.85	0.44	0.00	0.42	0.17	0.30	0.02	0.79	0.47
Avail Cap(c_a), veh/h	125	745	633	417	1722	770	167	884	396	626	1158	518
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	23.5	16.1	35.1	13.5	10.6	38.9	23.9	24.7	38.0	28.2	25.6
Incr Delay (d2), s/veh	5.6	15.3	0.1	15.1	0.2	0.0	2.6	0.1	0.4	0.1	2.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	17.0	1.5	4.8	5.6	0.0	0.5	1.3	2.2	0.0	7.8	3.7
LnGrp Delay(d),s/veh	45.1	38.8	16.2	50.3	13.7	10.6	41.5	23.9	25.1	38.0	31.0	26.4
LnGrp LOS	D	D	B	D	B	B	D	C	C	D	C	C
Approach Vol, veh/h		806			1121			310			903	
Approach Delay, s/veh		36.3			25.2			26.9			30.1	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	24.6	14.0	36.1	6.5	25.1	6.0	44.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	15.0	16.0	10.0	33.0	4.0	27.0	3.0	40.0
Max Q Clear Time (g_c+I1), s	2.1	7.0	10.3	29.7	3.0	17.4	3.1	13.6
Green Ext Time (p_c), s	0.0	4.5	0.0	2.4	0.0	3.7	0.0	12.2

Intersection Summary	
HCM 2010 Ctrl Delay	29.6
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	2168	47	170	1793	6	32	1488	251	14	1604	99
Future Volume (veh/h)	91	2168	47	170	1793	6	32	1488	251	14	1604	99
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	91	2168	47	170	1793	6	32	1488	251	14	1604	99
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	133	1995	621	160	2036	634	67	1534	686	40	1506	674
Arrive On Green	0.04	0.40	0.40	0.05	0.40	0.40	0.02	0.44	0.44	0.01	0.43	0.43
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	91	2168	47	170	1793	6	32	1488	251	14	1604	99
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	3.9	59.0	2.8	7.0	49.1	0.3	1.4	61.8	16.0	0.6	64.0	5.7
Cycle Q Clear(g_c), s	3.9	59.0	2.8	7.0	49.1	0.3	1.4	61.8	16.0	0.6	64.0	5.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	133	1995	621	160	2036	634	67	1534	686	40	1506	674
V/C Ratio(X)	0.69	1.09	0.08	1.06	0.88	0.01	0.48	0.97	0.37	0.35	1.07	0.15
Avail Cap(c_a), veh/h	137	1995	621	160	2036	634	92	1534	686	92	1506	674
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.7	45.0	28.0	71.0	41.0	26.5	72.2	40.9	28.0	73.0	42.5	25.9
Incr Delay (d2), s/veh	12.9	48.2	0.1	88.3	4.9	0.0	5.2	16.4	0.3	5.1	42.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	36.2	1.2	5.3	23.7	0.1	0.7	33.2	6.9	0.3	39.9	2.5
LnGrp Delay(d),s/veh	83.5	93.2	28.0	159.3	45.9	26.5	77.4	57.3	28.4	78.1	85.1	26.0
LnGrp LOS	F	F	C	F	D	C	E	E	C	E	F	C
Approach Vol, veh/h		2306			1969			1771			1717	
Approach Delay, s/veh		91.5			55.6			53.6			81.7	
Approach LOS		F			E			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.8	69.2	11.0	63.0	6.9	68.0	9.8	64.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	64.0	7.0	59.0	4.0	64.0	6.0	60.0
Max Q Clear Time (g_c+I1), s	2.6	63.8	9.0	61.0	3.4	66.0	5.9	51.1
Green Ext Time (p_c), s	0.0	0.2	0.0	0.0	0.0	0.0	0.0	8.8

Intersection Summary	
HCM 2010 Ctrl Delay	71.6
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	379	1270	0	451	1278	0	1	257	394	5	333	492
Future Volume (veh/h)	379	1270	0	451	1278	0	1	257	394	5	333	492
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	379	1270	0	451	1278	0	1	257	394	5	333	492
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	368	1285	0	423	1395	0	2	406	345	9	413	351
Arrive On Green	0.21	0.37	0.00	0.24	0.40	0.00	0.00	0.22	0.22	0.01	0.22	0.22
Sat Flow, veh/h	1757	3597	0	1757	3597	0	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	379	1270	0	451	1278	0	1	257	394	5	333	492
Grp Sat Flow(s),veh/h/ln	1757	1752	0	1757	1752	0	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	20.0	34.4	0.0	23.0	33.0	0.0	0.1	12.1	21.0	0.3	16.3	21.4
Cycle Q Clear(g_c), s	20.0	34.4	0.0	23.0	33.0	0.0	0.1	12.1	21.0	0.3	16.3	21.4
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	368	1285	0	423	1395	0	2	406	345	9	413	351
V/C Ratio(X)	1.03	0.99	0.00	1.07	0.92	0.00	0.52	0.63	1.14	0.55	0.81	1.40
Avail Cap(c_a), veh/h	368	1285	0	423	1395	0	74	406	345	74	413	351
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.7	30.1	0.0	36.2	27.2	0.0	47.7	33.8	37.2	47.4	35.1	37.1
Incr Delay (d2), s/veh	54.9	22.3	0.0	62.4	9.8	0.0	134.4	3.2	93.1	42.5	11.2	196.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.2	20.6	0.0	18.4	17.7	0.0	0.1	6.5	18.0	0.2	9.6	28.5
LnGrp Delay(d),s/veh	92.6	52.4	0.0	98.6	37.0	0.0	182.1	37.0	130.3	89.9	46.2	233.8
LnGrp LOS	F	D		F	D		F	D	F	F	D	F
Approach Vol, veh/h		1649			1729			652			830	
Approach Delay, s/veh		61.6			53.1			93.6			157.7	
Approach LOS		E			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.5	25.0	27.0	39.0	4.1	25.4	24.0	42.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	21.0	23.0	35.0	4.0	21.0	20.0	38.0
Max Q Clear Time (g_c+I1), s	2.3	23.0	25.0	36.4	2.1	23.4	22.0	35.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9

Intersection Summary	
HCM 2010 Ctrl Delay	79.3
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	301	672	0	1044	749	123	3	799	947	98	732	304
Future Volume (veh/h)	301	672	0	1044	749	123	3	799	947	98	732	304
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	301	672	0	1044	749	123	3	799	947	98	732	304
Adj No. of Lanes	1	2	1	2	2	1	1	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	333	666	298	1022	1053	471	6	1087	486	136	1215	544
Arrive On Green	0.19	0.19	0.00	0.30	0.30	0.30	0.00	0.31	0.31	0.04	0.35	0.35
Sat Flow, veh/h	1757	3505	1568	3408	3505	1568	1757	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	301	672	0	1044	749	123	3	799	947	98	732	304
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1704	1752	1568	1757	1752	1568	1704	1752	1568
Q Serve(g_s), s	16.8	19.0	0.0	30.0	19.0	6.0	0.2	20.4	31.0	2.8	17.2	15.7
Cycle Q Clear(g_c), s	16.8	19.0	0.0	30.0	19.0	6.0	0.2	20.4	31.0	2.8	17.2	15.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	333	666	298	1022	1053	471	6	1087	486	136	1215	544
V/C Ratio(X)	0.90	1.01	0.00	1.02	0.71	0.26	0.53	0.74	1.95	0.72	0.60	0.56
Avail Cap(c_a), veh/h	369	666	298	1022	1053	471	70	1087	486	136	1215	544
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	40.5	0.0	35.0	31.1	26.6	49.8	30.8	34.5	47.4	27.0	26.5
Incr Delay (d2), s/veh	23.3	37.1	0.0	33.6	2.3	0.3	61.3	2.6	434.2	16.7	0.8	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.3	12.6	0.0	18.8	9.5	2.6	0.2	10.3	72.0	1.6	8.5	7.0
LnGrp Delay(d),s/veh	63.0	77.7	0.0	68.6	33.4	26.9	111.1	33.5	468.7	64.1	27.8	27.8
LnGrp LOS	E	F		F	C	C	F	C	F	E	C	C
Approach Vol, veh/h		973			1916			1749			1134	
Approach Delay, s/veh		73.1			52.1			269.3			30.9	
Approach LOS		E			D			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	35.0	34.0	23.0	4.3	38.7	23.0	34.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	31.0	30.0	19.0	4.0	31.0	21.0	28.0
Max Q Clear Time (g_c+I1), s	4.8	33.0	32.0	21.0	2.2	19.2	18.8	21.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	10.1	0.2	4.9

Intersection Summary		
HCM 2010 Ctrl Delay		117.3
HCM 2010 LOS		F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	12	100	10	2	28	8	174	78	28	327	84
Future Volume (veh/h)	122	12	100	10	2	28	8	174	78	28	327	84
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	122	12	100	10	2	28	8	174	78	28	327	84
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	153	281	239	14	136	116	11	613	264	37	752	190
Arrive On Green	0.09	0.15	0.15	0.01	0.07	0.07	0.01	0.26	0.26	0.02	0.27	0.27
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	2388	1028	1757	2771	702
Grp Volume(v), veh/h	122	12	100	10	2	28	8	126	126	28	205	206
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1663	1757	1752	1721
Q Serve(g_s), s	1.9	0.2	1.6	0.2	0.0	0.5	0.1	1.6	1.7	0.5	2.8	2.8
Cycle Q Clear(g_c), s	1.9	0.2	1.6	0.2	0.0	0.5	0.1	1.6	1.7	0.5	2.8	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.62	1.00		0.41
Lane Grp Cap(c), veh/h	153	281	239	14	136	116	11	450	427	37	475	467
V/C Ratio(X)	0.80	0.04	0.42	0.71	0.01	0.24	0.70	0.28	0.30	0.76	0.43	0.44
Avail Cap(c_a), veh/h	370	1166	991	185	972	826	185	923	876	185	923	906
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.8	10.3	10.9	14.1	12.2	12.4	14.1	8.5	8.5	13.9	8.6	8.6
Incr Delay (d2), s/veh	9.2	0.1	1.2	49.2	0.0	1.1	57.2	0.3	0.4	27.0	0.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.1	0.8	0.3	0.0	0.2	0.2	0.8	0.8	0.5	1.4	1.4
LnGrp Delay(d),s/veh	22.0	10.4	12.1	63.3	12.3	13.5	71.3	8.8	8.9	40.9	9.2	9.2
LnGrp LOS	C	B	B	E	B	B	E	A	A	D	A	A
Approach Vol, veh/h		234			40			260			439	
Approach Delay, s/veh		17.2			25.9			10.8			11.2	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.6	11.3	4.2	8.3	4.2	11.7	6.5	6.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	15.0	3.0	18.0	3.0	15.0	6.0	15.0
Max Q Clear Time (g_c+I1), s	2.5	3.7	2.2	3.6	2.1	4.8	3.9	2.5
Green Ext Time (p_c), s	0.0	3.1	0.0	0.3	0.0	2.9	0.1	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	13.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	5	9	5	5	5	12	377	5	5	567	14
Future Volume (veh/h)	10	5	9	5	5	5	12	377	5	5	567	14
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	10	5	9	5	5	5	12	377	5	5	567	14
Adj No. of Lanes	1	1	1	1	1	1	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	38	83	71	10	53	45	17	1783	798	612	1231	30
Arrive On Green	0.02	0.05	0.05	0.01	0.03	0.03	0.01	0.51	0.51	0.35	0.35	0.35
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	3505	1568	987	3496	86
Grp Volume(v), veh/h	10	5	9	5	5	5	12	377	5	5	284	297
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1568	987	1752	1829
Q Serve(g_s), s	0.2	0.1	0.2	0.1	0.1	0.1	0.2	1.6	0.0	0.1	3.4	3.4
Cycle Q Clear(g_c), s	0.2	0.1	0.2	0.1	0.1	0.1	0.2	1.6	0.0	0.1	3.4	3.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	38	83	71	10	53	45	17	1783	798	612	617	644
V/C Ratio(X)	0.26	0.06	0.13	0.52	0.09	0.11	0.71	0.21	0.01	0.01	0.46	0.46
Avail Cap(c_a), veh/h	968	1829	1555	258	1084	921	194	2832	1267	808	965	1008
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.1	12.4	12.5	13.5	12.9	12.9	13.4	3.7	3.3	5.7	6.8	6.8
Incr Delay (d2), s/veh	3.6	0.3	0.8	37.7	0.8	1.1	43.3	0.1	0.0	0.0	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.1	0.1	0.0	0.0	0.3	0.7	0.0	0.0	1.7	1.7
LnGrp Delay(d),s/veh	16.7	12.7	13.3	51.2	13.6	13.9	56.8	3.7	3.3	5.7	7.4	7.3
LnGrp LOS	B	B	B	D	B	B	E	A	A	A	A	A
Approach Vol, veh/h		24			15			394			586	
Approach Delay, s/veh		14.6			26.3			5.4			7.3	
Approach LOS		B			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s		17.9	4.1	5.2	4.3	13.6	4.6	4.8
Change Period (Y+Rc), s		4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s		22.0	4.0	27.0	3.0	15.0	15.0	16.0
Max Q Clear Time (g_c+I1), s		3.6	2.1	2.2	2.2	5.4	2.2	2.1
Green Ext Time (p_c), s		6.0	0.0	0.0	0.0	4.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	7.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	17	18	164	25	97	22	290	76	61	399	78
Future Volume (veh/h)	29	17	18	164	25	97	22	290	76	61	399	78
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	29	17	18	164	25	97	22	290	76	61	399	78
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	37	138	118	213	322	274	29	748	193	72	865	168
Arrive On Green	0.02	0.08	0.08	0.12	0.17	0.17	0.02	0.27	0.27	0.04	0.30	0.30
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	2760	711	1757	2929	568
Grp Volume(v), veh/h	29	17	18	164	25	97	22	182	184	61	237	240
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1719	1757	1752	1744
Q Serve(g_s), s	0.5	0.3	0.3	2.9	0.4	1.8	0.4	2.8	2.8	1.1	3.6	3.6
Cycle Q Clear(g_c), s	0.5	0.3	0.3	2.9	0.4	1.8	0.4	2.8	2.8	1.1	3.6	3.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.41	1.00		0.33
Lane Grp Cap(c), veh/h	37	138	118	213	322	274	29	475	466	72	517	515
V/C Ratio(X)	0.78	0.12	0.15	0.77	0.08	0.35	0.75	0.38	0.39	0.85	0.46	0.47
Avail Cap(c_a), veh/h	162	851	723	486	1191	1013	162	862	846	216	916	912
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.8	14.0	14.1	13.9	11.2	11.8	15.9	9.6	9.7	15.5	9.3	9.4
Incr Delay (d2), s/veh	28.2	0.4	0.6	5.8	0.1	0.8	31.6	0.5	0.5	23.1	0.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.2	0.2	1.8	0.2	0.8	0.4	1.4	1.4	1.0	1.8	1.8
LnGrp Delay(d),s/veh	44.1	14.4	14.7	19.7	11.3	12.6	47.5	10.1	10.2	38.6	10.0	10.0
LnGrp LOS	D	B	B	B	B	B	D	B	B	D	A	B
Approach Vol, veh/h		64			286			388			538	
Approach Delay, s/veh		27.9			16.5			12.3			13.2	
Approach LOS		C			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.3	12.8	7.9	6.4	4.5	13.6	4.7	9.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	9.0	15.0	3.0	17.0	3.0	21.0
Max Q Clear Time (g_c+I1), s	3.1	4.8	4.9	2.3	2.4	5.6	2.5	3.8
Green Ext Time (p_c), s	0.0	3.9	0.2	0.4	0.0	4.0	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	14.4
HCM 2010 LOS	B



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	43	10	380	45	24	671
Future Volume (veh/h)	43	10	380	45	24	671
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845
Adj Flow Rate, veh/h	43	10	380	45	24	671
Adj No. of Lanes	1	1	2	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	90	81	1646	194	817	1826
Arrive On Green	0.05	0.05	0.52	0.52	0.52	0.52
Sat Flow, veh/h	1757	1568	3252	372	949	3597
Grp Volume(v), veh/h	43	10	210	215	24	671
Grp Sat Flow(s),veh/h/ln	1757	1568	1752	1779	949	1752
Q Serve(g_s), s	0.4	0.1	1.2	1.2	0.3	2.1
Cycle Q Clear(g_c), s	0.4	0.1	1.2	1.2	1.5	2.1
Prop In Lane	1.00	1.00		0.21	1.00	
Lane Grp Cap(c), veh/h	90	81	913	927	817	1826
V/C Ratio(X)	0.48	0.12	0.23	0.23	0.03	0.37
Avail Cap(c_a), veh/h	1502	1340	1498	1521	1133	2996
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.6	8.5	2.4	2.4	2.9	2.7
Incr Delay (d2), s/veh	3.8	0.7	0.1	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	0.6	0.6	0.1	1.0
LnGrp Delay(d),s/veh	12.5	9.2	2.6	2.6	2.9	2.8
LnGrp LOS	B	A	A	A	A	A
Approach Vol, veh/h	53		425			695
Approach Delay, s/veh	11.8		2.6			2.8
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		13.8				13.8		5.0
Change Period (Y+Rc), s		4.0				4.0		4.0
Max Green Setting (Gmax), s		16.0				16.0		16.0
Max Q Clear Time (g_c+I1), s		3.2				4.1		2.4
Green Ext Time (p_c), s		5.9				5.6		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	3.1
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	43	97	136	35	30	112	306	193	73	515	126
Future Volume (veh/h)	89	43	97	136	35	30	112	306	193	73	515	126
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	89	43	97	136	35	30	112	306	193	73	515	126
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	340	233	198	174	594	505	142	1012	623	447	861	210
Arrive On Green	0.13	0.13	0.13	0.10	0.32	0.32	0.08	0.49	0.49	0.31	0.31	0.31
Sat Flow, veh/h	1318	1845	1568	1757	1845	1568	1757	2087	1284	887	2796	681
Grp Volume(v), veh/h	89	43	97	136	35	30	112	256	243	73	322	319
Grp Sat Flow(s),veh/h/ln	1318	1845	1568	1757	1845	1568	1757	1752	1618	887	1752	1725
Q Serve(g_s), s	2.6	0.9	2.4	3.1	0.5	0.5	2.6	3.6	3.8	2.6	6.5	6.5
Cycle Q Clear(g_c), s	2.6	0.9	2.4	3.1	0.5	0.5	2.6	3.6	3.8	2.6	6.5	6.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.79	1.00		0.39
Lane Grp Cap(c), veh/h	340	233	198	174	594	505	142	850	785	447	539	531
V/C Ratio(X)	0.26	0.18	0.49	0.78	0.06	0.06	0.79	0.30	0.31	0.16	0.60	0.60
Avail Cap(c_a), veh/h	651	668	568	297	1157	984	254	1100	1015	516	677	666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.0	16.2	16.9	18.2	9.7	9.7	18.7	6.4	6.5	10.8	12.2	12.2
Incr Delay (d2), s/veh	0.4	0.4	1.9	7.4	0.0	0.0	9.3	0.2	0.2	0.2	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.5	1.1	1.9	0.3	0.2	1.6	1.8	1.7	0.6	3.2	3.2
LnGrp Delay(d),s/veh	17.4	16.6	18.7	25.7	9.8	9.8	28.0	6.6	6.7	11.0	13.2	13.3
LnGrp LOS	B	B	B	C	A	A	C	A	A	B	B	B
Approach Vol, veh/h		229			201			611			714	
Approach Delay, s/veh		17.8			20.5			10.6			13.0	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6		8
Phs Duration (G+Y+Rc), s		24.1	8.1	9.2	7.4	16.8		17.3
Change Period (Y+Rc), s		4.0	4.0	4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s		26.0	7.0	15.0	6.0	16.0		26.0
Max Q Clear Time (g_c+I1), s		5.8	5.1	4.6	4.6	8.5		2.5
Green Ext Time (p_c), s		7.9	0.1	0.8	0.0	4.2		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	13.6
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	0	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	0	414	76	520
Demand Flow Rate, veh/h	0	427	78	536
Vehicles Circulating, veh/h	429	78	0	289
Vehicles Exiting, veh/h	396	0	429	216
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	8.0	3.9	14.8
Approach LOS	-	A	A	B

Lane	Left	Left	Left
Designated Moves	LTR	LT	TR
Assumed Moves	LTR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	427	78	536
Cap Entry Lane, veh/h	1045	1130	846
Entry HV Adj Factor	0.970	0.972	0.971
Flow Entry, veh/h	414	76	520
Cap Entry, veh/h	1014	1098	821
V/C Ratio	0.409	0.069	0.633
Control Delay, s/veh	8.0	3.9	14.8
LOS	A	A	B
95th %tile Queue, veh	2	0	5

Intersection	
Intersection Delay, s/veh	48.9
Intersection LOS	E

Approach	EB	WB	NB	SB
Entry Lanes	1	0	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	762	0	90	417
Demand Flow Rate, veh/h	785	0	93	429
Vehicles Circulating, veh/h	429	78	700	0
Vehicles Exiting, veh/h	0	715	514	78
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	76.5	0.0	8.8	7.2
Approach LOS	F	-	A	A

Lane	Left	Left	Left
Designated Moves	LTR	TR	LT
Assumed Moves	LTR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	785	93	429
Cap Entry Lane, veh/h	736	561	1130
Entry HV Adj Factor	0.971	0.968	0.972
Flow Entry, veh/h	762	90	417
Cap Entry, veh/h	714	543	1098
V/C Ratio	1.067	0.166	0.380
Control Delay, s/veh	76.5	8.8	7.2
LOS	F	A	A
95th %tile Queue, veh	20	1	2

Intersection	
Intersection Delay, s/veh	106.4
Intersection LOS	F

Approach	EB	WB	NB	SB
Entry Lanes	0	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	0	246	2192	2059
Demand Flow Rate, veh/h	0	254	2258	2121
Vehicles Circulating, veh/h	1978	2258	0	450
Vehicles Exiting, veh/h	593	0	1978	2062
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	132.6	49.5	163.8
Approach LOS	-	F	E	F

Lane	Left	Left	Right	Left	Right
Designated Moves	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Critical Headway, s	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	254	1061	1197	997	1124
Cap Entry Lane, veh/h	233	1130	1130	806	825
Entry HV Adj Factor	0.969	0.971	0.971	0.971	0.971
Flow Entry, veh/h	246	1030	1162	968	1091
Cap Entry, veh/h	225	1097	1097	783	801
V/C Ratio	1.092	0.939	1.059	1.237	1.363
Control Delay, s/veh	132.6	33.9	63.4	136.3	188.3
LOS	F	D	F	F	F
95th %tile Queue, veh	11	16	25	34	45

Intersection	
Intersection Delay, s/veh	215.2
Intersection LOS	F

Approach	EB	WB	NB	SB
Entry Lanes	1	0	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	749	0	2094	1920
Demand Flow Rate, veh/h	771	0	2157	1978
Vehicles Circulating, veh/h	1978	2257	452	0
Vehicles Exiting, veh/h	0	352	2297	2257
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	814.4	0.0	173.9	26.6
Approach LOS	F	-	F	D

Lane	Left	Left	Right	Left	Right
Designated Moves	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Critical Headway, s	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	771	1014	1143	930	1048
Cap Entry Lane, veh/h	283	805	823	1130	1130
Entry HV Adj Factor	0.971	0.971	0.971	0.971	0.971
Flow Entry, veh/h	749	984	1110	903	1018
Cap Entry, veh/h	275	781	800	1097	1097
V/C Ratio	2.725	1.260	1.388	0.823	0.927
Control Delay, s/veh	814.4	145.6	199.0	20.5	32.0
LOS	F	F	F	C	D
95th %tile Queue, veh	64	36	48	10	15

Intersection	
Intersection Delay, s/veh	11.6
Intersection LOS	B

Approach	WB	NB	SB
Entry Lanes	1	2	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	368	828	1168
Demand Flow Rate, veh/h	379	853	1203
Vehicles Circulating, veh/h	725	344	110
Vehicles Exiting, veh/h	472	969	994
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	14.9	10.6	11.2
Approach LOS	B	B	B

Lane	Left	Left	Right	Left	Right
Designated Moves	LR	LT	TR	LT	TR
Assumed Moves	LR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Critical Headway, s	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	379	401	452	565	638
Cap Entry Lane, veh/h	680	873	888	1040	1046
Entry HV Adj Factor	0.971	0.970	0.971	0.972	0.970
Flow Entry, veh/h	368	389	439	549	619
Cap Entry, veh/h	660	847	862	1011	1015
V/C Ratio	0.557	0.459	0.509	0.543	0.610
Control Delay, s/veh	14.9	10.1	11.0	10.4	12.0
LOS	B	B	B	B	B
95th %tile Queue, veh	3	2	3	3	4

Intersection	
Intersection Delay, s/veh	9.1
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	2	2	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	375	791	941
Demand Flow Rate, veh/h	386	815	969
Vehicles Circulating, veh/h	673	135	206
Vehicles Exiting, veh/h	277	1040	853
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	8.8	8.0	10.1
Approach LOS	A	A	B

Lane	Left	Right	Left	Right	Left	Right
Designated Moves	L	TR	LT	TR	LT	TR
Assumed Moves	L	TR	LT	TR	LT	TR
RT Channelized						
Lane Util	0.534	0.466	0.470	0.530	0.470	0.530
Critical Headway, s	4.293	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	206	180	383	432	455	514
Cap Entry Lane, veh/h	682	705	1021	1028	968	978
Entry HV Adj Factor	0.971	0.972	0.971	0.971	0.972	0.970
Flow Entry, veh/h	200	175	372	419	442	499
Cap Entry, veh/h	662	686	992	998	941	949
V/C Ratio	0.302	0.255	0.375	0.420	0.470	0.525
Control Delay, s/veh	9.3	8.3	7.7	8.3	9.5	10.5
LOS	A	A	A	A	A	B
95th %tile Queue, veh	1	1	2	2	3	3

Intersection	
Intersection Delay, s/veh	9.1
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	2	2	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	353	791	1009
Demand Flow Rate, veh/h	364	815	1039
Vehicles Circulating, veh/h	610	140	160
Vehicles Exiting, veh/h	345	1059	814
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	8.1	8.0	10.2
Approach LOS	A	A	B

Lane	Left	Right	Left	Right	Left	Right
Designated Moves	L	TR	LT	TR	LT	TR
Assumed Moves	L	TR	LT	TR	LT	TR
RT Channelized						
Lane Util	0.440	0.560	0.470	0.530	0.470	0.530
Critical Headway, s	4.293	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	160	204	383	432	488	551
Cap Entry Lane, veh/h	715	737	1017	1024	1002	1010
Entry HV Adj Factor	0.969	0.971	0.971	0.971	0.972	0.970
Flow Entry, veh/h	155	198	372	419	474	535
Cap Entry, veh/h	693	716	988	994	974	980
V/C Ratio	0.224	0.277	0.376	0.422	0.487	0.545
Control Delay, s/veh	7.8	8.3	7.7	8.3	9.6	10.7
LOS	A	A	A	A	A	B
95th %tile Queue, veh	1	1	2	2	3	3

Intersection	
Int Delay, s/veh	4.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	42	121	875	59	299	210
Future Vol, veh/h	42	121	875	59	299	210
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	70	0	-	-	85	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	4	4	3	3	3	3
Mvmt Flow	42	121	875	59	299	210

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1608	467	0	0	934	0
Stage 1	905	-	-	-	-	-
Stage 2	703	-	-	-	-	-
Critical Hdwy	6.88	6.98	-	-	4.16	-
Critical Hdwy Stg 1	5.88	-	-	-	-	-
Critical Hdwy Stg 2	5.88	-	-	-	-	-
Follow-up Hdwy	3.54	3.34	-	-	2.23	-
Pot Cap-1 Maneuver	94	537	-	-	723	-
Stage 1	350	-	-	-	-	-
Stage 2	447	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	55	537	-	-	723	-
Mov Cap-2 Maneuver	161	-	-	-	-	-
Stage 1	350	-	-	-	-	-
Stage 2	262	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.1	0	7.9
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	161	537	723	-
HCM Lane V/C Ratio	-	-	0.261	0.225	0.414	-
HCM Control Delay (s)	-	-	35.1	13.6	13.4	-
HCM Lane LOS	-	-	E	B	B	-
HCM 95th %tile Q(veh)	-	-	1	0.9	2	-

Intersection	
Int Delay, s/veh	582.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	299	65	820	158	57	1480
Future Vol, veh/h	299	65	820	158	57	1480
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	4	4	4	4
Mvmt Flow	299	65	820	158	57	1480

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1605	489	0	0	978	0
Stage 1	899	-	-	-	-	-
Stage 2	706	-	-	-	-	-
Critical Hdwy	5.76	7.16	-	-	5.38	-
Critical Hdwy Stg 1	6.66	-	-	-	-	-
Critical Hdwy Stg 2	6.06	-	-	-	-	-
Follow-up Hdwy	3.83	3.93	-	-	3.14	-
Pot Cap-1 Maneuver	~ 150	447	-	-	395	-
Stage 1	~ 277	-	-	-	-	-
Stage 2	407	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 28	447	-	-	395	-
Mov Cap-2 Maneuver	~ 28	-	-	-	-	-
Stage 1	~ 277	-	-	-	-	-
Stage 2	~ 77	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, $	4592.4	0	4.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	34	395	-
HCM Lane V/C Ratio	-	-	10.706	0.144	-
HCM Control Delay (s)	-	-	$ 4592.4	15.6	3.8
HCM Lane LOS	-	-	F	C	A
HCM 95th %tile Q(veh)	-	-	44.3	0.5	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	72

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	83	2720	2336	25	14	30
Future Vol, veh/h	83	2720	2336	25	14	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	190	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	6	6	6	6	3	3
Mvmt Flow	83	2720	2336	25	14	30

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2361	0	-	0	3875	1181
Stage 1	-	-	-	-	2349	-
Stage 2	-	-	-	-	1526	-
Critical Hdwy	4.22	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.26	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	192	-	-	-	~ 2	181
Stage 1	-	-	-	-	57	-
Stage 2	-	-	-	-	164	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	192	-	-	-	~ 1	181
Mov Cap-2 Maneuver	-	-	-	-	~ 1	-
Stage 1	-	-	-	-	57	-
Stage 2	-	-	-	-	93	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	$ 8448.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	192	-	-	-	3
HCM Lane V/C Ratio	0.432	-	-	-	14.667
HCM Control Delay (s)	37.3	-	-	-	$ 8448.4
HCM Lane LOS	E	-	-	-	F
HCM 95th %tile Q(veh)	2	-	-	-	7.4

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	1	2	0	2	0	770	6	1	976	4
Future Vol, veh/h	2	0	1	2	0	2	0	770	6	1	976	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	2	0	1	2	0	2	0	770	6	1	976	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1754	1756	978	1754	1755	773	980	0	0	776	0	0
Stage 1	980	980	-	773	773	-	-	-	-	-	-	-
Stage 2	774	776	-	981	982	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	66	84	303	66	85	397	700	-	-	836	-	-
Stage 1	299	327	-	390	407	-	-	-	-	-	-	-
Stage 2	390	406	-	299	326	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	66	84	303	66	85	397	700	-	-	836	-	-
Mov Cap-2 Maneuver	66	84	-	66	85	-	-	-	-	-	-	-
Stage 1	299	326	-	390	407	-	-	-	-	-	-	-
Stage 2	388	406	-	297	325	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	46.9	38	0	0
HCM LOS	E	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	700	-	-	89	113	836	-	-
HCM Lane V/C Ratio	-	-	-	0.034	0.035	0.001	-	-
HCM Control Delay (s)	0	-	-	46.9	38	9.3	0	-
HCM Lane LOS	A	-	-	E	E	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	10.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	74	36	45	920	1132	147
Future Vol, veh/h	74	36	45	920	1132	147
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	74	36	45	920	1132	147

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1756	640	1279	0	-	0
Stage 1	1206	-	-	-	-	-
Stage 2	550	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	-	-
Pot Cap-1 Maneuver	75	416	533	-	-	-
Stage 1	244	-	-	-	-	-
Stage 2	539	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 69	416	533	-	-	-
Mov Cap-2 Maneuver	~ 69	-	-	-	-	-
Stage 1	244	-	-	-	-	-
Stage 2	493	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	223.4	0.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	533	-	95	-	-
HCM Lane V/C Ratio	0.084	-	1.158	-	-
HCM Control Delay (s)	12.4	-	223.4	-	-
HCM Lane LOS	B	-	F	-	-
HCM 95th %tile Q(veh)	0.3	-	7.4	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	11.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	689	182	755	773	777	316
Future Vol, veh/h	689	182	755	773	777	316
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	0	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	689	182	755	773	777	316

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	871	0	2677	436
Stage 1	-	-	-	-	780	-
Stage 2	-	-	-	-	1897	-
Critical Hdwy	-	-	4.16	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	2.23	-	3.53	3.33
Pot Cap-1 Maneuver	-	-	763	-	~ 18	565
Stage 1	-	-	-	-	~ 410	-
Stage 2	-	-	-	-	~ 102	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	763	-	0	565
Mov Cap-2 Maneuver	-	-	-	-	0	-
Stage 1	-	-	-	-	~ 410	-
Stage 2	-	-	-	-	~ 1	-

Approach	EB	WB	NB
HCM Control Delay, s	0	26.3	
HCM LOS			-

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	565	-	-	763	-
HCM Lane V/C Ratio	-	0.559	-	-	0.99	-
HCM Control Delay (s)	-	19.2	-	-	53.3	-
HCM Lane LOS	-	C	-	-	F	-
HCM 95th %tile Q(veh)	-	3.4	-	-	16.3	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	196	553	8	2	501	1	9	188	0	1	280	323
Future Vol, veh/h	196	553	8	2	501	1	9	188	0	1	280	323
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	8	8	8	10	10	10	8	8	8	8	8	8
Mvmt Flow	196	553	8	2	501	1	9	188	0	1	280	323

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	502	0	0	561	0	0	1756	1455	557	1549	1459	502
Stage 1	-	-	-	-	-	-	949	949	-	506	506	-
Stage 2	-	-	-	-	-	-	807	506	-	1043	953	-
Critical Hdwy	4.18	-	-	4.2	-	-	7.18	6.58	6.28	7.18	6.58	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Follow-up Hdwy	2.272	-	-	2.29	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	1032	-	-	971	-	-	64	~ 126	519	90	~ 125	557
Stage 1	-	-	-	-	-	-	305	331	-	538	530	-
Stage 2	-	-	-	-	-	-	367	530	-	270	330	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1032	-	-	971	-	-	-	~ 91	519	-	~ 90	557
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 91	-	-	~ 90	-
Stage 1	-	-	-	-	-	-	221	240	-	390	528	-
Stage 2	-	-	-	-	-	-	72	528	-	42	~ 239	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.4	0		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1032	-	-	971	-	-	-
HCM Lane V/C Ratio	-	0.19	-	-	0.002	-	-	-
HCM Control Delay (s)	-	9.3	0	-	8.7	0	-	-
HCM Lane LOS	-	A	A	-	A	A	-	-
HCM 95th %tile Q(veh)	-	0.7	-	-	0	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	75	47	65	121	56	30
Future Vol, veh/h	75	47	65	121	56	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	75	47	65	121	56	30

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	322	71	86	0	-	0
Stage 1	71	-	-	-	-	-
Stage 2	251	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	670	989	1504	-	-	-
Stage 1	949	-	-	-	-	-
Stage 2	788	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	639	989	1504	-	-	-
Mov Cap-2 Maneuver	639	-	-	-	-	-
Stage 1	949	-	-	-	-	-
Stage 2	752	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.8	2.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1504	-	740	-	-
HCM Lane V/C Ratio	0.043	-	0.165	-	-
HCM Control Delay (s)	7.5	0	10.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	13	8	181	119	8
Future Vol, veh/h	10	13	8	181	119	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	10	13	8	181	119	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	320	123	127	0	-	0
Stage 1	123	-	-	-	-	-
Stage 2	197	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	671	925	1453	-	-	-
Stage 1	900	-	-	-	-	-
Stage 2	834	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	667	925	1453	-	-	-
Mov Cap-2 Maneuver	667	-	-	-	-	-
Stage 1	900	-	-	-	-	-
Stage 2	829	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.7	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1453	-	792	-	-
HCM Lane V/C Ratio	0.006	-	0.029	-	-
HCM Control Delay (s)	7.5	0	9.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	12.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	198	120	185	165	99	164
Future Vol, veh/h	198	120	185	165	99	164
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	198	120	185	165	99	164

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	716	181	263	0	-	0
Stage 1	181	-	-	-	-	-
Stage 2	535	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	395	859	1295	-	-	-
Stage 1	848	-	-	-	-	-
Stage 2	585	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	333	859	1295	-	-	-
Mov Cap-2 Maneuver	333	-	-	-	-	-
Stage 1	848	-	-	-	-	-
Stage 2	493	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	33	4.4	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1295	-	433	-	-
HCM Lane V/C Ratio	0.143	-	0.734	-	-
HCM Control Delay (s)	8.2	0	33	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.5	-	5.9	-	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	66	12	24	206	191	57
Future Vol, veh/h	66	12	24	206	191	57
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	150	0	150	-	-	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	66	12	24	206	191	57

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	445	191	191	0	-	0
Stage 1	191	-	-	-	-	-
Stage 2	254	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	569	848	1377	-	-	-
Stage 1	839	-	-	-	-	-
Stage 2	786	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	559	848	1377	-	-	-
Mov Cap-2 Maneuver	559	-	-	-	-	-
Stage 1	839	-	-	-	-	-
Stage 2	772	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.8	0.8	0
HCM LOS	B		

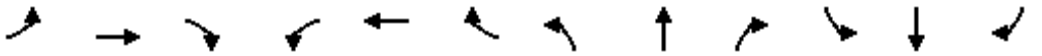
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1377	-	559	848	-	-
HCM Lane V/C Ratio	0.017	-	0.118	0.014	-	-
HCM Control Delay (s)	7.7	-	12.3	9.3	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	0	-	-

Appendix C

Mitigation Synchro Reports

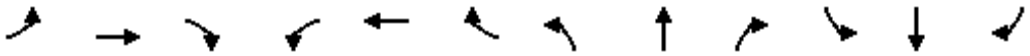
Existing Plus All Projects Mitigation

AM



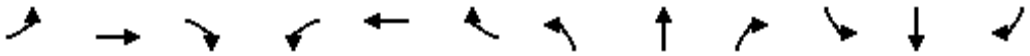
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	642	28	225	434	191	70	693	310	78	430	206
Future Volume (vph)	49	642	28	225	434	191	70	693	310	78	430	206
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.1		6.8	6.8		4.7	5.1	5.1	5.3	5.1	5.1
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.99		1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	3483		1752	3344		1736	3471	1568	1752	3471	1553
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1752	3483		1752	3344		1736	3471	1568	1752	3471	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	49	642	28	225	434	191	70	693	310	78	430	206
RTOR Reduction (vph)	0	3	0	0	43	0	0	0	214	0	0	153
Lane Group Flow (vph)	49	667	0	225	582	0	70	693	96	78	430	53
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	3%	3%	4%	4%
Turn Type	Split	NA		Split	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases									6			2
Actuated Green, G (s)	21.2	21.2		18.4	18.4		5.2	23.0	23.0	5.5	23.9	23.9
Effective Green, g (s)	21.2	21.2		18.4	18.4		5.2	23.0	23.0	5.5	23.9	23.9
Actuated g/C Ratio	0.23	0.23		0.20	0.20		0.06	0.25	0.25	0.06	0.26	0.26
Clearance Time (s)	7.1	7.1		6.8	6.8		4.7	5.1	5.1	5.3	5.1	5.1
Vehicle Extension (s)	1.0	1.0		3.0	3.0		1.0	1.0	1.0	3.0	1.0	1.0
Lane Grp Cap (vph)	401	799		348	665		97	863	390	104	897	401
v/s Ratio Prot	0.03	c0.19		0.13	c0.17		0.04	c0.20		c0.04	0.12	
v/s Ratio Perm									0.06			0.03
v/c Ratio	0.12	0.83		0.65	0.87		0.72	0.80	0.25	0.75	0.48	0.13
Uniform Delay, d1	28.2	33.9		34.0	35.9		42.9	32.6	27.8	42.8	29.0	26.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0	7.2		4.1	12.3		19.9	5.1	0.1	25.8	0.1	0.1
Delay (s)	28.3	41.1		38.1	48.2		62.8	37.7	27.9	68.5	29.1	26.3
Level of Service	C	D		D	D		E	D	C	E	C	C
Approach Delay (s)		40.3			45.5			36.5			32.6	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	38.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	92.4	Sum of lost time (s)	24.3
Intersection Capacity Utilization	74.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	586	599	5	1	317	6	20	5	3	14	8	70
Future Volume (vph)	586	599	5	1	317	6	20	5	3	14	8	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		1.00			1.00			0.99			0.90	
Flt Protected		0.98			1.00			0.97			0.99	
Satd. Flow (prot)		1782			1822			1755			1643	
Flt Permitted		0.69			1.00			0.40			0.95	
Satd. Flow (perm)		1253			1820			725			1575	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	586	599	5	1	317	6	20	5	3	14	8	70
RTOR Reduction (vph)	0	0	0	0	0	0	0	3	0	0	66	0
Lane Group Flow (vph)	0	1190	0	0	324	0	0	25	0	0	26	0
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		126.0			126.0			8.6			8.6	
Effective Green, g (s)		126.0			126.0			8.6			8.6	
Actuated g/C Ratio		0.88			0.88			0.06			0.06	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1107			1608			43			94	
v/s Ratio Prot												
v/s Ratio Perm		c0.95			0.18			c0.03			0.02	
v/c Ratio		1.07			0.20			0.59			0.28	
Uniform Delay, d1		8.3			1.2			65.3			64.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		49.6			0.1			18.7			1.6	
Delay (s)		57.9			1.2			84.0			65.7	
Level of Service		E			A			F			E	
Approach Delay (s)		57.9			1.2			84.0			65.7	
Approach LOS		E			A			F			E	

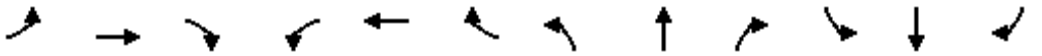
Intersection Summary			
HCM 2000 Control Delay	47.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	142.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	96.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	417	2	9	8	1	1	26	872	2	0	167	50
Future Volume (vph)	417	2	9	8	1	1	26	872	2	0	167	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		1.00			0.99			1.00			0.97	
Flt Protected		0.95			0.96			1.00			1.00	
Satd. Flow (prot)		1754			1750			1841			1787	
Flt Permitted		0.72			0.81			0.99			1.00	
Satd. Flow (perm)		1333			1475			1824			1787	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	417	2	9	8	1	1	26	872	2	0	167	50
RTOR Reduction (vph)	0	1	0	0	1	0	0	0	0	0	15	0
Lane Group Flow (vph)	0	427	0	0	9	0	0	900	0	0	202	0
Turn Type	Perm	NA		Perm	NA		Perm	NA			NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		24.8			24.8			37.8			37.8	
Effective Green, g (s)		24.8			24.8			37.8			37.8	
Actuated g/C Ratio		0.35			0.35			0.54			0.54	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		468			518			976			956	
v/s Ratio Prot											0.11	
v/s Ratio Perm		c0.32			0.01			c0.49				
v/c Ratio		0.91			0.02			0.92			0.21	
Uniform Delay, d1		21.9			15.0			15.0			8.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		21.9			0.0			13.7			0.1	
Delay (s)		43.8			15.0			28.7			8.7	
Level of Service		D			B			C			A	
Approach Delay (s)		43.8			15.0			28.7			8.7	
Approach LOS		D			B			C			A	

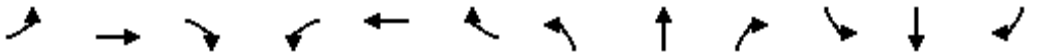
Intersection Summary			
HCM 2000 Control Delay	30.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	70.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	96.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



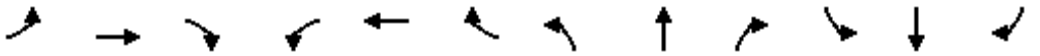
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	777	47	658	25	63	161	545	482	13	105	1229	1151
Future Volume (vph)	777	47	658	25	63	161	545	482	13	105	1229	1151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3	5.3		5.5	5.5	4.7	4.6		4.4	4.8	4.8
Lane Util. Factor	0.95	0.95	1.00		1.00	1.00	1.00	0.91		1.00	0.91	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.96	1.00		0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1649	1662	1553		1819	1568	1736	4968		1736	4988	1553
Flt Permitted	0.95	0.96	1.00		0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1649	1662	1553		1819	1568	1736	4968		1736	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	777	47	658	25	63	161	545	482	13	105	1229	1151
RTOR Reduction (vph)	0	0	274	0	0	155	0	2	0	0	0	459
Lane Group Flow (vph)	412	412	384	0	88	6	545	493	0	105	1229	692
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	4%	4%	4%	4%	4%	4%
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4						2
Actuated Green, G (s)	25.9	25.9	25.9		3.5	3.5	19.3	42.5		8.1	30.8	30.8
Effective Green, g (s)	25.9	25.9	25.9		3.5	3.5	19.3	42.5		8.1	30.8	30.8
Actuated g/C Ratio	0.26	0.26	0.26		0.04	0.04	0.19	0.43		0.08	0.31	0.31
Clearance Time (s)	5.3	5.3	5.3		5.5	5.5	4.7	4.6		4.4	4.8	4.8
Vehicle Extension (s)	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lane Grp Cap (vph)	427	431	403		63	54	335	2115		140	1539	479
v/s Ratio Prot	c0.25	0.25			c0.05		c0.31	0.10		0.06	0.25	
v/s Ratio Perm			0.25			0.00						c0.45
v/c Ratio	0.96	0.96	0.95		1.40	0.10	1.63	0.23		0.75	0.80	1.44
Uniform Delay, d1	36.5	36.4	36.4		48.1	46.6	40.2	18.3		44.9	31.7	34.5
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	34.1	31.7	32.5		250.3	0.3	295.4	0.0		18.0	2.8	211.6
Delay (s)	70.6	68.1	68.8		298.5	46.9	335.7	18.3		62.8	34.4	246.1
Level of Service	E	E	E		F	D	F	B		E	C	F
Approach Delay (s)		69.1			135.8			184.6			133.7	
Approach LOS		E			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	125.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	99.8	Sum of lost time (s)	20.3
Intersection Capacity Utilization	118.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	225	156	0	0	156	7	5	302	0	0	93	109
Future Volume (vph)	225	156	0	0	156	7	5	302	0	0	93	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frt	1.00	1.00			0.99			1.00			0.93	
Flt Protected	0.95	1.00			1.00			1.00			1.00	
Satd. Flow (prot)	1671	1759			1716			1758			1631	
Flt Permitted	0.95	1.00			1.00			1.00			1.00	
Satd. Flow (perm)	1671	1759			1716			1758			1631	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	225	156	0	0	156	7	5	302	0	0	93	109
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	0	55	0
Lane Group Flow (vph)	225	156	0	0	160	0	0	307	0	0	147	0
Heavy Vehicles (%)	8%	8%	8%	10%	10%	10%	8%	8%	8%	8%	8%	8%
Turn Type	Prot	NA		Prot	NA		Split	NA			NA	
Protected Phases	7	4		3	8		2	2			6	
Permitted Phases										6		
Actuated Green, G (s)	13.5	26.8			9.3			15.7			11.0	
Effective Green, g (s)	13.5	26.8			9.3			15.7			11.0	
Actuated g/C Ratio	0.21	0.41			0.14			0.24			0.17	
Clearance Time (s)	4.0	4.0			4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)	344	719			243			421			273	
v/s Ratio Prot	c0.13	0.09			c0.09			c0.17			c0.09	
v/s Ratio Perm												
v/c Ratio	0.65	0.22			0.66			0.73			0.54	
Uniform Delay, d1	23.9	12.5			26.6			22.9			24.9	
Progression Factor	1.00	1.00			1.00			1.00			1.00	
Incremental Delay, d2	4.4	0.2			6.6			6.2			2.0	
Delay (s)	28.3	12.7			33.2			29.2			27.0	
Level of Service	C	B			C			C			C	
Approach Delay (s)		21.9			33.2			29.2			27.0	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	26.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	189	310	40	3	155	23	32	620	26	20	129	28
Future Volume (vph)	189	310	40	3	155	23	32	620	26	20	129	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	1796		1736	1792		1736	1816		1752	1795	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1736	1796		1736	1792		1736	1816		1752	1795	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	189	310	40	3	155	23	32	620	26	20	129	28
RTOR Reduction (vph)	0	6	0	0	7	0	0	2	0	0	10	0
Lane Group Flow (vph)	189	344	0	3	171	0	32	644	0	20	147	0
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	9.3	23.4		0.7	14.8		1.7	26.4		1.3	26.0	
Effective Green, g (s)	9.3	23.4		0.7	14.8		1.7	26.4		1.3	26.0	
Actuated g/C Ratio	0.14	0.35		0.01	0.22		0.03	0.39		0.02	0.38	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	238	619		17	391		43	707		33	688	
v/s Ratio Prot	c0.11	c0.19		0.00	0.10		c0.02	c0.35		0.01	0.08	
v/s Ratio Perm												
v/c Ratio	0.79	0.56		0.18	0.44		0.74	0.91		0.61	0.21	
Uniform Delay, d1	28.3	18.0		33.3	22.9		32.8	19.6		33.0	14.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	16.5	1.1		4.9	0.8		50.5	16.0		27.6	0.2	
Delay (s)	44.8	19.1		38.2	23.7		83.3	35.6		60.6	14.2	
Level of Service	D	B		D	C		F	D		E	B	
Approach Delay (s)		28.1			23.9			37.8			19.4	
Approach LOS		C			C			D			B	

Intersection Summary			
HCM 2000 Control Delay	30.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	67.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	186	342	1781	370	865	255
Future Volume (vph)	186	342	1781	370	865	255
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.88	0.91		0.97	0.91
Frt	1.00	0.85	0.97		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	2760	4906		3400	5036
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	2760	4906		3400	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	186	342	1781	370	865	255
RTOR Reduction (vph)	0	294	35	0	0	0
Lane Group Flow (vph)	186	48	2116	0	865	255
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		3				
Actuated Green, G (s)	11.0	11.0	42.0		24.7	70.7
Effective Green, g (s)	11.0	11.0	42.0		24.7	70.7
Actuated g/C Ratio	0.12	0.12	0.47		0.28	0.79
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	214	338	2297		936	3969
v/s Ratio Prot	c0.11		c0.43		c0.25	0.05
v/s Ratio Perm		0.02				
v/c Ratio	0.87	0.14	0.92		0.92	0.06
Uniform Delay, d1	38.6	35.1	22.3		31.6	2.1
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	29.0	0.2	6.7		14.4	0.0
Delay (s)	67.7	35.3	29.0		46.0	2.1
Level of Service	E	D	C		D	A
Approach Delay (s)	46.7		29.0			36.0
Approach LOS	D		C			D

Intersection Summary			
HCM 2000 Control Delay	33.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	89.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	216	726	37	67	632	425	100	1120	148	248	469	68
Future Volume (veh/h)	216	726	37	67	632	425	100	1120	148	248	469	68
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	216	726	37	67	632	425	100	1120	148	248	469	68
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	237	1057	473	85	755	338	166	1228	549	273	1338	599
Arrive On Green	0.13	0.30	0.30	0.05	0.22	0.22	0.05	0.35	0.35	0.08	0.39	0.39
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	3375	3471	1553	3375	3471	1553
Grp Volume(v), veh/h	216	726	37	67	632	425	100	1120	148	248	469	68
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1568	1688	1736	1553	1688	1736	1553
Q Serve(g_s), s	9.0	13.6	1.3	2.8	12.8	16.0	2.2	22.9	5.1	5.4	7.1	2.1
Cycle Q Clear(g_c), s	9.0	13.6	1.3	2.8	12.8	16.0	2.2	22.9	5.1	5.4	7.1	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	237	1057	473	85	755	338	166	1228	549	273	1338	599
V/C Ratio(X)	0.91	0.69	0.08	0.79	0.84	1.26	0.60	0.91	0.27	0.91	0.35	0.11
Avail Cap(c_a), veh/h	237	1057	473	118	755	338	227	1262	564	273	1338	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	22.8	18.6	35.0	27.9	29.1	34.6	22.9	17.1	33.9	16.2	14.7
Incr Delay (d2), s/veh	36.0	1.9	0.1	20.6	8.2	138.1	3.5	10.0	0.3	31.9	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	6.8	0.6	1.8	7.0	19.8	1.1	12.6	2.2	3.7	3.4	0.9
LnGrp Delay(d),s/veh	67.7	24.7	18.6	55.6	36.1	167.2	38.1	32.9	17.4	65.8	16.4	14.8
LnGrp LOS	E	C	B	E	D	F	D	C	B	E	B	B
Approach Vol, veh/h		979			1124			1368			785	
Approach Delay, s/veh		34.0			86.8			31.6			31.8	
Approach LOS		C			F			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	30.3	7.6	26.4	7.7	32.6	14.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	27.0	5.0	21.0	5.0	28.0	10.0	16.0
Max Q Clear Time (g_c+I1), s	7.4	24.9	4.8	15.6	4.2	9.1	11.0	18.0
Green Ext Time (p_c), s	0.0	1.4	0.0	3.8	0.0	9.3	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	46.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1279	136	190	1628	88	14	536	111	58	474	2
Future Volume (veh/h)	10	1279	136	190	1628	88	14	536	111	58	474	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1900	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	10	1279	136	190	1628	88	14	536	111	58	474	2
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	17	1434	642	228	1790	96	24	667	298	73	782	3
Arrive On Green	0.01	0.42	0.42	0.13	0.54	0.54	0.01	0.19	0.19	0.04	0.22	0.22
Sat Flow, veh/h	1707	3406	1524	1707	3287	177	1757	3505	1568	1757	3579	15
Grp Volume(v), veh/h	10	1279	136	190	839	877	14	536	111	58	232	244
Grp Sat Flow(s),veh/h/ln	1707	1703	1524	1707	1703	1761	1757	1752	1568	1757	1752	1842
Q Serve(g_s), s	0.4	26.1	4.3	8.1	33.2	33.8	0.6	11.0	4.6	2.5	8.9	8.9
Cycle Q Clear(g_c), s	0.4	26.1	4.3	8.1	33.2	33.8	0.6	11.0	4.6	2.5	8.9	8.9
Prop In Lane	1.00		1.00	1.00		0.10	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	17	1434	642	228	927	959	24	667	298	73	383	402
V/C Ratio(X)	0.58	0.89	0.21	0.83	0.91	0.91	0.59	0.80	0.37	0.79	0.61	0.61
Avail Cap(c_a), veh/h	91	1500	671	251	927	959	94	748	335	94	383	402
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.9	20.1	13.8	31.7	15.3	15.5	36.8	29.0	26.4	35.6	26.4	26.4
Incr Delay (d2), s/veh	27.8	7.0	0.2	19.5	12.2	13.0	21.2	5.8	0.8	28.9	2.7	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	13.5	1.8	5.1	18.5	19.8	0.4	5.8	2.1	1.8	4.6	4.8
LnGrp Delay(d),s/veh	64.7	27.1	13.9	51.2	27.6	28.5	58.0	34.8	27.2	64.5	29.1	29.0
LnGrp LOS	E	C	B	D	C	C	E	C	C	E	C	C
Approach Vol, veh/h		1425			1906			661			534	
Approach Delay, s/veh		26.1			30.3			34.0			32.9	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.1	18.3	14.0	35.6	5.0	20.4	4.8	44.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	11.0	33.0	4.0	16.0	4.0	40.0
Max Q Clear Time (g_c+I1), s	4.5	13.0	10.1	28.1	2.6	10.9	2.4	35.8
Green Ext Time (p_c), s	0.0	1.3	0.1	3.5	0.0	2.4	0.0	3.9

Intersection Summary	
HCM 2010 Ctrl Delay	29.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	142	23	148	179	777	34	2115	149	553	1610	65
Future Volume (veh/h)	37	142	23	148	179	777	34	2115	149	553	1610	65
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1845	1845	1845	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	37	142	23	148	179	777	34	2115	149	553	1610	65
Adj No. of Lanes	2	2	1	2	2	1	2	3	0	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	65	674	301	153	771	625	60	2048	143	602	2906	117
Arrive On Green	0.02	0.19	0.19	0.04	0.22	0.22	0.02	0.43	0.43	0.18	0.59	0.59
Sat Flow, veh/h	3375	3471	1553	3408	3505	1568	3375	4760	333	3375	4918	199
Grp Volume(v), veh/h	37	142	23	148	179	777	34	1473	791	553	1088	587
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1704	1752	1568	1688	1663	1768	1688	1663	1792
Q Serve(g_s), s	1.6	5.0	1.8	6.3	6.1	31.8	1.4	62.2	62.2	23.3	28.8	28.8
Cycle Q Clear(g_c), s	1.6	5.0	1.8	6.3	6.1	31.8	1.4	62.2	62.2	23.3	28.8	28.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		0.11
Lane Grp Cap(c), veh/h	65	674	301	153	771	625	60	1431	761	602	1965	1059
V/C Ratio(X)	0.57	0.21	0.08	0.97	0.23	1.24	0.57	1.03	1.04	0.92	0.55	0.55
Avail Cap(c_a), veh/h	84	696	312	153	771	625	98	1431	761	712	2034	1096
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.3	48.9	47.6	68.9	46.3	43.5	70.4	41.2	41.2	58.4	18.0	18.0
Incr Delay (d2), s/veh	3.0	0.1	0.0	61.8	0.1	122.9	3.1	31.7	43.4	14.3	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	2.4	0.8	4.3	2.9	46.1	0.7	34.7	39.4	12.0	13.2	14.3
LnGrp Delay(d),s/veh	73.3	49.0	47.7	130.8	46.4	166.4	73.5	72.8	84.5	72.6	18.1	18.3
LnGrp LOS	E	D	D	F	D	F	E	F	F	E	B	B
Approach Vol, veh/h		202			1104			2298			2228	
Approach Delay, s/veh		53.3			142.2			76.9			31.7	
Approach LOS		D			F			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	90.7	8.3	37.5	31.3	67.5	12.0	33.8
Change Period (Y+Rc), s	5.5	5.3	5.5	* 5.7	5.5	* 5.3	5.5	* 5.7
Max Green Setting (Gmax), s	4.2	88.4	3.6	* 32	30.5	* 62	6.5	* 29
Max Q Clear Time (g_c+I1), s	3.4	30.8	3.6	33.8	25.3	64.2	8.3	7.0
Green Ext Time (p_c), s	0.0	8.6	0.0	0.0	0.5	0.0	0.0	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	71.2
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	1322	106	283	1410	1114	407	1062	55	938	766	111
Future Volume (veh/h)	60	1322	106	283	1410	1114	407	1062	55	938	766	111
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	60	1322	106	283	1410	0	407	1062	55	938	766	111
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	4	4	4	4	4	4
Cap, veh/h	83	1306	407	289	1631	508	465	1119	349	870	1688	526
Arrive On Green	0.02	0.27	0.27	0.09	0.33	0.00	0.14	0.22	0.22	0.26	0.34	0.34
Sat Flow, veh/h	3312	4893	1524	3312	4893	1524	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	60	1322	106	283	1410	0	407	1062	55	938	766	111
Grp Sat Flow(s),veh/h/ln	1656	1631	1524	1656	1631	1524	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	2.2	32.1	6.6	10.3	32.5	0.0	14.2	25.2	3.4	31.0	14.4	6.1
Cycle Q Clear(g_c), s	2.2	32.1	6.6	10.3	32.5	0.0	14.2	25.2	3.4	31.0	14.4	6.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	83	1306	407	289	1631	508	465	1119	349	870	1688	526
V/C Ratio(X)	0.73	1.01	0.26	0.98	0.86	0.00	0.87	0.95	0.16	1.08	0.45	0.21
Avail Cap(c_a), veh/h	83	1306	407	289	1631	508	612	1119	349	870	1688	526
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.2	44.1	34.8	54.8	37.6	0.0	50.8	46.0	37.5	44.6	31.1	28.3
Incr Delay (d2), s/veh	24.1	28.0	0.1	46.9	4.9	0.0	9.0	15.9	0.1	53.9	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	17.8	2.8	6.6	15.4	0.0	7.2	13.3	1.5	20.9	6.6	2.6
LnGrp Delay(d),s/veh	82.3	72.1	34.9	101.6	42.4	0.0	59.8	61.9	37.6	98.6	31.2	28.4
LnGrp LOS	F	F	C	F	D		E	E	D	F	C	C
Approach Vol, veh/h		1488			1693			1524			1815	
Approach Delay, s/veh		69.9			52.3			60.5			65.8	
Approach LOS		E			D			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	45.5	21.3	45.5	16.0	37.5	35.0	31.8
Change Period (Y+Rc), s	5.0	* 5.4	* 4.7	4.8	5.5	* 5.4	4.0	4.8
Max Green Setting (Gmax), s	3.0	* 40	* 22	35.5	10.5	* 32	31.0	27.0
Max Q Clear Time (g_c+I1), s	4.2	34.5	16.2	16.4	12.3	34.1	33.0	27.2
Green Ext Time (p_c), s	0.0	3.0	0.4	3.2	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	62.0
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	161	738	43	60	439	249	134	803	52	160	688	247
Future Volume (veh/h)	161	738	43	60	439	249	134	803	52	160	688	247
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1827	1827	1845	1845	1827	1827
Adj Flow Rate, veh/h	161	738	43	60	439	249	134	803	52	160	688	247
Adj No. of Lanes	1	2	0	1	2	0	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	3	3	4	4
Cap, veh/h	201	989	58	75	470	265	169	1076	338	200	1216	379
Arrive On Green	0.11	0.29	0.29	0.04	0.22	0.22	0.10	0.22	0.22	0.11	0.24	0.24
Sat Flow, veh/h	1757	3366	196	1757	2164	1218	1740	4988	1568	1757	4988	1553
Grp Volume(v), veh/h	161	384	397	60	355	333	134	803	52	160	688	247
Grp Sat Flow(s),veh/h/ln	1757	1752	1810	1757	1752	1630	1740	1663	1568	1757	1663	1553
Q Serve(g_s), s	5.5	12.2	12.2	2.1	12.3	12.4	4.6	9.3	1.7	5.5	7.5	8.8
Cycle Q Clear(g_c), s	5.5	12.2	12.2	2.1	12.3	12.4	4.6	9.3	1.7	5.5	7.5	8.8
Prop In Lane	1.00		0.11	1.00		0.75	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	201	515	532	75	381	354	169	1076	338	200	1216	379
V/C Ratio(X)	0.80	0.75	0.75	0.80	0.93	0.94	0.79	0.75	0.15	0.80	0.57	0.65
Avail Cap(c_a), veh/h	242	515	532	108	381	354	209	1496	470	268	1714	534
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.6	19.7	19.7	29.3	23.7	23.8	27.2	22.6	19.6	26.6	20.5	21.0
Incr Delay (d2), s/veh	12.2	5.2	5.1	15.0	29.0	32.5	12.3	0.7	0.1	8.5	0.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	6.6	6.8	1.3	9.0	8.8	2.8	4.3	0.7	3.1	3.5	3.8
LnGrp Delay(d),s/veh	38.9	24.9	24.8	44.3	52.7	56.3	39.6	23.3	19.7	35.2	20.6	21.7
LnGrp LOS	D	C	C	D	D	E	D	C	B	D	C	C
Approach Vol, veh/h		942			748			989			1095	
Approach Delay, s/veh		27.2			53.6			25.3			23.0	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	19.8	12.6	18.7	12.3	18.1	7.8	23.4
Change Period (Y+Rc), s	* 4.6	4.8	5.5	* 5.3	* 5.3	4.8	* 5.2	* 5.3
Max Green Setting (Gmax), s	* 7.4	21.2	8.5	* 13	* 9.4	18.5	* 3.8	* 18
Max Q Clear Time (g_c+I1), s	6.6	10.8	7.5	14.4	7.5	11.3	4.1	14.2
Green Ext Time (p_c), s	0.0	2.3	0.0	0.0	0.0	2.0	0.0	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	30.7
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	895	412	6	1	465	274	4	0	1	106	0	526
Future Volume (veh/h)	895	412	6	1	465	274	4	0	1	106	0	526
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1900	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	895	412	6	1	465	274	4	0	1	106	0	526
Adj No. of Lanes	2	1	0	1	2	0	0	1	0	1	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	981	893	13	77	530	310	5	0	1	397	417	624
Arrive On Green	0.29	0.49	0.49	0.04	0.25	0.25	0.00	0.00	0.00	0.23	0.00	0.23
Sat Flow, veh/h	3408	1814	26	1757	2129	1248	1372	0	343	1757	1845	2760
Grp Volume(v), veh/h	895	0	418	1	382	357	5	0	0	106	0	526
Grp Sat Flow(s),veh/h/ln	1704	0	1840	1757	1752	1624	1715	0	0	1757	1845	1380
Q Serve(g_s), s	17.4	0.0	10.2	0.0	14.4	14.5	0.2	0.0	0.0	3.4	0.0	12.5
Cycle Q Clear(g_c), s	17.4	0.0	10.2	0.0	14.4	14.5	0.2	0.0	0.0	3.4	0.0	12.5
Prop In Lane	1.00		0.01	1.00		0.77	0.80		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	981	0	906	77	436	404	7	0	0	397	417	624
V/C Ratio(X)	0.91	0.00	0.46	0.01	0.88	0.88	0.73	0.00	0.00	0.27	0.00	0.84
Avail Cap(c_a), veh/h	995	0	906	462	460	427	75	0	0	462	485	725
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.6	0.0	11.4	31.3	24.7	24.8	34.1	0.0	0.0	21.8	0.0	25.4
Incr Delay (d2), s/veh	12.3	0.0	0.4	0.1	16.6	18.5	89.7	0.0	0.0	0.4	0.0	7.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.8	0.0	5.2	0.0	8.9	8.5	0.3	0.0	0.0	1.7	0.0	5.4
LnGrp Delay(d),s/veh	35.9	0.0	11.8	31.4	41.3	43.2	123.8	0.0	0.0	22.2	0.0	33.3
LnGrp LOS	D		B	C	D	D	F			C		C
Approach Vol, veh/h		1313			740			5			632	
Approach Delay, s/veh		28.2			42.2			123.8			31.4	
Approach LOS		C			D			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		4.3	7.0	37.8		19.5	23.7	21.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		3.0	18.0	20.0		18.0	20.0	18.0
Max Q Clear Time (g_c+I1), s		2.2	2.0	12.2		14.5	19.4	16.5
Green Ext Time (p_c), s		0.0	0.0	3.4		1.0	0.3	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	33.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	40	32	9	30	234	57	2633	72	543	2091	59
Future Volume (veh/h)	76	40	32	9	30	234	57	2633	72	543	2091	59
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	76	40	32	9	30	234	57	2633	72	543	2091	59
Adj No. of Lanes	1	1	0	2	1	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	81	44	35	545	295	251	72	2480	772	513	3044	86
Arrive On Green	0.05	0.05	0.05	0.16	0.16	0.16	0.04	0.50	0.50	0.15	0.61	0.61
Sat Flow, veh/h	1757	950	760	3408	1845	1568	1740	4988	1553	3375	4987	140
Grp Volume(v), veh/h	76	0	72	9	30	234	57	2633	72	543	1393	757
Grp Sat Flow(s),veh/h/ln	1757	0	1711	1704	1845	1568	1740	1663	1553	1688	1663	1802
Q Serve(g_s), s	6.5	0.0	6.3	0.3	2.1	22.1	4.9	74.6	3.7	22.8	42.1	42.3
Cycle Q Clear(g_c), s	6.5	0.0	6.3	0.3	2.1	22.1	4.9	74.6	3.7	22.8	42.1	42.3
Prop In Lane	1.00		0.44	1.00		1.00	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	81	0	79	545	295	251	72	2480	772	513	2030	1100
V/C Ratio(X)	0.94	0.00	0.92	0.02	0.10	0.93	0.79	1.06	0.09	1.06	0.69	0.69
Avail Cap(c_a), veh/h	81	0	79	545	295	251	123	2480	772	513	2030	1100
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.3	0.0	71.3	53.1	53.8	62.2	71.2	37.7	19.9	63.6	19.6	19.6
Incr Delay (d2), s/veh	79.2	0.0	72.1	0.0	0.1	38.4	6.9	37.0	0.0	56.1	0.8	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	0.0	4.6	0.2	1.1	12.2	2.5	42.7	1.6	14.6	19.4	21.5
LnGrp Delay(d),s/veh	150.5	0.0	143.3	53.1	53.9	100.6	78.1	74.7	19.9	119.7	20.4	21.2
LnGrp LOS	F		F	D	D	F	E	F	B	F	C	C
Approach Vol, veh/h		148			273			2762			2693	
Approach Delay, s/veh		147.0			93.9			73.4			40.6	
Approach LOS		F			F			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.3	96.8		12.4	28.3	79.8		29.5
Change Period (Y+Rc), s	* 5.1	* 5.2		5.5	5.5	* 5.2		5.5
Max Green Setting (Gmax), s	* 11	* 87		6.9	22.8	* 75		24.0
Max Q Clear Time (g_c+I1), s	6.9	44.3		8.5	24.8	76.6		24.1
Green Ext Time (p_c), s	0.0	16.0		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	61.2
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	204	1166	473	188	1092	942	350	1491	300	484	873	139
Future Volume (veh/h)	204	1166	473	188	1092	942	350	1491	300	484	873	139
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	204	1166	473	188	1092	942	350	1491	300	484	873	139
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	182	1811	564	236	1890	589	398	1471	458	397	1469	457
Arrive On Green	0.05	0.36	0.36	0.07	0.38	0.38	0.12	0.29	0.29	0.12	0.29	0.29
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	204	1166	473	188	1092	942	350	1491	300	484	873	139
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	7.5	27.1	38.8	7.6	24.3	52.7	14.3	41.4	23.7	16.5	21.0	9.7
Cycle Q Clear(g_c), s	7.5	27.1	38.8	7.6	24.3	52.7	14.3	41.4	23.7	16.5	21.0	9.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	182	1811	564	236	1890	589	398	1471	458	397	1469	457
V/C Ratio(X)	1.12	0.64	0.84	0.80	0.58	1.60	0.88	1.01	0.66	1.22	0.59	0.30
Avail Cap(c_a), veh/h	182	1811	564	313	1890	589	478	1471	458	397	1469	457
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.4	37.5	41.2	64.4	35.0	43.8	61.0	49.5	43.3	61.9	42.3	38.4
Incr Delay (d2), s/veh	102.7	0.6	10.2	7.4	0.3	278.2	13.4	26.9	2.7	119.8	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	12.6	18.4	3.8	11.3	68.3	7.5	22.6	10.5	14.3	9.7	4.2
LnGrp Delay(d),s/veh	169.2	38.1	51.5	71.8	35.3	322.0	74.4	76.4	45.9	181.8	42.8	38.5
LnGrp LOS	F	D	D	E	D	F	E	F	D	F	D	D
Approach Vol, veh/h		1843			2222			2141			1496	
Approach Delay, s/veh		56.0			159.9			71.8			87.4	
Approach LOS		E			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	47.0	13.0	58.4	22.0	47.0	15.2	56.2
Change Period (Y+Rc), s	5.5	* 5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	19.9	* 38	7.5	* 53	16.5	* 41	12.9	* 47
Max Q Clear Time (g_c+I1), s	16.3	23.0	9.5	54.7	18.5	43.4	9.6	40.8
Green Ext Time (p_c), s	0.2	4.5	0.0	0.0	0.0	0.0	0.1	3.4

Intersection Summary	
HCM 2010 Ctrl Delay	96.5
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	335	1406	450	120	1570	664	370	1436	107	674	648	90
Future Volume (veh/h)	335	1406	450	120	1570	664	370	1436	107	674	648	90
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1845	1845	1792	1792	1845	1845	1845	1827	1845	1827
Adj Flow Rate, veh/h	335	1406	450	120	1570	664	370	1436	107	674	648	0
Adj No. of Lanes	2	3	1	2	3	2	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	3	3	6	6	3	3	3	4	3	4
Cap, veh/h	329	1674	536	169	1449	794	424	1340	417	623	1628	502
Arrive On Green	0.10	0.34	0.34	0.05	0.30	0.30	0.12	0.27	0.27	0.18	0.32	0.00
Sat Flow, veh/h	3312	4893	1568	3408	4893	2682	3408	5036	1568	3375	5036	1553
Grp Volume(v), veh/h	335	1406	450	120	1570	664	370	1436	107	674	648	0
Grp Sat Flow(s),veh/h/ln	1656	1631	1568	1704	1631	1341	1704	1679	1568	1688	1679	1553
Q Serve(g_s), s	12.9	34.5	34.4	4.5	38.5	30.1	13.9	34.6	7.0	24.0	13.0	0.0
Cycle Q Clear(g_c), s	12.9	34.5	34.4	4.5	38.5	30.1	13.9	34.6	7.0	24.0	13.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	329	1674	536	169	1449	794	424	1340	417	623	1628	502
V/C Ratio(X)	1.02	0.84	0.84	0.71	1.08	0.84	0.87	1.07	0.26	1.08	0.40	0.00
Avail Cap(c_a), veh/h	329	1675	537	181	1449	794	558	1340	417	623	1628	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	58.6	39.5	39.5	60.9	45.8	42.8	55.9	47.7	37.6	53.0	34.2	0.0
Incr Delay (d2), s/veh	54.7	3.8	10.7	11.4	49.7	7.3	9.5	46.1	0.3	60.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	16.1	16.5	2.4	24.0	11.9	7.1	21.7	3.1	16.4	6.0	0.0
LnGrp Delay(d),s/veh	113.3	43.3	50.2	72.2	95.4	50.1	65.4	93.8	37.9	113.1	34.2	0.0
LnGrp LOS	F	D	D	E	F	D	E	F	D	F	C	
Approach Vol, veh/h		2191			2354			1913			1322	
Approach Delay, s/veh		55.4			81.5			85.2			74.4	
Approach LOS		E			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.6	47.1	17.2	44.1	29.0	39.7	11.2	50.1
Change Period (Y+Rc), s	* 5.4	5.1	* 4.3	5.6	5.0	5.1	* 4.8	* 5.6
Max Green Setting (Gmax), s	* 21	36.9	* 13	38.5	24.0	34.6	* 6.9	* 45
Max Q Clear Time (g_c+I1), s	15.9	15.0	14.9	40.5	26.0	36.6	6.5	36.5
Green Ext Time (p_c), s	0.3	10.2	0.0	0.0	0.0	0.0	0.0	5.0

Intersection Summary	
HCM 2010 Ctrl Delay	73.9
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	410	96	287	560	123	231	1668	202	37	357	57
Future Volume (veh/h)	9	410	96	287	560	123	231	1668	202	37	357	57
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	9	410	96	287	560	123	231	1668	202	37	357	57
Adj No. of Lanes	2	1	1	2	2	1	1	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	22	456	387	294	1145	512	265	1635	732	66	1176	526
Arrive On Green	0.01	0.25	0.25	0.09	0.33	0.33	0.15	0.47	0.47	0.02	0.34	0.34
Sat Flow, veh/h	3408	1845	1568	3408	3505	1568	1757	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	9	410	96	287	560	123	231	1668	202	37	357	57
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1752	1568	1757	1752	1568	1704	1752	1568
Q Serve(g_s), s	0.3	25.2	5.8	9.9	15.0	6.7	15.1	54.7	9.2	1.3	8.8	2.9
Cycle Q Clear(g_c), s	0.3	25.2	5.8	9.9	15.0	6.7	15.1	54.7	9.2	1.3	8.8	2.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	22	456	387	294	1145	512	265	1635	732	66	1176	526
V/C Ratio(X)	0.41	0.90	0.25	0.98	0.49	0.24	0.87	1.02	0.28	0.56	0.30	0.11
Avail Cap(c_a), veh/h	87	488	415	294	1145	512	390	1635	732	87	1176	526
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.0	42.7	35.4	53.5	31.6	28.8	48.7	31.3	19.1	57.0	28.8	26.9
Incr Delay (d2), s/veh	11.5	18.8	0.3	46.2	0.3	0.2	13.7	27.4	0.2	7.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	15.2	2.5	6.5	7.3	2.9	8.3	32.6	4.1	0.7	4.3	1.3
LnGrp Delay(d),s/veh	69.5	61.5	35.7	99.6	32.0	29.1	62.4	58.7	19.4	64.1	28.9	26.9
LnGrp LOS	E	E	D	F	C	C	E	F	B	E	C	C
Approach Vol, veh/h		515			970			2101			451	
Approach Delay, s/veh		56.9			51.6			55.3			31.5	
Approach LOS		E			D			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.2	44.3	15.6	34.2	7.8	59.7	6.3	43.5
Change Period (Y+Rc), s	5.5	5.0	5.5	* 5.2	5.5	5.0	5.5	* 5.2
Max Green Setting (Gmax), s	26.0	31.7	10.1	* 31	3.0	54.7	3.0	* 38
Max Q Clear Time (g_c+I1), s	17.1	10.8	11.9	27.2	3.3	56.7	2.3	17.0
Green Ext Time (p_c), s	0.6	11.8	0.0	1.7	0.0	0.0	0.0	5.5

Intersection Summary	
HCM 2010 Ctrl Delay	52.0
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	427	34	96	247	19	9	1987	465	20	492	186
Future Volume (veh/h)	170	427	34	96	247	19	9	1987	465	20	492	186
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1828	1900	1845	1796	1900	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	170	427	34	96	247	19	9	1987	465	20	492	186
Adj No. of Lanes	2	1	0	2	1	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	4	4	3	6	6	3	3	3	3	3	3
Cap, veh/h	194	409	33	120	368	28	11	1943	869	24	1401	527
Arrive On Green	0.06	0.24	0.24	0.04	0.22	0.22	0.01	0.55	0.55	0.01	0.56	0.56
Sat Flow, veh/h	3408	1672	133	3408	1647	127	1757	3505	1568	1757	2494	937
Grp Volume(v), veh/h	170	0	461	96	0	266	9	1987	465	20	345	333
Grp Sat Flow(s),veh/h/ln	1704	0	1805	1704	0	1774	1757	1752	1568	1757	1752	1679
Q Serve(g_s), s	6.9	0.0	34.0	3.9	0.0	19.0	0.7	77.0	26.1	1.6	14.9	15.1
Cycle Q Clear(g_c), s	6.9	0.0	34.0	3.9	0.0	19.0	0.7	77.0	26.1	1.6	14.9	15.1
Prop In Lane	1.00		0.07	1.00		0.07	1.00		1.00	1.00		0.56
Lane Grp Cap(c), veh/h	194	0	442	120	0	396	11	1943	869	24	984	943
V/C Ratio(X)	0.88	0.00	1.04	0.80	0.00	0.67	0.81	1.02	0.54	0.82	0.35	0.35
Avail Cap(c_a), veh/h	194	0	442	120	0	396	43	1943	869	38	984	943
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.0	0.0	52.5	66.5	0.0	49.3	68.9	31.0	19.6	68.3	16.6	16.6
Incr Delay (d2), s/veh	33.4	0.0	54.7	30.4	0.0	3.6	77.6	26.4	0.6	53.1	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	0.0	23.6	2.3	0.0	9.7	0.6	44.1	11.4	1.1	7.2	7.0
LnGrp Delay(d),s/veh	98.4	0.0	107.1	96.9	0.0	52.9	146.5	57.4	20.3	121.5	16.8	16.9
LnGrp LOS	F		F	F		D	F	F	C	F	B	B
Approach Vol, veh/h		631			362			2461			698	
Approach Delay, s/veh		104.8			64.6			50.7			19.8	
Approach LOS		F			E			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.4	82.1	13.4	36.0	6.4	83.1	10.4	39.0
Change Period (Y+Rc), s	5.5	* 5.1	5.5	* 5	5.5	* 5.1	5.5	* 5
Max Green Setting (Gmax), s	3.0	* 77	7.9	* 31	3.4	* 77	4.9	* 34
Max Q Clear Time (g_c+I1), s	3.6	79.0	8.9	21.0	2.7	17.1	5.9	36.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.6	0.0	36.6	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	54.9
HCM 2010 LOS	D

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	343	195	313	264	42	380
Future Volume (veh/h)	343	195	313	264	42	380
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	343	195	313	264	42	380
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	460	391	385	1017	498	444
Arrive On Green	0.25	0.25	0.22	0.55	0.28	0.28
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	343	195	313	264	42	380
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	8.3	5.2	8.2	3.6	0.8	11.1
Cycle Q Clear(g_c), s	8.3	5.2	8.2	3.6	0.8	11.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	460	391	385	1017	498	444
V/C Ratio(X)	0.75	0.50	0.81	0.26	0.08	0.86
Avail Cap(c_a), veh/h	610	518	545	1334	617	551
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.7	15.6	18.0	5.7	12.7	16.4
Incr Delay (d2), s/veh	3.5	1.0	6.3	0.1	0.1	10.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	2.3	4.6	1.9	0.4	6.0
LnGrp Delay(d),s/veh	20.2	16.6	24.3	5.8	12.8	27.0
LnGrp LOS	C	B	C	A	B	C
Approach Vol, veh/h	538			577	422	
Approach Delay, s/veh	18.9			15.8	25.6	
Approach LOS	B			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		17.7	14.6	16.1				30.7
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		17.0	15.0	16.0				35.0
Max Q Clear Time (g_c+I1), s		13.1	10.2	10.3				5.6
Green Ext Time (p_c), s		0.6	0.6	1.8				3.4

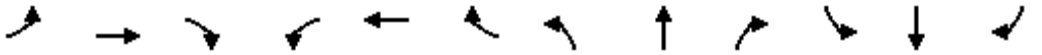
Intersection Summary	
HCM 2010 Ctrl Delay	19.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	833	133	562	1244	311	177	695	784	339	283	49
Future Volume (veh/h)	117	833	133	562	1244	311	177	695	784	339	283	49
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1792	1845	1845	1792	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	117	833	133	562	1244	311	177	695	784	339	283	49
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	6	3	3	6	3	3	3	3	3	3	3
Cap, veh/h	186	1280	410	684	1996	639	257	747	649	363	857	383
Arrive On Green	0.05	0.26	0.26	0.20	0.41	0.41	0.08	0.21	0.21	0.11	0.24	0.24
Sat Flow, veh/h	3408	4893	1568	3408	4893	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	117	833	133	562	1244	311	177	695	784	339	283	49
Grp Sat Flow(s),veh/h/ln	1704	1631	1568	1704	1631	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	2.8	12.8	5.8	13.3	17.0	12.4	4.3	16.4	18.0	8.3	5.6	2.1
Cycle Q Clear(g_c), s	2.8	12.8	5.8	13.3	17.0	12.4	4.3	16.4	18.0	8.3	5.6	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	186	1280	410	684	1996	639	257	747	649	363	857	383
V/C Ratio(X)	0.63	0.65	0.32	0.82	0.62	0.49	0.69	0.93	1.21	0.93	0.33	0.13
Avail Cap(c_a), veh/h	283	1310	420	888	2179	698	363	747	649	363	857	383
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.1	27.7	25.1	32.3	19.9	18.5	38.1	32.6	24.7	37.4	26.2	24.9
Incr Delay (d2), s/veh	3.5	1.3	0.6	4.9	0.6	0.8	3.3	18.1	107.7	30.7	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	5.9	2.6	6.7	7.7	5.5	2.1	9.8	34.5	5.5	2.7	0.9
LnGrp Delay(d),s/veh	42.6	29.0	25.8	37.2	20.5	19.3	41.4	50.7	132.4	68.1	26.4	25.0
LnGrp LOS	D	C	C	D	C	B	D	D	F	E	C	C
Approach Vol, veh/h		1083			2117			1656			671	
Approach Delay, s/veh		30.1			24.7			88.4			47.4	
Approach LOS		C			C			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.9	28.5	10.4	24.6	8.6	40.8	13.0	22.0
Change Period (Y+Rc), s	4.0	6.4	4.0	4.0	4.0	6.4	4.0	4.0
Max Green Setting (Gmax), s	22.0	22.6	9.0	18.0	7.0	37.6	9.0	18.0
Max Q Clear Time (g_c+I1), s	15.3	14.8	6.3	7.6	4.8	19.0	10.3	20.0
Green Ext Time (p_c), s	1.6	7.1	0.2	6.2	0.1	15.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	47.6
HCM 2010 LOS	D

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	644	3	92	34	33	123	224	877	29	55	450	574
Future Volume (veh/h)	644	3	92	34	33	123	224	877	29	55	450	574
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845	1845	1827	1827	1827	1827	1845
Adj Flow Rate, veh/h	644	3	92	34	33	123	224	877	29	55	450	574
Adj No. of Lanes	2	2	1	0	1	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	4	4	4	4	3
Cap, veh/h	751	772	345	99	96	170	313	1248	558	99	1046	472
Arrive On Green	0.22	0.22	0.22	0.11	0.11	0.11	0.09	0.36	0.36	0.03	0.30	0.30
Sat Flow, veh/h	3408	3505	1568	913	886	1568	3408	3471	1553	3375	3471	1568
Grp Volume(v), veh/h	644	3	92	67	0	123	224	877	29	55	450	574
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1799	0	1568	1704	1736	1553	1688	1736	1568
Q Serve(g_s), s	12.4	0.0	3.3	2.4	0.0	5.2	4.4	14.8	0.8	1.1	7.1	20.6
Cycle Q Clear(g_c), s	12.4	0.0	3.3	2.4	0.0	5.2	4.4	14.8	0.8	1.1	7.1	20.6
Prop In Lane	1.00		1.00	0.51		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	751	772	345	195	0	170	313	1248	558	99	1046	472
V/C Ratio(X)	0.86	0.00	0.27	0.34	0.00	0.72	0.72	0.70	0.05	0.55	0.43	1.21
Avail Cap(c_a), veh/h	798	820	367	474	0	413	319	1248	558	148	1046	472
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.6	20.8	22.1	28.2	0.0	29.5	30.2	18.8	14.3	32.7	19.2	23.9
Incr Delay (d2), s/veh	8.9	0.0	0.4	1.0	0.0	5.7	7.3	1.8	0.0	4.8	0.3	114.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	0.0	1.5	1.2	0.0	2.5	2.4	7.4	0.4	0.6	3.4	23.9
LnGrp Delay(d),s/veh	34.5	20.8	22.5	29.2	0.0	35.2	37.5	20.6	14.3	37.5	19.5	138.8
LnGrp LOS	C	C	C	C		D	D	C	B	D	B	F
Approach Vol, veh/h		739			190			1130			1079	
Approach Delay, s/veh		32.9			33.1			23.8			83.8	
Approach LOS		C			C			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.9	25.6		12.8	6.9	29.6		19.1
Change Period (Y+Rc), s	* 4.6	5.0		* 5.4	* 4.9	5.0		4.0
Max Green Setting (Gmax), s	* 6.4	20.6		* 18	* 3	23.7		16.0
Max Q Clear Time (g_c+I1), s	6.4	22.6		7.2	3.1	16.8		14.4
Green Ext Time (p_c), s	0.0	0.0		0.4	0.0	4.8		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	47.1
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	193	386	38	45	870	120	88	753	31	106	298	214
Future Volume (veh/h)	193	386	38	45	870	120	88	753	31	106	298	214
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1838	1900	1845	1845	1900	1827	1845	1845
Adj Flow Rate, veh/h	193	386	38	45	870	120	88	753	31	106	298	214
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	4	3	3
Cap, veh/h	202	1384	136	57	1070	148	113	959	39	117	521	623
Arrive On Green	0.11	0.43	0.43	0.03	0.35	0.35	0.06	0.28	0.28	0.07	0.28	0.28
Sat Flow, veh/h	1757	3225	316	1757	3084	425	1757	3431	141	1740	1845	1568
Grp Volume(v), veh/h	193	209	215	45	493	497	88	385	399	106	298	214
Grp Sat Flow(s),veh/h/ln	1757	1752	1789	1757	1746	1763	1757	1752	1820	1740	1845	1568
Q Serve(g_s), s	11.4	8.1	8.1	2.7	26.8	26.8	5.2	21.1	21.2	6.3	14.4	9.9
Cycle Q Clear(g_c), s	11.4	8.1	8.1	2.7	26.8	26.8	5.2	21.1	21.2	6.3	14.4	9.9
Prop In Lane	1.00		0.18	1.00		0.24	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	202	752	768	57	606	612	113	490	509	117	521	623
V/C Ratio(X)	0.96	0.28	0.28	0.78	0.81	0.81	0.78	0.79	0.79	0.91	0.57	0.34
Avail Cap(c_a), veh/h	202	1024	1046	152	971	980	219	806	837	117	742	811
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.9	19.3	19.3	50.1	31.0	31.0	48.1	34.7	34.7	48.4	32.0	21.9
Incr Delay (d2), s/veh	50.5	0.2	0.2	20.3	2.9	2.8	11.1	2.8	2.7	54.6	1.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	3.9	4.0	1.6	13.3	13.5	2.8	10.6	11.0	4.8	7.5	4.3
LnGrp Delay(d),s/veh	96.4	19.5	19.5	70.4	33.9	33.8	59.2	37.5	37.4	103.0	33.0	22.3
LnGrp LOS	F	B	B	E	C	C	E	D	D	F	C	C
Approach Vol, veh/h		617			1035			872			618	
Approach Delay, s/veh		43.6			35.4			39.7			41.3	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.4	50.8	10.7	35.5	16.0	42.2	11.0	35.2
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	9.0	61.0	13.0	42.0	12.0	58.0	7.0	48.0
Max Q Clear Time (g_c+I1), s	4.7	10.1	7.2	16.4	13.4	28.8	8.3	23.2
Green Ext Time (p_c), s	0.0	7.9	0.1	6.1	0.0	7.4	0.0	6.0

Intersection Summary	
HCM 2010 Ctrl Delay	39.4
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	291	5	39	768	40	2	107	9	13	150	187
Future Volume (veh/h)	203	291	5	39	768	40	2	107	9	13	150	187
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1900	1900	1810	1900	1900	1810	1900
Adj Flow Rate, veh/h	203	291	5	39	768	40	2	107	9	13	150	187
Adj No. of Lanes	1	1	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	5	5	5	5	5	5
Cap, veh/h	232	792	14	49	1130	59	3	136	11	14	159	198
Arrive On Green	0.14	0.45	0.45	0.03	0.34	0.34	0.08	0.08	0.08	0.22	0.22	0.22
Sat Flow, veh/h	1707	1757	30	1707	3294	171	30	1618	136	61	707	882
Grp Volume(v), veh/h	203	0	296	39	397	411	118	0	0	350	0	0
Grp Sat Flow(s),veh/h/ln	1707	0	1787	1707	1703	1762	1784	0	0	1651	0	0
Q Serve(g_s), s	12.4	0.0	11.6	2.4	21.3	21.3	6.9	0.0	0.0	22.3	0.0	0.0
Cycle Q Clear(g_c), s	12.4	0.0	11.6	2.4	21.3	21.3	6.9	0.0	0.0	22.3	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.10	0.02		0.08	0.04		0.53
Lane Grp Cap(c), veh/h	232	0	805	49	584	604	150	0	0	371	0	0
V/C Ratio(X)	0.87	0.00	0.37	0.80	0.68	0.68	0.79	0.00	0.00	0.94	0.00	0.00
Avail Cap(c_a), veh/h	262	0	1142	147	973	1007	435	0	0	371	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	45.2	0.0	19.3	51.5	30.0	30.0	47.9	0.0	0.0	40.7	0.0	0.0
Incr Delay (d2), s/veh	22.4	0.0	0.6	10.7	3.0	2.9	8.7	0.0	0.0	32.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	0.0	5.9	1.3	10.5	10.9	3.8	0.0	0.0	13.4	0.0	0.0
LnGrp Delay(d),s/veh	67.6	0.0	19.9	62.2	33.0	32.9	56.6	0.0	0.0	73.0	0.0	0.0
LnGrp LOS	E		B	E	C	C	E			E		
Approach Vol, veh/h		499			847			118			350	
Approach Delay, s/veh		39.3			34.3			56.6			73.0	
Approach LOS		D			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.1	42.6		30.0	7.6	54.1		15.0
Change Period (Y+Rc), s	4.6	6.0		6.0	4.6	6.0		6.0
Max Green Setting (Gmax), s	16.4	61.0		24.0	9.2	68.2		26.0
Max Q Clear Time (g_c+I1), s	14.4	23.3		24.3	4.4	13.6		8.9
Green Ext Time (p_c), s	0.1	13.3		0.0	0.0	14.6		0.3

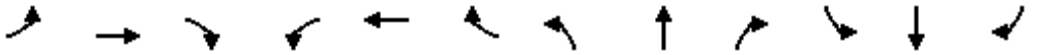
Intersection Summary	
HCM 2010 Ctrl Delay	44.6
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1	1	260	0	432	2	882	131	181	568	5
Future Volume (veh/h)	5	1	1	260	0	432	2	882	131	181	568	5
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	5	1	1	260	0	432	2	882	131	181	568	5
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	9	117	117	305	0	480	4	1065	158	223	862	8
Arrive On Green	0.01	0.14	0.14	0.17	0.00	0.31	0.00	0.35	0.35	0.13	0.47	0.47
Sat Flow, veh/h	1757	848	848	1757	0	1568	1757	3062	455	1757	1826	16
Grp Volume(v), veh/h	5	0	2	260	0	432	2	505	508	181	0	573
Grp Sat Flow(s),veh/h/ln	1757	0	1695	1757	0	1568	1757	1752	1764	1757	0	1842
Q Serve(g_s), s	0.2	0.0	0.1	10.7	0.0	19.7	0.1	19.7	19.7	7.5	0.0	17.8
Cycle Q Clear(g_c), s	0.2	0.0	0.1	10.7	0.0	19.7	0.1	19.7	19.7	7.5	0.0	17.8
Prop In Lane	1.00		0.50	1.00		1.00	1.00		0.26	1.00		0.01
Lane Grp Cap(c), veh/h	9	0	233	305	0	480	4	610	614	223	0	870
V/C Ratio(X)	0.54	0.00	0.01	0.85	0.00	0.90	0.52	0.83	0.83	0.81	0.00	0.66
Avail Cap(c_a), veh/h	94	0	363	376	0	587	94	680	684	305	0	936
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.1	0.0	27.8	30.0	0.0	24.8	37.3	22.3	22.3	31.8	0.0	15.1
Incr Delay (d2), s/veh	41.0	0.0	0.0	14.4	0.0	14.8	81.0	7.7	7.7	11.2	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	6.4	0.0	10.5	0.1	10.8	10.9	4.3	0.0	9.3
LnGrp Delay(d),s/veh	78.1	0.0	27.9	44.3	0.0	39.7	118.2	30.1	30.0	43.0	0.0	16.7
LnGrp LOS	E		C	D		D	F	C	C	D		B
Approach Vol, veh/h		7			692			1015			754	
Approach Delay, s/veh		63.8			41.4			30.2			23.0	
Approach LOS		E			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.5	30.0	17.0	14.3	4.2	39.3	4.4	26.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	13.0	29.0	16.0	16.0	4.0	38.0	4.0	28.0
Max Q Clear Time (g_c+I1), s	9.5	21.7	12.7	2.1	2.1	19.8	2.2	21.7
Green Ext Time (p_c), s	0.2	4.3	0.3	1.9	0.0	7.5	0.0	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	31.2
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	263	752	772	20	1276	24	1484	124	38	18	45	96
Future Volume (veh/h)	263	752	772	20	1276	24	1484	124	38	18	45	96
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	263	752	772	20	1276	24	1484	124	38	18	45	96
Adj No. of Lanes	2	3	2	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	277	1659	909	41	1310	408	1521	1812	811	38	287	128
Arrive On Green	0.08	0.33	0.33	0.01	0.26	0.26	0.45	0.52	0.52	0.01	0.08	0.08
Sat Flow, veh/h	3408	5036	2760	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	263	752	772	20	1276	24	1484	124	38	18	45	96
Grp Sat Flow(s),veh/h/ln	1704	1679	1380	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	9.4	14.5	32.0	0.7	30.9	1.4	52.5	2.2	1.5	0.6	1.5	7.4
Cycle Q Clear(g_c), s	9.4	14.5	32.0	0.7	30.9	1.4	52.5	2.2	1.5	0.6	1.5	7.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	277	1659	909	41	1310	408	1521	1812	811	38	287	128
V/C Ratio(X)	0.95	0.45	0.85	0.49	0.97	0.06	0.98	0.07	0.05	0.47	0.16	0.75
Avail Cap(c_a), veh/h	277	1659	909	83	1310	408	1524	1967	880	83	485	217
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.2	32.5	38.4	60.4	45.1	34.2	33.4	14.9	14.7	60.4	52.5	55.2
Incr Delay (d2), s/veh	40.3	0.2	7.6	8.6	18.8	0.1	17.5	0.0	0.0	8.8	0.3	8.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	6.7	13.1	0.4	16.6	0.6	28.2	1.1	0.6	0.4	0.7	3.5
LnGrp Delay(d),s/veh	96.5	32.7	46.0	69.0	63.9	34.2	50.8	14.9	14.7	69.2	52.7	63.5
LnGrp LOS	F	C	D	E	E	C	D	B	B	E	D	E
Approach Vol, veh/h		1787			1320			1646			159	
Approach Delay, s/veh		47.8			63.4			47.3			61.1	
Approach LOS		D			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.4	67.6	5.5	44.5	58.9	14.1	14.0	36.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	69.0	3.0	39.0	55.0	17.0	10.0	32.0
Max Q Clear Time (g_c+I1), s	2.6	4.2	2.7	34.0	54.5	9.4	11.4	32.9
Green Ext Time (p_c), s	0.0	1.3	0.0	4.4	0.4	0.7	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		52.3
HCM 2010 LOS		D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	140	0	1326	199	125	0	305	1328	147	561	88
Future Volume (veh/h)	18	140	0	1326	199	125	0	305	1328	147	561	88
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	18	140	0	1326	199	125	0	305	1328	147	561	88
Adj No. of Lanes	1	1	1	2	1	1	1	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	28	196	167	1592	1028	874	2	674	1034	216	1046	468
Arrive On Green	0.02	0.11	0.00	0.47	0.56	0.56	0.00	0.19	0.19	0.06	0.30	0.30
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	18	140	0	1326	199	125	0	305	1328	147	561	88
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1752	1568	1704	1752	1568
Q Serve(g_s), s	1.0	6.9	0.0	31.8	5.0	3.6	0.0	7.2	18.0	4.0	12.5	3.9
Cycle Q Clear(g_c), s	1.0	6.9	0.0	31.8	5.0	3.6	0.0	7.2	18.0	4.0	12.5	3.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	28	196	167	1592	1028	874	2	674	1034	216	1046	468
V/C Ratio(X)	0.64	0.71	0.00	0.83	0.19	0.14	0.00	0.45	1.28	0.68	0.54	0.19
Avail Cap(c_a), veh/h	94	315	268	2986	1833	1558	75	674	1034	291	1046	468
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.8	40.4	0.0	21.8	10.3	10.0	0.0	33.4	15.9	42.9	27.4	24.4
Incr Delay (d2), s/veh	21.8	4.7	0.0	1.2	0.1	0.1	0.0	0.5	135.5	3.9	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.8	0.0	15.2	2.6	1.6	0.0	3.5	65.0	2.0	6.2	1.7
LnGrp Delay(d),s/veh	67.6	45.2	0.0	23.0	10.4	10.0	0.0	33.9	151.4	46.8	28.0	24.6
LnGrp LOS	E	D		C	B	B		C	F	D	C	C
Approach Vol, veh/h		158			1650			1633			796	
Approach Delay, s/veh		47.7			20.5			129.5			31.1	
Approach LOS		D			C			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.9	22.0	47.7	14.0	0.0	31.9	5.5	56.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	18.0	82.0	16.0	4.0	22.0	5.0	93.0
Max Q Clear Time (g_c+I1), s	6.0	20.0	33.8	8.9	0.0	14.5	3.0	7.0
Green Ext Time (p_c), s	0.1	0.0	10.0	1.1	0.0	6.1	0.0	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	65.5
HCM 2010 LOS	E

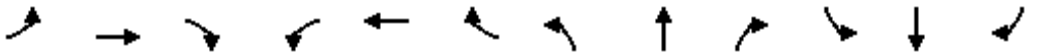
Intersection	
Intersection Delay, s/veh	18.0
Intersection LOS	C

Approach	EB	NB	SB
Entry Lanes	1	2	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	117	864	768
Demand Flow Rate, veh/h	120	890	791
Vehicles Circulating, veh/h	721	77	20
Vehicles Exiting, veh/h	90	764	947
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	9.7	22.0	14.8
Approach LOS	A	C	B

Lane	Left	Left	Right	Left
Designated Moves	LR	L	TR	TR
Assumed Moves	LR	L	TR	TR
RT Channelized				
Lane Util	1.000	0.022	0.978	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	120	20	870	791
Cap Entry Lane, veh/h	549	1046	1046	1108
Entry HV Adj Factor	0.975	0.950	0.971	0.971
Flow Entry, veh/h	117	19	845	768
Cap Entry, veh/h	536	994	1016	1075
V/C Ratio	0.218	0.019	0.832	0.714
Control Delay, s/veh	9.7	3.8	22.4	14.8
LOS	A	A	C	B
95th %tile Queue, veh	1	0	10	6

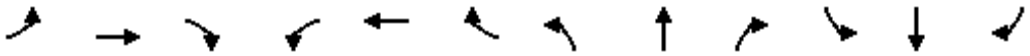
Existing Plus All Projects Mitigation

PM



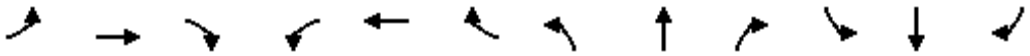
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	136	454	134	376	604	52	44	513	212	180	589	20
Future Volume (vph)	136	454	134	376	604	52	44	513	212	180	589	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.1		6.8	6.8		4.7	5.1	5.1	5.3	5.1	5.1
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.97		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	3385		1752	3463		1736	3471	1568	1752	3471	1553
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1752	3385		1752	3463		1736	3471	1568	1752	3471	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	136	454	134	376	604	52	44	513	212	180	589	20
RTOR Reduction (vph)	0	25	0	0	5	0	0	0	169	0	0	14
Lane Group Flow (vph)	136	563	0	376	651	0	44	513	43	180	589	6
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	3%	3%	4%	4%
Turn Type	Split	NA		Split	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases									6			2
Actuated Green, G (s)	19.8	19.8		23.4	23.4		3.9	20.1	20.1	11.8	28.6	28.6
Effective Green, g (s)	19.8	19.8		23.4	23.4		3.9	20.1	20.1	11.8	28.6	28.6
Actuated g/C Ratio	0.20	0.20		0.24	0.24		0.04	0.20	0.20	0.12	0.29	0.29
Clearance Time (s)	7.1	7.1		6.8	6.8		4.7	5.1	5.1	5.3	5.1	5.1
Vehicle Extension (s)	1.0	1.0		3.0	3.0		1.0	1.0	1.0	3.0	1.0	1.0
Lane Grp Cap (vph)	348	674		412	815		68	701	317	207	998	446
v/s Ratio Prot	0.08	c0.17		c0.21	0.19		0.03	c0.15		c0.10	0.17	
v/s Ratio Perm									0.03			0.00
v/c Ratio	0.39	0.84		0.91	0.80		0.65	0.73	0.14	0.87	0.59	0.01
Uniform Delay, d1	34.6	38.2		37.0	35.8		47.1	37.1	32.5	43.0	30.4	25.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	8.5		24.2	5.5		14.7	3.4	0.1	29.8	0.6	0.0
Delay (s)	34.8	46.7		61.2	41.3		61.8	40.5	32.6	72.9	31.0	25.3
Level of Service	C	D		E	D		E	D	C	E	C	C
Approach Delay (s)		44.5			48.5			39.6			40.4	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	43.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	99.4	Sum of lost time (s)	24.3
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	356	17	2	621	4	10	8	2	61	11	402
Future Volume (vph)	62	356	17	2	621	4	10	8	2	61	11	402
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.99			1.00			0.99			0.89	
Flt Protected		0.99			1.00			0.98			0.99	
Satd. Flow (prot)		1804			1825			1775			1623	
Flt Permitted		0.88			1.00			0.85			0.96	
Satd. Flow (perm)		1608			1823			1543			1564	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	62	356	17	2	621	4	10	8	2	61	11	402
RTOR Reduction (vph)	0	2	0	0	1	0	0	1	0	0	207	0
Lane Group Flow (vph)	0	433	0	0	626	0	0	19	0	0	267	0
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)		16.2			16.2			10.0			10.0	
Effective Green, g (s)		16.2			16.2			10.0			10.0	
Actuated g/C Ratio		0.47			0.47			0.29			0.29	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		761			863			451			457	
v/s Ratio Prot												
v/s Ratio Perm		0.27			c0.34			0.01			c0.17	
v/c Ratio		0.57			0.73			0.04			0.59	
Uniform Delay, d1		6.5			7.2			8.7			10.3	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.0			3.1			0.0			1.9	
Delay (s)		7.5			10.3			8.7			12.2	
Level of Service		A			B			A			B	
Approach Delay (s)		7.5			10.3			8.7			12.2	
Approach LOS		A			B			A			B	

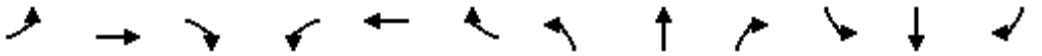
Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	34.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	97	3	22	0	1	1	14	285	1	1	680	325
Future Volume (vph)	97	3	22	0	1	1	14	285	1	1	680	325
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.98			0.93			1.00			0.96	
Flt Protected		0.96			1.00			1.00			1.00	
Satd. Flow (prot)		1731			1720			1840			1764	
Flt Permitted		0.77			1.00			0.96			1.00	
Satd. Flow (perm)		1384			1720			1764			1764	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	97	3	22	0	1	1	14	285	1	1	680	325
RTOR Reduction (vph)	0	15	0	0	1	0	0	0	0	0	20	0
Lane Group Flow (vph)	0	107	0	0	1	0	0	300	0	0	986	0
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		8.1			8.1			41.5			41.5	
Effective Green, g (s)		8.1			8.1			41.5			41.5	
Actuated g/C Ratio		0.14			0.14			0.72			0.72	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		194			241			1270			1270	
v/s Ratio Prot					0.00							
v/s Ratio Perm		c0.08						0.17			0.56	
v/c Ratio		0.55			0.00			0.24			0.78	
Uniform Delay, d1		23.0			21.3			2.7			5.1	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		3.2			0.0			0.1			3.0	
Delay (s)		26.2			21.3			2.8			8.2	
Level of Service		C			C			A			A	
Approach Delay (s)		26.2			21.3			2.8			8.2	
Approach LOS		C			C			A			A	

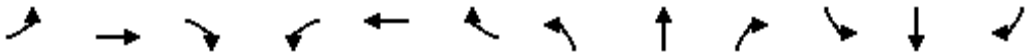
Intersection Summary			
HCM 2000 Control Delay	8.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	57.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



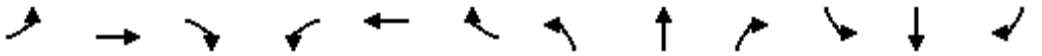
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1040	44	624	27	77	110	598	1430	17	146	362	586
Future Volume (vph)	1040	44	624	27	77	110	598	1430	17	146	362	586
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3	5.3		5.5	5.5	4.7	4.6		4.4	4.8	4.8
Lane Util. Factor	0.95	0.95	1.00		1.00	1.00	1.00	0.91		1.00	0.91	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.96	1.00		0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1649	1659	1553		1821	1568	1736	4979		1736	4988	1553
Flt Permitted	0.95	0.96	1.00		0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1649	1659	1553		1821	1568	1736	4979		1736	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1040	44	624	27	77	110	598	1430	17	146	362	586
RTOR Reduction (vph)	0	0	185	0	0	103	0	1	0	0	0	514
Lane Group Flow (vph)	541	543	439	0	104	7	598	1446	0	146	362	72
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	4%	4%	4%	4%	4%	4%
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4						2
Actuated Green, G (s)	44.5	44.5	44.5		8.5	8.5	46.7	47.3		13.7	13.8	13.8
Effective Green, g (s)	44.5	44.5	44.5		8.5	8.5	46.7	47.3		13.7	13.8	13.8
Actuated g/C Ratio	0.33	0.33	0.33		0.06	0.06	0.35	0.35		0.10	0.10	0.10
Clearance Time (s)	5.3	5.3	5.3		5.5	5.5	4.7	4.6		4.4	4.8	4.8
Vehicle Extension (s)	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lane Grp Cap (vph)	548	551	516		115	99	605	1760		177	514	160
v/s Ratio Prot	c0.33	0.33			c0.06		c0.34	c0.29		0.08	0.07	
v/s Ratio Perm			0.28			0.00						0.05
v/c Ratio	0.99	0.99	0.85		0.90	0.07	0.99	0.82		0.82	0.70	0.45
Uniform Delay, d1	44.4	44.3	41.6		62.2	58.9	43.3	39.4		58.9	58.0	56.4
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	34.7	34.2	12.3		53.9	0.1	33.2	3.1		24.7	3.6	0.7
Delay (s)	79.1	78.6	53.9		116.1	59.0	76.5	42.5		83.5	61.6	57.2
Level of Service	E	E	D		F	E	E	D		F	E	E
Approach Delay (s)		69.7			86.8			52.4			62.2	
Approach LOS		E			F			D			E	

Intersection Summary			
HCM 2000 Control Delay	61.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	133.8	Sum of lost time (s)	20.3
Intersection Capacity Utilization	89.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	125	140	7	0	216	1	8	98	0	1	262	216
Future Volume (vph)	125	140	7	0	216	1	8	98	0	1	262	216
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frt	1.00	0.99			1.00			1.00			0.94	
Flt Protected	0.95	1.00			1.00			1.00			1.00	
Satd. Flow (prot)	1671	1747			1726			1753			1652	
Flt Permitted	0.95	1.00			1.00			1.00			1.00	
Satd. Flow (perm)	1671	1747			1726			1753			1652	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	125	140	7	0	216	1	8	98	0	1	262	216
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	0	0	30	0
Lane Group Flow (vph)	125	145	0	0	217	0	0	106	0	0	449	0
Heavy Vehicles (%)	8%	8%	8%	10%	10%	10%	8%	8%	8%	8%	8%	8%
Turn Type	Prot	NA		Prot	NA		Split	NA		Perm	NA	
Protected Phases	7	4		3	8		2	2			6	
Permitted Phases										6		
Actuated Green, G (s)	9.0	26.9			13.9			10.1			25.1	
Effective Green, g (s)	9.0	26.9			13.9			10.1			25.1	
Actuated g/C Ratio	0.12	0.36			0.19			0.14			0.34	
Clearance Time (s)	4.0	4.0			4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)	202	634			323			238			559	
v/s Ratio Prot	c0.07	0.08			c0.13			c0.06				
v/s Ratio Perm											0.27	
v/c Ratio	0.62	0.23			0.67			0.45			0.80	
Uniform Delay, d1	30.9	16.4			28.0			29.4			22.2	
Progression Factor	1.00	1.00			1.00			1.00			1.00	
Incremental Delay, d2	5.5	0.2			5.4			1.3			8.1	
Delay (s)	36.5	16.6			33.4			30.8			30.4	
Level of Service	D	B			C			C			C	
Approach Delay (s)		25.7			33.4			30.8			30.4	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	29.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	74.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	151	52	19	288	3	68	214	9	18	512	135
Future Volume (vph)	36	151	52	19	288	3	68	214	9	18	512	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	1.00		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	1757		1736	1824		1736	1816		1752	1787	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1736	1757		1736	1824		1736	1816		1752	1787	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	36	151	52	19	288	3	68	214	9	18	512	135
RTOR Reduction (vph)	0	19	0	0	1	0	0	2	0	0	14	0
Lane Group Flow (vph)	36	184	0	19	290	0	68	221	0	18	633	0
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	1.3	14.4		0.7	13.8		3.0	28.5		0.7	26.2	
Effective Green, g (s)	1.3	14.4		0.7	13.8		3.0	28.5		0.7	26.2	
Actuated g/C Ratio	0.02	0.24		0.01	0.23		0.05	0.47		0.01	0.43	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	37	419		20	417		86	858		20	776	
v/s Ratio Prot	c0.02	0.10		0.01	c0.16		c0.04	0.12		0.01	c0.35	
v/s Ratio Perm												
v/c Ratio	0.97	0.44		0.95	0.70		0.79	0.26		0.90	0.82	
Uniform Delay, d1	29.5	19.5		29.8	21.3		28.3	9.5		29.8	14.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	136.4	0.7		175.6	5.0		37.6	0.2		153.9	6.6	
Delay (s)	165.9	20.3		205.4	26.3		66.0	9.7		183.7	21.6	
Level of Service	F	C		F	C		E	A		F	C	
Approach Delay (s)		42.2			37.3			22.9			26.0	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	30.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	60.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	70.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	304	797	617	169	425	1874
Future Volume (vph)	304	797	617	169	425	1874
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.88	0.91		1.00	0.91
Frt	1.00	0.85	0.97		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	2760	4874		1752	5036
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	2760	4874		1752	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	304	797	617	169	425	1874
RTOR Reduction (vph)	0	607	90	0	0	0
Lane Group Flow (vph)	304	190	696	0	425	1874
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		3				
Actuated Green, G (s)	12.3	12.3	11.4		15.9	31.3
Effective Green, g (s)	12.3	12.3	11.4		15.9	31.3
Actuated g/C Ratio	0.24	0.24	0.22		0.31	0.61
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	417	657	1076		539	3054
v/s Ratio Prot	c0.17		0.14		c0.24	c0.37
v/s Ratio Perm		0.07				
v/c Ratio	0.73	0.29	0.65		0.79	0.61
Uniform Delay, d1	18.1	16.1	18.3		16.3	6.4
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	6.3	0.2	1.4		7.5	0.4
Delay (s)	24.4	16.3	19.6		23.8	6.7
Level of Service	C	B	B		C	A
Approach Delay (s)	18.5		19.6			9.9
Approach LOS	B		B			A

Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	51.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	149	636	124	158	855	204	132	616	15	225	1165	231
Future Volume (veh/h)	149	636	124	158	855	204	132	616	15	225	1165	231
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	149	636	124	158	855	204	132	616	15	225	1165	231
Adj No. of Lanes	1	2	1	1	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	179	903	404	193	931	416	172	1163	520	314	1308	585
Arrive On Green	0.10	0.26	0.26	0.11	0.27	0.27	0.05	0.33	0.33	0.09	0.38	0.38
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	3375	3471	1553	3375	3471	1553
Grp Volume(v), veh/h	149	636	124	158	855	204	132	616	15	225	1165	231
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1568	1688	1736	1553	1688	1736	1553
Q Serve(g_s), s	6.5	12.9	5.0	6.9	18.6	8.6	3.0	11.2	0.5	5.1	24.6	8.5
Cycle Q Clear(g_c), s	6.5	12.9	5.0	6.9	18.6	8.6	3.0	11.2	0.5	5.1	24.6	8.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	179	903	404	193	931	416	172	1163	520	314	1308	585
V/C Ratio(X)	0.83	0.70	0.31	0.82	0.92	0.49	0.77	0.53	0.03	0.72	0.89	0.39
Avail Cap(c_a), veh/h	179	903	404	202	940	420	172	1163	520	431	1374	615
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.5	26.4	23.4	34.1	27.9	24.3	36.7	21.1	17.5	34.5	22.9	17.9
Incr Delay (d2), s/veh	26.7	2.5	0.4	21.8	13.7	0.9	18.4	0.5	0.0	3.5	7.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	6.5	2.2	4.5	10.7	3.8	1.9	5.5	0.2	2.5	13.0	3.7
LnGrp Delay(d),s/veh	61.2	28.8	23.8	55.9	41.6	25.2	55.1	21.5	17.5	38.0	30.3	18.3
LnGrp LOS	E	C	C	E	D	C	E	C	B	D	C	B
Approach Vol, veh/h		909			1217			763			1621	
Approach Delay, s/veh		33.5			40.7			27.2			29.6	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.3	30.2	12.6	24.2	8.0	33.5	12.0	24.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	25.0	9.0	20.0	4.0	31.0	8.0	21.0
Max Q Clear Time (g_c+I1), s	7.1	13.2	8.9	14.9	5.0	26.6	8.5	20.6
Green Ext Time (p_c), s	0.3	7.7	0.0	3.6	0.0	2.9	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	33.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	1629	67	160	1087	105	88	802	185	27	236	2
Future Volume (veh/h)	23	1629	67	160	1087	105	88	802	185	27	236	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1900	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	23	1629	67	160	1087	105	88	802	185	27	236	2
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	33	1588	710	175	1723	166	112	797	357	39	661	6
Arrive On Green	0.02	0.47	0.47	0.10	0.55	0.55	0.06	0.23	0.23	0.02	0.19	0.19
Sat Flow, veh/h	1707	3406	1524	1707	3139	303	1757	3505	1568	1757	3562	30
Grp Volume(v), veh/h	23	1629	67	160	589	603	88	802	185	27	116	122
Grp Sat Flow(s),veh/h/ln	1707	1703	1524	1707	1703	1739	1757	1752	1568	1757	1752	1839
Q Serve(g_s), s	1.2	41.0	2.2	8.2	21.0	21.0	4.3	20.0	9.1	1.3	5.1	5.1
Cycle Q Clear(g_c), s	1.2	41.0	2.2	8.2	21.0	21.0	4.3	20.0	9.1	1.3	5.1	5.1
Prop In Lane	1.00		1.00	1.00		0.17	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	33	1588	710	175	935	955	112	797	357	39	325	341
V/C Ratio(X)	0.69	1.03	0.09	0.92	0.63	0.63	0.78	1.01	0.52	0.70	0.36	0.36
Avail Cap(c_a), veh/h	97	1588	710	175	935	955	140	797	357	80	339	356
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.8	23.5	13.1	39.1	13.7	13.7	40.6	34.0	29.8	42.7	31.2	31.2
Incr Delay (d2), s/veh	22.3	29.4	0.1	44.6	1.4	1.4	20.2	33.4	1.3	20.4	0.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	25.7	0.9	6.0	10.2	10.4	2.7	13.3	4.0	0.9	2.5	2.6
LnGrp Delay(d),s/veh	65.1	52.9	13.2	83.7	15.0	15.0	60.8	67.3	31.1	63.1	31.9	31.9
LnGrp LOS	E	F	B	F	B	B	E	F	C	E	C	C
Approach Vol, veh/h		1719			1352			1075			265	
Approach Delay, s/veh		51.5			23.2			60.6			35.1	
Approach LOS		D			C			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.9	24.0	13.0	45.0	9.6	20.3	5.7	52.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	20.0	9.0	41.0	7.0	17.0	5.0	45.0
Max Q Clear Time (g_c+I1), s	3.3	22.0	10.2	43.0	6.3	7.1	3.2	23.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	4.2	0.0	16.7

Intersection Summary	
HCM 2010 Ctrl Delay	44.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	333	23	115	149	648	9	1900	129	789	1879	23
Future Volume (veh/h)	74	333	23	115	149	648	9	1900	129	789	1879	23
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1845	1845	1845	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	74	333	23	115	149	648	9	1900	129	789	1879	23
Adj No. of Lanes	2	2	1	2	2	1	2	3	0	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	97	673	301	143	726	675	21	1882	127	753	3105	38
Arrive On Green	0.03	0.19	0.19	0.04	0.21	0.21	0.01	0.39	0.39	0.22	0.61	0.61
Sat Flow, veh/h	3375	3471	1553	3408	3505	1568	3375	4772	323	3375	5079	62
Grp Volume(v), veh/h	74	333	23	115	149	648	9	1322	707	789	1230	672
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1704	1752	1568	1688	1663	1770	1688	1663	1816
Q Serve(g_s), s	3.3	12.8	1.8	5.0	5.3	31.1	0.4	59.2	59.2	33.5	34.2	34.3
Cycle Q Clear(g_c), s	3.3	12.8	1.8	5.0	5.3	31.1	0.4	59.2	59.2	33.5	34.2	34.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		0.03
Lane Grp Cap(c), veh/h	97	673	301	143	726	675	21	1311	698	753	2033	1110
V/C Ratio(X)	0.77	0.49	0.08	0.80	0.21	0.96	0.43	1.01	1.01	1.05	0.61	0.61
Avail Cap(c_a), veh/h	97	675	302	143	726	675	67	1311	698	753	2033	1110
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.4	53.9	49.5	71.3	49.3	41.5	74.3	45.4	45.5	58.3	18.0	18.0
Incr Delay (d2), s/veh	27.4	0.2	0.0	25.6	0.1	24.9	5.0	26.8	37.3	45.9	0.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	6.2	0.8	2.9	2.6	30.7	0.2	32.0	36.1	20.4	15.8	17.4
LnGrp Delay(d),s/veh	99.8	54.2	49.5	96.9	49.3	66.4	79.3	72.3	82.7	104.2	18.4	18.7
LnGrp LOS	F	D	D	F	D	E	E	F	F	F	B	B
Approach Vol, veh/h		430			912			2038			2691	
Approach Delay, s/veh		61.8			67.5			75.9			43.6	
Approach LOS		E			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	97.1	9.8	36.8	39.0	64.5	11.8	34.8
Change Period (Y+Rc), s	5.5	5.3	5.5	* 5.7	5.5	* 5.3	5.5	* 5.7
Max Green Setting (Gmax), s	3.0	89.6	4.3	* 31	33.5	* 59	6.3	* 29
Max Q Clear Time (g_c+I1), s	2.4	36.3	5.3	33.1	35.5	61.2	7.0	14.8
Green Ext Time (p_c), s	0.0	8.4	0.0	0.0	0.0	0.0	0.0	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	59.3
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	1383	322	161	1116	1075	157	1101	85	1011	705	79
Future Volume (veh/h)	105	1383	322	161	1116	1075	157	1101	85	1011	705	79
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	105	1383	322	161	1116	0	157	1101	85	1011	705	79
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	4	4	4	4	4	4
Cap, veh/h	154	1395	434	173	1445	450	208	1119	349	926	2152	670
Arrive On Green	0.05	0.29	0.29	0.05	0.30	0.00	0.06	0.22	0.22	0.27	0.43	0.43
Sat Flow, veh/h	3312	4893	1524	3312	4893	1524	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	105	1383	322	161	1116	0	157	1101	85	1011	705	79
Grp Sat Flow(s),veh/h/ln	1656	1631	1524	1656	1631	1524	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	3.8	33.9	23.0	5.8	25.0	0.0	5.5	26.4	5.4	33.0	11.3	3.7
Cycle Q Clear(g_c), s	3.8	33.9	23.0	5.8	25.0	0.0	5.5	26.4	5.4	33.0	11.3	3.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	154	1395	434	173	1445	450	208	1119	349	926	2152	670
V/C Ratio(X)	0.68	0.99	0.74	0.93	0.77	0.00	0.76	0.98	0.24	1.09	0.33	0.12
Avail Cap(c_a), veh/h	165	1395	434	173	1445	450	208	1119	349	926	2152	670
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.5	42.9	39.0	56.8	38.7	0.0	55.6	46.4	38.3	43.7	22.6	20.5
Incr Delay (d2), s/veh	7.9	21.9	5.9	47.3	2.4	0.0	13.2	22.8	0.1	57.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	18.1	10.4	3.8	11.6	0.0	3.0	14.5	2.3	22.7	5.2	1.6
LnGrp Delay(d),s/veh	64.4	64.8	44.9	104.1	41.1	0.0	68.8	69.3	38.4	101.5	22.7	20.5
LnGrp LOS	E	E	D	F	D		E	E	D	F	C	C
Approach Vol, veh/h		1810			1277			1343			1795	
Approach Delay, s/veh		61.2			49.0			67.3			67.0	
Approach LOS		E			D			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	40.9	12.1	56.7	11.8	39.7	37.0	31.8
Change Period (Y+Rc), s	5.0	* 5.4	* 4.7	4.8	5.5	* 5.4	4.0	4.8
Max Green Setting (Gmax), s	6.0	* 35	* 7.4	51.9	6.3	* 34	33.0	27.0
Max Q Clear Time (g_c+I1), s	5.8	27.0	7.5	13.3	7.8	35.9	35.0	28.4
Green Ext Time (p_c), s	0.0	3.6	0.0	3.2	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	61.7
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	369	444	99	57	692	152	35	747	54	227	626	199
Future Volume (veh/h)	369	444	99	57	692	152	35	747	54	227	626	199
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1827	1827	1845	1845	1827	1827
Adj Flow Rate, veh/h	369	444	99	57	692	152	35	747	54	227	626	199
Adj No. of Lanes	1	2	0	1	2	0	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	3	3	4	4
Cap, veh/h	385	1189	263	73	674	148	43	861	271	243	1466	457
Arrive On Green	0.22	0.42	0.42	0.04	0.24	0.24	0.02	0.17	0.17	0.14	0.29	0.29
Sat Flow, veh/h	1757	2854	632	1757	2859	628	1740	4988	1568	1757	4988	1553
Grp Volume(v), veh/h	369	271	272	57	424	420	35	747	54	227	626	199
Grp Sat Flow(s),veh/h/ln	1757	1752	1733	1757	1752	1734	1740	1663	1568	1757	1663	1553
Q Serve(g_s), s	18.5	9.5	9.7	2.9	21.0	21.0	1.8	13.0	2.6	11.4	9.0	9.2
Cycle Q Clear(g_c), s	18.5	9.5	9.7	2.9	21.0	21.0	1.8	13.0	2.6	11.4	9.0	9.2
Prop In Lane	1.00		0.36	1.00		0.36	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	385	730	722	73	413	409	43	861	271	243	1466	457
V/C Ratio(X)	0.96	0.37	0.38	0.78	1.03	1.03	0.82	0.87	0.20	0.94	0.43	0.44
Avail Cap(c_a), veh/h	385	730	722	142	413	409	119	952	299	243	1466	457
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.4	17.9	18.0	42.3	34.0	34.0	43.2	35.9	31.6	38.0	25.4	25.5
Incr Delay (d2), s/veh	35.1	0.1	0.1	6.8	51.2	51.7	12.9	7.4	0.1	40.0	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.7	4.6	4.6	1.5	16.0	15.9	1.0	6.5	1.1	8.2	4.1	4.0
LnGrp Delay(d),s/veh	69.5	18.1	18.1	49.1	85.2	85.8	56.2	43.2	31.7	78.0	25.5	25.7
LnGrp LOS	E	B	B	D	F	F	E	D	C	E	C	C
Approach Vol, veh/h		912			901			836			1052	
Approach Delay, s/veh		38.9			83.2			43.0			36.8	
Approach LOS		D			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	31.0	25.0	26.3	17.6	20.2	8.9	42.4
Change Period (Y+Rc), s	* 4.6	4.8	5.5	* 5.3	* 5.3	4.8	* 5.2	* 5.3
Max Green Setting (Gmax), s	* 6.1	23.9	19.5	* 21	* 12	17.0	* 7.2	* 33
Max Q Clear Time (g_c+I1), s	3.8	11.2	20.5	23.0	13.4	15.0	4.9	11.7
Green Ext Time (p_c), s	0.0	2.2	0.0	0.0	0.0	0.4	0.0	1.4

Intersection Summary	
HCM 2010 Ctrl Delay	50.0
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	515	296	0	0	484	129	6	0	1	197	0	748
Future Volume (veh/h)	515	296	0	0	484	129	6	0	1	197	0	748
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1900	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	515	296	0	0	484	129	6	0	1	197	0	748
Adj No. of Lanes	2	1	0	1	2	0	0	1	0	1	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	687	918	0	3	629	167	8	0	1	522	548	820
Arrive On Green	0.20	0.50	0.00	0.00	0.23	0.23	0.01	0.00	0.01	0.30	0.00	0.30
Sat Flow, veh/h	3408	1845	0	1757	2742	726	1480	0	247	1757	1845	2760
Grp Volume(v), veh/h	515	296	0	0	308	305	7	0	0	197	0	748
Grp Sat Flow(s),veh/h/ln	1704	1845	0	1757	1752	1716	1727	0	0	1757	1845	1380
Q Serve(g_s), s	8.5	5.8	0.0	0.0	9.9	10.0	0.2	0.0	0.0	5.3	0.0	15.7
Cycle Q Clear(g_c), s	8.5	5.8	0.0	0.0	9.9	10.0	0.2	0.0	0.0	5.3	0.0	15.7
Prop In Lane	1.00		0.00	1.00		0.42	0.86		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	687	918	0	3	402	393	10	0	0	522	548	820
V/C Ratio(X)	0.75	0.32	0.00	0.00	0.77	0.77	0.74	0.00	0.00	0.38	0.00	0.91
Avail Cap(c_a), veh/h	1021	918	0	527	584	572	86	0	0	527	553	827
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.5	9.0	0.0	0.0	21.6	21.7	29.8	0.0	0.0	16.7	0.0	20.3
Incr Delay (d2), s/veh	1.7	0.2	0.0	0.0	3.7	4.1	71.3	0.0	0.0	0.5	0.0	14.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	2.9	0.0	0.0	5.1	5.2	0.3	0.0	0.0	2.6	0.0	7.6
LnGrp Delay(d),s/veh	24.3	9.2	0.0	0.0	25.4	25.7	101.1	0.0	0.0	17.2	0.0	34.6
LnGrp LOS	C	A			C	C	F			B		C
Approach Vol, veh/h		811			613			7			945	
Approach Delay, s/veh		18.8			25.6			101.1			30.9	
Approach LOS		B			C			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		4.3	0.0	33.9		21.9	16.1	17.8
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		3.0	18.0	20.0		18.0	18.0	20.0
Max Q Clear Time (g_c+I1), s		2.2	0.0	7.8		17.7	10.5	12.0
Green Ext Time (p_c), s		0.0	0.0	3.3		0.2	1.6	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	25.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	31	17	128	44	479	48	2159	37	419	2225	59
Future Volume (veh/h)	73	31	17	128	44	479	48	2159	37	419	2225	59
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	73	31	17	128	44	479	48	2159	37	419	2225	59
Adj No. of Lanes	1	1	0	2	1	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	88	56	31	593	321	273	61	2395	746	468	2931	78
Arrive On Green	0.05	0.05	0.05	0.17	0.17	0.17	0.04	0.48	0.48	0.14	0.59	0.59
Sat Flow, veh/h	1757	1121	615	3408	1845	1568	1740	4988	1553	3375	4996	132
Grp Volume(v), veh/h	73	0	48	128	44	479	48	2159	37	419	1479	805
Grp Sat Flow(s),veh/h/ln	1757	0	1736	1704	1845	1568	1740	1663	1553	1688	1663	1804
Q Serve(g_s), s	5.7	0.0	3.7	4.5	2.8	24.0	3.8	54.8	1.8	16.9	45.7	46.0
Cycle Q Clear(g_c), s	5.7	0.0	3.7	4.5	2.8	24.0	3.8	54.8	1.8	16.9	45.7	46.0
Prop In Lane	1.00		0.35	1.00		1.00	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	88	0	87	593	321	273	61	2395	746	468	1950	1058
V/C Ratio(X)	0.83	0.00	0.55	0.22	0.14	1.76	0.78	0.90	0.05	0.89	0.76	0.76
Avail Cap(c_a), veh/h	88	0	87	593	321	273	134	2695	839	557	2103	1141
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.0	0.0	64.1	49.0	48.3	57.0	66.1	32.9	19.1	58.5	21.2	21.3
Incr Delay (d2), s/veh	44.1	0.0	4.5	0.1	0.1	355.5	7.8	4.0	0.0	13.8	1.3	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	0.0	1.9	2.1	1.4	37.3	1.9	25.9	0.8	8.8	21.3	23.5
LnGrp Delay(d),s/veh	109.1	0.0	68.5	49.0	48.3	412.5	73.9	36.9	19.1	72.2	22.5	23.7
LnGrp LOS	F		E	D	D	F	E	D	B	E	C	C
Approach Vol, veh/h		121			651			2244			2703	
Approach Delay, s/veh		93.0			316.4			37.4			30.6	
Approach LOS		F			F			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	86.2		12.4	24.6	71.5		29.5
Change Period (Y+Rc), s	* 5.1	* 5.2		5.5	5.5	* 5.2		5.5
Max Green Setting (Gmax), s	* 11	* 87		6.9	22.8	* 75		24.0
Max Q Clear Time (g_c+I1), s	5.8	48.0		7.7	18.9	56.8		26.0
Green Ext Time (p_c), s	0.0	12.7		0.0	0.3	9.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	67.1
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	1075	457	395	987	603	500	1023	148	728	1370	169
Future Volume (veh/h)	179	1075	457	395	987	603	500	1023	148	728	1370	169
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	179	1075	457	395	987	603	500	1023	148	728	1370	169
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	210	1274	397	383	1530	476	528	1222	380	688	1458	454
Arrive On Green	0.06	0.25	0.25	0.11	0.30	0.30	0.16	0.24	0.24	0.20	0.29	0.29
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	179	1075	457	395	987	603	500	1023	148	728	1370	169
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	6.2	24.4	30.4	13.5	20.4	36.5	17.6	23.4	9.6	24.5	32.2	10.4
Cycle Q Clear(g_c), s	6.2	24.4	30.4	13.5	20.4	36.5	17.6	23.4	9.6	24.5	32.2	10.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	210	1274	397	383	1530	476	528	1222	380	688	1458	454
V/C Ratio(X)	0.85	0.84	1.15	1.03	0.65	1.27	0.95	0.84	0.39	1.06	0.94	0.37
Avail Cap(c_a), veh/h	210	1274	397	383	1530	476	528	1233	384	688	1478	460
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.8	42.6	44.9	53.3	36.2	41.8	50.2	43.1	37.8	47.8	41.5	33.7
Incr Delay (d2), s/veh	26.0	5.1	93.4	54.3	0.7	135.5	26.1	4.9	0.2	50.5	11.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	11.8	23.5	9.2	9.5	33.8	10.1	11.3	4.1	16.2	16.3	4.5
LnGrp Delay(d),s/veh	81.8	47.7	138.3	107.6	36.9	177.3	76.3	48.0	38.1	98.3	53.1	33.9
LnGrp LOS	F	D	F	F	D	F	E	D	D	F	D	C
Approach Vol, veh/h		1711			1985			1671			2267	
Approach Delay, s/veh		75.4			93.6			55.5			66.2	
Approach LOS		E			F			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.3	40.7	12.9	42.2	30.0	35.0	19.0	36.1
Change Period (Y+Rc), s	5.5	* 5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	18.8	* 36	7.4	* 37	24.5	* 30	13.5	* 30
Max Q Clear Time (g_c+I1), s	19.6	34.2	8.2	38.5	26.5	25.4	15.5	32.4
Green Ext Time (p_c), s	0.0	0.9	0.0	0.0	0.0	2.3	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	73.1
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	276	1576	354	240	1322	594	493	694	78	596	1666	161
Future Volume (veh/h)	276	1576	354	240	1322	594	493	694	78	596	1666	161
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1845	1845	1792	1792	1845	1845	1845	1827	1845	1827
Adj Flow Rate, veh/h	276	1576	354	240	1322	594	493	694	78	596	1666	0
Adj No. of Lanes	2	3	1	2	3	2	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	3	3	6	6	3	3	3	4	3	4
Cap, veh/h	302	1496	479	243	1417	777	486	1372	427	653	1613	497
Arrive On Green	0.09	0.31	0.31	0.07	0.29	0.29	0.14	0.27	0.27	0.19	0.32	0.00
Sat Flow, veh/h	3312	4893	1568	3408	4893	2682	3408	5036	1568	3375	5036	1553
Grp Volume(v), veh/h	276	1576	354	240	1322	594	493	694	78	596	1666	0
Grp Sat Flow(s),veh/h/ln	1656	1631	1568	1704	1631	1341	1704	1679	1568	1688	1679	1553
Q Serve(g_s), s	10.8	39.9	26.4	9.2	34.3	26.4	18.6	15.2	5.0	22.6	41.8	0.0
Cycle Q Clear(g_c), s	10.8	39.9	26.4	9.2	34.3	26.4	18.6	15.2	5.0	22.6	41.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	302	1496	479	243	1417	777	486	1372	427	653	1613	497
V/C Ratio(X)	0.91	1.05	0.74	0.99	0.93	0.76	1.01	0.51	0.18	0.91	1.03	0.00
Avail Cap(c_a), veh/h	302	1496	479	243	1417	777	486	1372	427	828	1613	497
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	58.8	45.3	40.6	60.5	45.1	42.3	56.0	40.1	36.3	51.5	44.4	0.0
Incr Delay (d2), s/veh	30.0	38.7	5.3	54.3	11.2	4.1	44.6	0.3	0.2	10.9	31.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	23.2	12.2	6.1	16.9	10.2	11.7	7.1	2.2	11.5	23.9	0.0
LnGrp Delay(d),s/veh	88.8	84.0	45.9	114.8	56.4	46.4	100.6	40.4	36.5	62.5	75.7	0.0
LnGrp LOS	F	F	D	F	E	D	F	D	D	E	F	
Approach Vol, veh/h		2206			2156			1265			2262	
Approach Delay, s/veh		78.5			60.1			63.6			72.2	
Approach LOS		E			E			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.0	46.9	16.2	43.4	30.2	40.7	14.1	45.5
Change Period (Y+Rc), s	* 5.4	5.1	* 4.3	5.6	5.0	5.1	* 4.8	* 5.6
Max Green Setting (Gmax), s	* 19	41.8	* 12	37.3	32.0	28.8	* 9.3	* 40
Max Q Clear Time (g_c+I1), s	20.6	43.8	12.8	36.3	24.6	17.2	11.2	41.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.8	0.7	5.7	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	69.3
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	535	43	190	493	63	73	612	311	91	1725	40
Future Volume (veh/h)	34	535	43	190	493	63	73	612	311	91	1725	40
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	34	535	43	190	493	63	73	612	311	91	1725	40
Adj No. of Lanes	2	1	1	2	2	1	1	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	60	514	437	198	1118	500	78	1692	757	134	1673	748
Arrive On Green	0.02	0.28	0.28	0.06	0.32	0.32	0.04	0.48	0.48	0.04	0.48	0.48
Sat Flow, veh/h	3408	1845	1568	3408	3505	1568	1757	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	34	535	43	190	493	63	73	612	311	91	1725	40
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1752	1568	1757	1752	1568	1704	1752	1568
Q Serve(g_s), s	1.5	41.8	3.1	8.3	16.7	4.3	6.2	16.4	19.2	4.0	71.6	2.1
Cycle Q Clear(g_c), s	1.5	41.8	3.1	8.3	16.7	4.3	6.2	16.4	19.2	4.0	71.6	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	60	514	437	198	1118	500	78	1692	757	134	1673	748
V/C Ratio(X)	0.57	1.04	0.10	0.96	0.44	0.13	0.93	0.36	0.41	0.68	1.03	0.05
Avail Cap(c_a), veh/h	95	514	437	198	1118	500	78	1692	757	191	1673	748
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.1	54.1	40.1	70.5	40.5	36.2	71.4	24.3	25.0	71.1	39.2	21.0
Incr Delay (d2), s/veh	8.1	50.7	0.1	52.7	0.3	0.1	78.1	0.1	0.4	6.0	30.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	28.5	1.3	5.4	8.1	1.9	4.7	7.9	8.3	2.0	41.7	0.9
LnGrp Delay(d),s/veh	81.2	104.8	40.2	123.2	40.7	36.3	149.5	24.4	25.4	77.1	69.6	21.0
LnGrp LOS	F	F	D	F	D	D	F	C	C	E	F	C
Approach Vol, veh/h		612			746			996			1856	
Approach Delay, s/veh		98.9			61.4			33.9			68.9	
Approach LOS		F			E			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.2	76.6	14.2	47.0	11.4	77.4	8.1	53.1
Change Period (Y+Rc), s	5.5	5.0	5.5	* 5.2	5.5	5.0	5.5	* 5.2
Max Green Setting (Gmax), s	6.7	71.6	8.7	* 42	8.4	69.9	4.2	* 46
Max Q Clear Time (g_c+I1), s	8.2	73.6	10.3	43.8	6.0	21.2	3.5	18.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	9.7	0.0	5.8

Intersection Summary	
HCM 2010 Ctrl Delay	63.7
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	253	14	355	459	31	4	670	130	13	1752	188
Future Volume (veh/h)	220	253	14	355	459	31	4	670	130	13	1752	188
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1828	1900	1845	1796	1900	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	220	253	14	355	459	31	4	670	130	13	1752	188
Adj No. of Lanes	2	1	0	2	1	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	4	4	3	6	6	3	3	3	3	3	3
Cap, veh/h	238	363	20	397	429	29	5	1824	816	15	1683	177
Arrive On Green	0.07	0.21	0.21	0.12	0.26	0.26	0.00	0.52	0.52	0.01	0.53	0.53
Sat Flow, veh/h	3408	1716	95	3408	1663	112	1757	3505	1568	1757	3200	337
Grp Volume(v), veh/h	220	0	267	355	0	490	4	670	130	13	945	995
Grp Sat Flow(s),veh/h/ln	1704	0	1811	1704	0	1776	1757	1752	1568	1757	1752	1785
Q Serve(g_s), s	9.5	0.0	20.1	15.1	0.0	38.0	0.3	16.7	6.4	1.1	77.5	77.5
Cycle Q Clear(g_c), s	9.5	0.0	20.1	15.1	0.0	38.0	0.3	16.7	6.4	1.1	77.5	77.5
Prop In Lane	1.00		0.05	1.00		0.06	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	238	0	383	397	0	458	5	1824	816	15	922	939
V/C Ratio(X)	0.92	0.00	0.70	0.89	0.00	1.07	0.74	0.37	0.16	0.85	1.03	1.06
Avail Cap(c_a), veh/h	238	0	383	398	0	458	37	1824	816	66	922	939
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.1	0.0	53.7	64.2	0.0	54.7	73.4	21.0	18.5	72.9	34.9	34.9
Incr Delay (d2), s/veh	38.1	0.0	4.6	21.9	0.0	62.0	107.1	0.1	0.1	71.8	36.3	46.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.0	10.6	8.4	0.0	26.5	0.3	8.1	2.8	0.8	46.7	50.2
LnGrp Delay(d),s/veh	106.2	0.0	58.4	86.2	0.0	116.7	180.5	21.1	18.6	144.7	71.3	81.4
LnGrp LOS	F		E	F		F	F	C	B	F	F	F
Approach Vol, veh/h		487			845			804			1953	
Approach Delay, s/veh		80.0			103.9			21.5			76.9	
Approach LOS		E			F			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	81.8	15.8	43.0	6.0	82.6	22.7	36.1
Change Period (Y+Rc), s	5.5	* 5.1	5.5	* 5	5.5	* 5.1	5.5	* 5
Max Green Setting (Gmax), s	5.5	* 75	10.3	* 38	3.1	* 78	17.2	* 31
Max Q Clear Time (g_c+I1), s	3.1	18.7	11.5	40.0	2.3	79.5	17.1	22.1
Green Ext Time (p_c), s	0.0	29.5	0.0	0.0	0.0	0.0	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	71.9
HCM 2010 LOS	E

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	322	119	381	288	168	303
Future Volume (veh/h)	322	119	381	288	168	303
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	322	119	381	288	168	303
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	444	377	457	1081	428	382
Arrive On Green	0.24	0.24	0.26	0.59	0.24	0.24
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	322	119	381	288	168	303
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	7.5	2.9	9.6	3.6	3.8	8.5
Cycle Q Clear(g_c), s	7.5	2.9	9.6	3.6	3.8	8.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	444	377	457	1081	428	382
V/C Ratio(X)	0.73	0.32	0.83	0.27	0.39	0.79
Avail Cap(c_a), veh/h	628	534	598	1414	598	534
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.4	14.7	16.4	4.8	14.9	16.7
Incr Delay (d2), s/veh	2.5	0.5	7.7	0.1	0.6	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	1.3	5.6	1.8	1.9	4.2
LnGrp Delay(d),s/veh	18.9	15.1	24.1	4.9	15.4	22.2
LnGrp LOS	B	B	C	A	B	C
Approach Vol, veh/h	441			669	471	
Approach Delay, s/veh	17.9			15.8	19.8	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		15.4	16.2	15.3				31.5
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		16.0	16.0	16.0				36.0
Max Q Clear Time (g_c+I1), s		10.5	11.6	9.5				5.6
Green Ext Time (p_c), s		0.9	0.7	1.8				3.1

Intersection Summary	
HCM 2010 Ctrl Delay	17.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	1167	153	766	844	374	107	347	597	363	626	39
Future Volume (veh/h)	126	1167	153	766	844	374	107	347	597	363	626	39
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1792	1845	1845	1792	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	126	1167	153	766	844	374	107	347	597	363	626	39
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	6	3	3	6	3	3	3	3	3	3	3
Cap, veh/h	194	1298	416	804	2174	697	153	630	652	383	866	388
Arrive On Green	0.06	0.27	0.27	0.24	0.44	0.44	0.04	0.18	0.18	0.11	0.25	0.25
Sat Flow, veh/h	3408	4893	1568	3408	4893	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	126	1167	153	766	844	374	107	347	597	363	626	39
Grp Sat Flow(s),veh/h/ln	1704	1631	1568	1704	1631	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	3.2	20.5	7.1	19.7	10.3	15.5	2.8	8.0	16.0	9.4	14.6	1.7
Cycle Q Clear(g_c), s	3.2	20.5	7.1	19.7	10.3	15.5	2.8	8.0	16.0	9.4	14.6	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	194	1298	416	804	2174	697	153	630	652	383	866	388
V/C Ratio(X)	0.65	0.90	0.37	0.95	0.39	0.54	0.70	0.55	0.92	0.95	0.72	0.10
Avail Cap(c_a), veh/h	268	1352	433	804	2174	697	153	630	652	383	866	388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.1	31.5	26.6	33.5	16.6	18.0	41.9	33.2	24.5	39.2	30.7	25.9
Incr Delay (d2), s/veh	3.6	8.4	0.8	21.0	0.2	1.1	13.1	1.0	17.8	32.8	3.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	10.2	3.1	11.6	4.6	6.9	1.6	4.0	17.0	6.2	7.4	0.7
LnGrp Delay(d),s/veh	44.8	40.0	27.4	54.5	16.8	19.1	55.0	34.3	42.3	72.0	33.7	26.0
LnGrp LOS	D	D	C	D	B	B	E	C	D	E	C	C
Approach Vol, veh/h		1446			1984			1051			1028	
Approach Delay, s/veh		39.1			31.8			41.0			46.9	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	30.0	8.0	26.0	9.1	46.0	14.0	20.0
Change Period (Y+Rc), s	4.0	6.4	4.0	4.0	4.0	6.4	4.0	4.0
Max Green Setting (Gmax), s	21.0	24.6	4.0	22.0	7.0	38.6	10.0	16.0
Max Q Clear Time (g_c+I1), s	21.7	22.5	4.8	16.6	5.2	17.5	11.4	18.0
Green Ext Time (p_c), s	0.0	1.1	0.0	3.4	0.1	17.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	38.3
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	542	20	182	9	16	51	109	498	42	84	952	621
Future Volume (veh/h)	542	20	182	9	16	51	109	498	42	84	952	621
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845	1845	1827	1827	1827	1827	1845
Adj Flow Rate, veh/h	542	20	182	9	16	51	109	498	42	84	952	621
Adj No. of Lanes	2	2	1	0	1	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	4	4	4	4	3
Cap, veh/h	710	730	327	32	56	76	184	1338	599	148	1320	596
Arrive On Green	0.21	0.21	0.21	0.05	0.05	0.05	0.05	0.39	0.39	0.04	0.38	0.38
Sat Flow, veh/h	3408	3505	1568	652	1160	1568	3408	3471	1553	3375	3471	1568
Grp Volume(v), veh/h	542	20	182	25	0	51	109	498	42	84	952	621
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1812	0	1568	1704	1736	1553	1688	1736	1568
Q Serve(g_s), s	9.2	0.3	6.4	0.8	0.0	2.0	1.9	6.3	1.1	1.5	14.4	23.4
Cycle Q Clear(g_c), s	9.2	0.3	6.4	0.8	0.0	2.0	1.9	6.3	1.1	1.5	14.4	23.4
Prop In Lane	1.00		1.00	0.36		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	710	730	327	88	0	76	184	1338	599	148	1320	596
V/C Ratio(X)	0.76	0.03	0.56	0.28	0.00	0.67	0.59	0.37	0.07	0.57	0.72	1.04
Avail Cap(c_a), veh/h	886	912	408	530	0	459	199	1338	599	296	1320	596
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.9	19.4	21.8	28.2	0.0	28.8	28.4	13.6	11.9	28.8	16.3	19.1
Incr Delay (d2), s/veh	3.1	0.0	1.5	1.7	0.0	9.7	4.1	0.2	0.0	3.4	2.0	48.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	0.1	2.9	0.5	0.0	1.0	1.0	3.1	0.5	0.8	7.2	17.9
LnGrp Delay(d),s/veh	26.0	19.4	23.3	30.0	0.0	38.4	32.5	13.7	12.0	32.2	18.2	67.1
LnGrp LOS	C	B	C	C		D	C	B	B	C	B	F
Approach Vol, veh/h		744			76			649			1657	
Approach Delay, s/veh		25.2			35.7			16.8			37.2	
Approach LOS		C			D			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.9	28.4		8.4	7.6	28.7		16.8
Change Period (Y+Rc), s	* 4.6	5.0		* 5.4	* 4.9	5.0		4.0
Max Green Setting (Gmax), s	* 3.6	23.4		* 18	* 5.4	21.3		16.0
Max Q Clear Time (g_c+I1), s	3.9	25.4		4.0	3.5	8.3		11.2
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	8.3		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	30.1
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	217	747	88	46	404	119	41	323	61	134	795	209
Future Volume (veh/h)	217	747	88	46	404	119	41	323	61	134	795	209
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1833	1900	1845	1845	1900	1827	1845	1845
Adj Flow Rate, veh/h	217	747	88	46	404	119	41	323	61	134	795	209
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	4	3	3
Cap, veh/h	214	946	111	58	562	164	52	1092	204	165	803	873
Arrive On Green	0.12	0.30	0.30	0.03	0.21	0.21	0.03	0.37	0.37	0.09	0.44	0.44
Sat Flow, veh/h	1757	3159	372	1757	2661	776	1757	2949	551	1740	1845	1568
Grp Volume(v), veh/h	217	414	421	46	263	260	41	190	194	134	795	209
Grp Sat Flow(s),veh/h/ln	1757	1752	1779	1757	1741	1696	1757	1752	1747	1740	1845	1568
Q Serve(g_s), s	12.0	21.4	21.4	2.6	13.9	14.1	2.3	7.6	7.7	7.5	42.2	6.7
Cycle Q Clear(g_c), s	12.0	21.4	21.4	2.6	13.9	14.1	2.3	7.6	7.7	7.5	42.2	6.7
Prop In Lane	1.00		0.21	1.00		0.46	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	214	525	533	58	367	358	52	649	647	165	803	873
V/C Ratio(X)	1.02	0.79	0.79	0.79	0.72	0.73	0.80	0.29	0.30	0.81	0.99	0.24
Avail Cap(c_a), veh/h	214	586	595	107	476	464	53	649	647	264	803	873
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.4	31.7	31.7	47.4	36.2	36.3	47.6	22.0	22.0	43.9	27.6	11.2
Incr Delay (d2), s/veh	65.9	6.5	6.4	20.4	3.6	4.0	54.4	0.2	0.3	4.3	29.1	0.1
Initial Q Delay(d3),s/veh	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	11.3	11.5	1.6	7.0	7.0	1.9	3.7	3.8	3.8	27.9	2.9
LnGrp Delay(d),s/veh	109.4	38.2	38.2	67.8	39.8	40.3	102.0	22.2	22.3	48.1	56.7	11.3
LnGrp LOS	F	D	D	E	D	D	F	C	C	D	E	B
Approach Vol, veh/h		1052			569			425			1138	
Approach Delay, s/veh		52.9			42.3			29.9			47.4	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	35.6	6.9	49.0	16.0	26.8	13.3	42.6
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	6.0	33.0	3.0	43.0	12.0	27.0	15.0	31.0
Max Q Clear Time (g_c+I1), s	4.6	23.4	4.3	44.2	14.0	16.1	9.5	9.7
Green Ext Time (p_c), s	0.0	4.4	0.0	0.0	0.0	4.7	0.1	6.9

Intersection Summary	
HCM 2010 Ctrl Delay	46.0
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	176	710	4	46	352	13	4	142	48	42	165	179
Future Volume (veh/h)	176	710	4	46	352	13	4	142	48	42	165	179
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1900	1900	1810	1900	1900	1810	1900
Adj Flow Rate, veh/h	176	710	4	46	352	13	4	142	48	42	165	179
Adj No. of Lanes	1	1	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	5	5	5	5	5	5
Cap, veh/h	205	747	4	58	1115	41	5	166	56	40	158	172
Arrive On Green	0.12	0.42	0.42	0.03	0.33	0.33	0.13	0.13	0.13	0.22	0.22	0.22
Sat Flow, veh/h	1707	1781	10	1707	3350	123	36	1268	429	181	711	772
Grp Volume(v), veh/h	176	0	714	46	179	186	194	0	0	386	0	0
Grp Sat Flow(s),veh/h/ln	1707	0	1791	1707	1703	1771	1732	0	0	1664	0	0
Q Serve(g_s), s	11.8	0.0	45.0	3.1	9.1	9.2	12.8	0.0	0.0	26.0	0.0	0.0
Cycle Q Clear(g_c), s	11.8	0.0	45.0	3.1	9.1	9.2	12.8	0.0	0.0	26.0	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.07	0.02		0.25	0.11		0.46
Lane Grp Cap(c), veh/h	205	0	751	58	567	590	227	0	0	370	0	0
V/C Ratio(X)	0.86	0.00	0.95	0.79	0.31	0.32	0.85	0.00	0.00	1.04	0.00	0.00
Avail Cap(c_a), veh/h	329	0	781	64	567	590	385	0	0	370	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	50.4	0.0	32.8	56.1	29.1	29.1	49.7	0.0	0.0	45.5	0.0	0.0
Incr Delay (d2), s/veh	6.9	0.0	21.4	39.6	0.7	0.7	9.1	0.0	0.0	58.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	0.0	26.7	2.1	4.4	4.6	6.7	0.0	0.0	17.9	0.0	0.0
LnGrp Delay(d),s/veh	57.4	0.0	54.2	95.7	29.7	29.7	58.8	0.0	0.0	103.8	0.0	0.0
LnGrp LOS	E		D	F	C	C	E			F		
Approach Vol, veh/h		890			411			194			386	
Approach Delay, s/veh		54.8			37.1			58.8			103.8	
Approach LOS		D			D			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.7	44.9		32.0	8.6	55.0		21.3
Change Period (Y+Rc), s	4.6	6.0		6.0	4.6	6.0		6.0
Max Green Setting (Gmax), s	22.5	32.9		26.0	4.4	51.0		26.0
Max Q Clear Time (g_c+I1), s	13.8	11.2		28.0	5.1	47.0		14.8
Green Ext Time (p_c), s	0.2	10.8		0.0	0.0	2.0		0.5

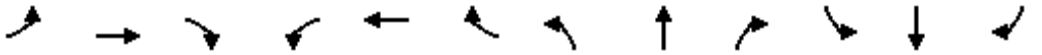
Intersection Summary	
HCM 2010 Ctrl Delay	61.4
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	13	21	168	3	165	4	636	219	545	697	1
Future Volume (veh/h)	7	13	21	168	3	165	4	636	219	545	697	1
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	7	13	21	168	3	165	4	636	219	545	697	1
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	13	35	56	205	5	253	7	705	243	594	1122	2
Arrive On Green	0.01	0.05	0.05	0.12	0.16	0.16	0.00	0.28	0.28	0.34	0.61	0.61
Sat Flow, veh/h	1757	636	1027	1757	28	1544	1757	2561	881	1757	1842	3
Grp Volume(v), veh/h	7	0	34	168	0	168	4	435	420	545	0	698
Grp Sat Flow(s),veh/h/ln	1757	0	1663	1757	0	1572	1757	1752	1689	1757	0	1844
Q Serve(g_s), s	0.3	0.0	1.5	6.9	0.0	7.4	0.2	17.8	17.8	22.1	0.0	17.7
Cycle Q Clear(g_c), s	0.3	0.0	1.5	6.9	0.0	7.4	0.2	17.8	17.8	22.1	0.0	17.7
Prop In Lane	1.00		0.62	1.00		0.98	1.00		0.52	1.00		0.00
Lane Grp Cap(c), veh/h	13	0	91	205	0	258	7	482	465	594	0	1123
V/C Ratio(X)	0.55	0.00	0.37	0.82	0.00	0.65	0.53	0.90	0.90	0.92	0.00	0.62
Avail Cap(c_a), veh/h	95	0	358	213	0	444	95	495	477	662	0	1123
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.8	0.0	33.9	32.1	0.0	29.1	36.9	26.0	26.0	23.6	0.0	9.1
Incr Delay (d2), s/veh	32.2	0.0	2.5	21.2	0.0	2.8	48.3	19.3	20.0	16.8	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.7	4.6	0.0	3.4	0.2	11.2	10.9	13.4	0.0	9.3
LnGrp Delay(d),s/veh	69.0	0.0	36.4	53.3	0.0	31.8	85.2	45.3	46.0	40.4	0.0	10.2
LnGrp LOS	E		D	D		C	F	D	D	D		B
Approach Vol, veh/h		41			336			859			1243	
Approach Delay, s/veh		42.0			42.6			45.8			23.4	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.1	24.5	12.7	8.1	4.3	49.3	4.5	16.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	28.0	21.0	9.0	16.0	4.0	45.0	4.0	21.0
Max Q Clear Time (g_c+I1), s	24.1	19.8	8.9	3.5	2.2	19.7	2.3	9.4
Green Ext Time (p_c), s	1.0	0.6	0.0	0.7	0.0	8.5	0.0	0.6

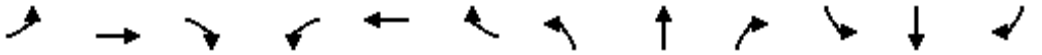
Intersection Summary	
HCM 2010 Ctrl Delay	34.1
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	1209	1135	30	816	20	977	75	75	40	97	206
Future Volume (veh/h)	132	1209	1135	30	816	20	977	75	75	40	97	206
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	132	1209	1135	30	816	20	977	75	75	40	97	206
Adj No. of Lanes	2	3	2	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	197	1945	1066	58	1740	542	970	1447	647	72	524	234
Arrive On Green	0.06	0.39	0.39	0.02	0.35	0.35	0.28	0.41	0.41	0.02	0.15	0.15
Sat Flow, veh/h	3408	5036	2760	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	132	1209	1135	30	816	20	977	75	75	40	97	206
Grp Sat Flow(s),veh/h/ln	1704	1679	1380	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	3.7	19.1	38.0	0.9	12.4	0.8	28.0	1.3	2.9	1.1	2.4	12.7
Cycle Q Clear(g_c), s	3.7	19.1	38.0	0.9	12.4	0.8	28.0	1.3	2.9	1.1	2.4	12.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	197	1945	1066	58	1740	542	970	1447	647	72	524	234
V/C Ratio(X)	0.67	0.62	1.06	0.52	0.47	0.04	1.01	0.05	0.12	0.55	0.19	0.88
Avail Cap(c_a), veh/h	277	1945	1066	104	1740	542	970	1447	647	104	534	239
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.4	24.4	30.2	48.0	25.1	21.3	35.2	17.3	17.8	47.7	36.6	41.0
Incr Delay (d2), s/veh	3.9	0.6	46.6	6.9	0.2	0.0	30.7	0.0	0.1	6.4	0.2	28.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	9.0	21.3	0.5	5.8	0.4	17.2	0.6	1.3	0.6	1.2	7.3
LnGrp Delay(d),s/veh	49.4	25.0	76.8	54.9	25.3	21.4	65.9	17.3	17.9	54.1	36.8	69.6
LnGrp LOS	D	C	F	D	C	C	F	B	B	D	D	E
Approach Vol, veh/h		2476			866			1127			343	
Approach Delay, s/veh		50.0			26.3			59.5			58.5	
Approach LOS		D			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	44.6	5.7	42.0	32.0	18.7	9.7	38.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	40.0	3.0	38.0	28.0	15.0	8.0	33.0
Max Q Clear Time (g_c+I1), s	3.1	4.9	2.9	40.0	30.0	14.7	5.7	14.4
Green Ext Time (p_c), s	0.0	1.8	0.0	0.0	0.0	0.1	0.1	15.1

Intersection Summary	
HCM 2010 Ctrl Delay	48.6
HCM 2010 LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	240	0	1216	162	186	0	565	1167	121	425	36
Future Volume (veh/h)	99	240	0	1216	162	186	0	565	1167	121	425	36
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	99	240	0	1216	162	186	0	565	1167	121	425	36
Adj No. of Lanes	1	1	1	2	1	1	1	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	127	291	247	1429	931	791	2	681	962	156	1002	448
Arrive On Green	0.07	0.16	0.00	0.42	0.50	0.50	0.00	0.19	0.19	0.05	0.29	0.29
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	99	240	0	1216	162	186	0	565	1167	121	425	36
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1752	1568	1704	1752	1568
Q Serve(g_s), s	4.8	11.0	0.0	28.2	4.2	5.8	0.0	13.5	17.0	3.1	8.6	1.5
Cycle Q Clear(g_c), s	4.8	11.0	0.0	28.2	4.2	5.8	0.0	13.5	17.0	3.1	8.6	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	127	291	247	1429	931	791	2	681	962	156	1002	448
V/C Ratio(X)	0.78	0.83	0.00	0.85	0.17	0.24	0.00	0.83	1.21	0.78	0.42	0.08
Avail Cap(c_a), veh/h	241	337	287	1832	1076	914	80	681	962	156	1002	448
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	35.7	0.0	22.9	11.8	12.2	0.0	33.8	16.9	41.3	25.4	22.8
Incr Delay (d2), s/veh	9.8	13.7	0.0	3.2	0.1	0.2	0.0	8.5	105.4	21.4	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	6.7	0.0	13.8	2.1	2.5	0.0	7.3	51.1	1.9	4.2	0.6
LnGrp Delay(d),s/veh	49.6	49.4	0.0	26.2	11.9	12.3	0.0	42.3	122.2	62.7	25.7	22.9
LnGrp LOS	D	D		C	B	B		D	F	E	C	C
Approach Vol, veh/h		339			1564			1732			582	
Approach Delay, s/veh		49.4			23.0			96.2			33.2	
Approach LOS		D			C			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	21.0	40.7	17.8	0.0	29.0	10.3	48.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	17.0	47.0	16.0	4.0	17.0	12.0	51.0
Max Q Clear Time (g_c+I1), s	5.1	19.0	30.2	13.0	0.0	10.6	6.8	7.8
Green Ext Time (p_c), s	0.0	0.0	6.5	0.8	0.0	5.1	0.1	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	56.6
HCM 2010 LOS	E

Intersection	
Intersection Delay, s/veh	19.6
Intersection LOS	C

Approach	EB	NB	SB
Entry Lanes	1	2	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	101	740	921
Demand Flow Rate, veh/h	104	762	949
Vehicles Circulating, veh/h	813	69	34
Vehicles Exiting, veh/h	170	848	797
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	10.4	13.9	25.1
Approach LOS	B	B	D

Lane	Left	Left	Right	Left
Designated Moves	LR	L	TR	TR
Assumed Moves	LR	L	TR	TR
RT Channelized				
Lane Util	1.000	0.045	0.955	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	104	34	728	949
Cap Entry Lane, veh/h	501	1055	1055	1092
Entry HV Adj Factor	0.971	0.971	0.971	0.971
Flow Entry, veh/h	101	33	707	921
Cap Entry, veh/h	487	1024	1024	1060
V/C Ratio	0.208	0.032	0.690	0.869
Control Delay, s/veh	10.4	3.8	14.4	25.1
LOS	B	A	B	D
95th %tile Queue, veh	1	0	6	12

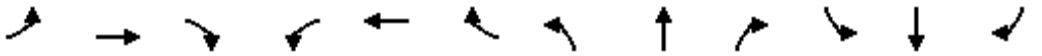
Cumulative Plus All Projects

County Standard Mitigation

AM

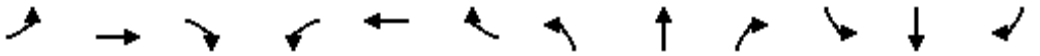
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	149	527	162	90	1149	805	577	1716	87	1265	1678	95
Future Volume (vph)	149	527	162	90	1149	805	577	1716	87	1265	1678	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		0.97	0.95	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	3349		3367	3471	2733	3367	4988	1553	3367	4988	1553
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	3349		3367	3471	2733	3367	4988	1553	3367	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	149	527	162	90	1149	805	577	1716	87	1265	1678	95
RTOR Reduction (vph)	0	22	0	0	0	479	0	0	60	0	0	56
Lane Group Flow (vph)	149	667	0	90	1149	326	577	1716	27	1265	1678	39
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	4.0	32.4		8.6	37.0	37.0	25.7	43.0	43.0	40.0	57.3	57.3
Effective Green, g (s)	4.0	32.4		8.6	37.0	37.0	25.7	43.0	43.0	40.0	57.3	57.3
Actuated g/C Ratio	0.03	0.23		0.06	0.26	0.26	0.18	0.31	0.31	0.29	0.41	0.41
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	96	775		206	917	722	618	1532	476	962	2041	635
v/s Ratio Prot	c0.04	0.20		0.03	c0.33		0.17	c0.34		c0.38	0.34	
v/s Ratio Perm						0.12			0.02			0.03
v/c Ratio	1.55	0.86		0.44	1.25	0.45	0.93	1.12	0.06	1.31	0.82	0.06
Uniform Delay, d1	68.0	51.6		63.4	51.5	43.0	56.3	48.5	34.2	50.0	36.8	25.1
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	293.1	9.7		1.5	122.9	0.5	21.3	63.4	0.0	149.2	2.8	0.0
Delay (s)	361.1	61.3		64.8	174.4	43.5	77.6	111.9	34.2	199.2	39.6	25.1
Level of Service	F	E		E	F	D	E	F	C	F	D	C
Approach Delay (s)		114.6			118.0			100.7			105.6	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	108.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	118.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	659	221	182	829	840	199	1837	190	505	814	71
Future Volume (vph)	39	659	221	182	829	840	199	1837	190	505	814	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.91	0.91	1.00	0.91		1.00	0.91	1.00
Frt	1.00	0.96		1.00	0.96	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	3373		1736	3184	1413	1736	4917		1736	4988	1553
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	3373		1736	3184	1413	1736	4917		1736	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	39	659	221	182	829	840	199	1837	190	505	814	71
RTOR Reduction (vph)	0	22	0	0	24	335	0	8	0	0	0	42
Lane Group Flow (vph)	39	858	0	182	1133	177	199	2019	0	505	814	29
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	7.6	39.8		16.0	48.2	48.2	21.8	48.0		31.0	57.2	57.2
Effective Green, g (s)	7.6	39.8		16.0	48.2	48.2	21.8	48.0		31.0	57.2	57.2
Actuated g/C Ratio	0.05	0.26		0.11	0.32	0.32	0.14	0.32		0.21	0.38	0.38
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	88	890		184	1017	451	250	1565		356	1892	589
v/s Ratio Prot	0.02	0.25		c0.10	c0.36		0.11	c0.41		c0.29	0.16	
v/s Ratio Perm						0.13						0.02
v/c Ratio	0.44	0.96		0.99	1.11	0.39	0.80	1.29		1.42	0.43	0.05
Uniform Delay, d1	69.5	54.8		67.3	51.3	39.9	62.4	51.4		59.9	34.7	29.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.5	21.7		62.5	65.1	0.6	15.9	135.4		204.2	0.2	0.0
Delay (s)	73.1	76.5		129.8	116.4	40.5	78.3	186.8		264.1	34.9	29.6
Level of Service	E	E		F	F	D	E	F		F	C	C
Approach Delay (s)		76.3			96.7			177.1			117.9	
Approach LOS		E			F			F			F	

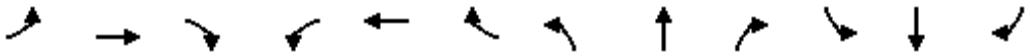
Intersection Summary			
HCM 2000 Control Delay	126.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	150.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	116.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	884	101	176	1036	384	110	614	197	293	400	80
Future Volume (vph)	58	884	101	176	1036	384	110	614	197	293	400	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	4.6		5.0	4.8	4.8	5.5	4.4	4.4	5.5	4.3	4.3
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	3451		1752	3505	1568	1752	1845	1568	1752	1845	1568
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1752	3451		1752	3505	1568	1752	1845	1568	1752	1845	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	58	884	101	176	1036	384	110	614	197	293	400	80
RTOR Reduction (vph)	0	6	0	0	0	215	0	0	101	0	0	49
Lane Group Flow (vph)	58	979	0	176	1036	169	110	614	96	293	400	31
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						2			8			4
Actuated Green, G (s)	5.2	37.2		12.0	43.6	43.6	11.4	40.6	40.6	20.7	50.0	50.0
Effective Green, g (s)	5.2	37.2		12.0	43.6	43.6	11.4	40.6	40.6	20.7	50.0	50.0
Actuated g/C Ratio	0.04	0.29		0.09	0.34	0.34	0.09	0.31	0.31	0.16	0.38	0.38
Clearance Time (s)	5.2	4.6		5.0	4.8	4.8	5.5	4.4	4.4	5.5	4.3	4.3
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lane Grp Cap (vph)	70	987		161	1175	525	153	576	489	278	709	603
v/s Ratio Prot	0.03	c0.28		c0.10	0.30		0.06	c0.33		c0.17	0.22	
v/s Ratio Perm						0.11			0.06			0.02
v/c Ratio	0.83	0.99		1.09	0.88	0.32	0.72	1.07	0.20	1.05	0.56	0.05
Uniform Delay, d1	62.0	46.2		59.0	40.8	32.2	57.7	44.7	32.7	54.6	31.4	25.1
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	50.7	26.4		98.0	7.8	0.1	12.6	56.3	0.1	68.9	0.6	0.0
Delay (s)	112.7	72.7		157.0	48.6	32.3	70.3	101.0	32.8	123.5	32.1	25.1
Level of Service	F	E		F	D	C	E	F	C	F	C	C
Approach Delay (s)		74.9			56.6			82.8			66.0	
Approach LOS		E			E			F			E	

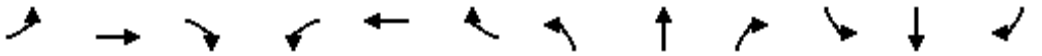
Intersection Summary			
HCM 2000 Control Delay	68.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	19.9
Intersection Capacity Utilization	102.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



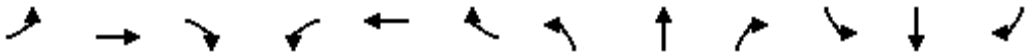
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	331	412	1	0	648	7	5	302	0	0	168	188
Future Volume (vph)	331	412	1	0	648	7	5	302	0	0	168	188
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		1.00			1.00			1.00			0.93	
Flt Protected		0.98			1.00			1.00			1.00	
Satd. Flow (prot)		1721			1725			1758			1634	
Flt Permitted		0.98			1.00			0.82			1.00	
Satd. Flow (perm)		1721			1725			1436			1634	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	331	412	1	0	648	7	5	302	0	0	168	188
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	33	0
Lane Group Flow (vph)	0	744	0	0	655	0	0	307	0	0	323	0
Heavy Vehicles (%)	8%	8%	8%	10%	10%	10%	8%	8%	8%	8%	8%	8%
Turn Type	Split	NA			NA		Perm	NA			NA	
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)		44.0			39.0			25.0			25.0	
Effective Green, g (s)		44.0			39.0			25.0			25.0	
Actuated g/C Ratio		0.37			0.32			0.21			0.21	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		631			560			299			340	
v/s Ratio Prot		c0.43			c0.38						0.20	
v/s Ratio Perm								c0.21				
v/c Ratio		1.18			1.17			1.03			0.95	
Uniform Delay, d1		38.0			40.5			47.5			46.9	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		96.3			94.3			59.1			35.2	
Delay (s)		134.3			134.8			106.6			82.1	
Level of Service		F			F			F			F	
Approach Delay (s)		134.3			134.8			106.6			82.1	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	121.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	104.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1183	701	7	0	1122	15	8	30	5	7	6	541
Future Volume (vph)	1183	701	7	0	1122	15	8	30	5	7	6	541
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.9	6.9		6.0			6.1			6.2	5.5
Lane Util. Factor	0.97	0.95	1.00		0.95			1.00			1.00	1.00
Frt	1.00	1.00	0.85		1.00			0.98			1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00			0.99			0.97	1.00
Satd. Flow (prot)	3303	3406	1524		3431			1799			1779	1553
Flt Permitted	0.95	1.00	1.00		1.00			0.99			0.97	1.00
Satd. Flow (perm)	3303	3406	1524		3431			1799			1779	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1183	701	7	0	1122	15	8	30	5	7	6	541
RTOR Reduction (vph)	0	0	1	0	1	0	0	3	0	0	0	42
Lane Group Flow (vph)	1183	701	6	0	1136	0	0	40	0	0	13	499
Heavy Vehicles (%)	6%	6%	6%	5%	5%	5%	3%	3%	3%	4%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	pm+ov
Protected Phases	1	6		5	2		8	8		4	4	1
Permitted Phases			6									4
Actuated Green, G (s)	51.6	103.5	103.5		47.3			3.3			2.1	53.7
Effective Green, g (s)	51.6	103.5	103.5		47.3			3.3			2.1	53.7
Actuated g/C Ratio	0.40	0.81	0.81		0.37			0.03			0.02	0.42
Clearance Time (s)	5.5	6.9	6.9		6.0			6.1			6.2	5.5
Vehicle Extension (s)	1.0	1.0	1.0		1.0			1.0			1.0	1.0
Lane Grp Cap (vph)	1330	2751	1231		1266			46			29	651
v/s Ratio Prot	c0.36	0.21			c0.33			c0.02			0.01	c0.31
v/s Ratio Perm			0.00									0.01
v/c Ratio	0.89	0.25	0.00		0.90			0.87			0.45	0.77
Uniform Delay, d1	35.6	3.0	2.4		38.1			62.2			62.4	31.8
Progression Factor	1.00	1.00	1.00		1.00			1.00			1.00	1.00
Incremental Delay, d2	7.4	0.0	0.0		8.4			83.2			4.0	4.8
Delay (s)	43.0	3.0	2.4		46.6			145.4			66.4	36.7
Level of Service	D	A	A		D			F			E	D
Approach Delay (s)		28.0			46.6			145.4			37.4	
Approach LOS		C			D			F			D	

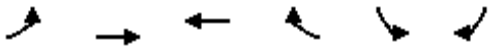
Intersection Summary			
HCM 2000 Control Delay	36.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	128.1	Sum of lost time (s)	24.7
Intersection Capacity Utilization	88.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1	19	205	4	610	19	1807	107	224	1589	0
Future Volume (vph)	0	1	19	205	4	610	19	1807	107	224	1589	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt		0.86		1.00	1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1582		1752	1845	1568	1752	3475		1752	3505	
Flt Permitted		1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1582		1752	1845	1568	1752	3475		1752	3505	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1	19	205	4	610	19	1807	107	224	1589	0
RTOR Reduction (vph)	0	18	0	0	0	159	0	3	0	0	0	0
Lane Group Flow (vph)	0	2	0	205	4	451	19	1911	0	224	1589	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)		6.0		27.6	37.6	37.6	3.0	77.6		18.0	92.6	
Effective Green, g (s)		6.0		27.6	37.6	37.6	3.0	77.6		18.0	92.6	
Actuated g/C Ratio		0.04		0.19	0.26	0.26	0.02	0.53		0.12	0.64	
Clearance Time (s)		4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		65		333	477	406	36	1857		217	2235	
v/s Ratio Prot		0.00		0.12	0.00		0.01	c0.55		c0.13	0.45	
v/s Ratio Perm						c0.29						
v/c Ratio		0.03		0.62	0.01	1.11	0.53	1.03		1.03	0.71	
Uniform Delay, d1		66.8		53.9	40.0	53.8	70.4	33.8		63.6	17.4	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2		3.4	0.0	77.9	13.3	28.8		69.8	1.1	
Delay (s)		67.0		57.3	40.0	131.7	83.7	62.6		133.4	18.5	
Level of Service		E		E	D	F	F	E		F	B	
Approach Delay (s)		67.0			112.7			62.8			32.7	
Approach LOS		E			F			E			C	

Intersection Summary			
HCM 2000 Control Delay	59.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	145.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	97.8%	ICU Level of Service	F
Analysis Period (min)	15		

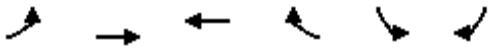
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	583	1392	2113	1736	0
Future Volume (vph)	0	583	1392	2113	1736	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95	0.95	1.00	0.97	
Frt		1.00	1.00	0.85	1.00	
Flt Protected		1.00	1.00	1.00	0.95	
Satd. Flow (prot)		3505	3505	1568	3400	
Flt Permitted		1.00	1.00	1.00	0.95	
Satd. Flow (perm)		3505	3505	1568	3400	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	583	1392	2113	1736	0
RTOR Reduction (vph)	0	0	0	518	0	0
Lane Group Flow (vph)	0	583	1392	1595	1736	0
Turn Type	Prot	NA	NA	Perm	Prot	
Protected Phases	4	5	5		6	
Permitted Phases				5		
Actuated Green, G (s)		63.0	63.0	63.0	49.0	
Effective Green, g (s)		63.0	63.0	63.0	49.0	
Actuated g/C Ratio		0.52	0.52	0.52	0.41	
Clearance Time (s)		4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1840	1840	823	1388	
v/s Ratio Prot		0.17	0.40		c0.51	
v/s Ratio Perm				c1.02		
v/c Ratio		0.32	0.76	1.94	1.25	
Uniform Delay, d1		16.2	22.5	28.5	35.5	
Progression Factor		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.1	1.8	426.5	119.0	
Delay (s)		16.3	24.3	455.0	154.5	
Level of Service		B	C	F	F	
Approach Delay (s)		16.3	283.9		154.5	
Approach LOS		B	F		F	

Intersection Summary			
HCM 2000 Control Delay	218.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.70		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	134.2%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	959	1243	2651	116	82	574
Future Volume (vph)	959	1243	2651	116	82	574
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	0.91	0.91		1.00	0.88
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3400	5036	5004		1752	2760
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3400	5036	5004		1752	2760
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	959	1243	2651	116	82	574
RTOR Reduction (vph)	0	0	3	0	0	525
Lane Group Flow (vph)	959	1243	2764	0	82	49
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	42.0	125.1	79.1		12.3	12.3
Effective Green, g (s)	42.0	125.1	79.1		12.3	12.3
Actuated g/C Ratio	0.29	0.86	0.54		0.08	0.08
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	982	4332	2722		148	233
v/s Ratio Prot	c0.28	0.25	c0.55		c0.05	
v/s Ratio Perm						0.02
v/c Ratio	0.98	0.29	1.02		0.55	0.21
Uniform Delay, d1	51.2	1.9	33.2		63.9	62.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	22.9	0.0	21.2		4.4	0.4
Delay (s)	74.1	1.9	54.3		68.4	62.5
Level of Service	E	A	D		E	E
Approach Delay (s)		33.4	54.3		63.2	
Approach LOS		C	D		E	

Intersection Summary			
HCM 2000 Control Delay	47.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	145.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	330	489	131	236	492	716	64	3446	456	591	2992	532
Future Volume (veh/h)	330	489	131	236	492	716	64	3446	456	591	2992	532
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	330	489	131	236	492	716	64	3446	456	591	2992	532
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	192	932	417	147	885	547	67	2290	713	325	2671	832
Arrive On Green	0.06	0.27	0.27	0.04	0.25	0.25	0.02	0.46	0.46	0.10	0.54	0.54
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	330	489	131	236	492	716	64	3446	456	591	2992	532
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	8.5	17.9	10.1	6.5	18.4	38.0	2.9	69.1	33.8	14.5	80.6	36.4
Cycle Q Clear(g_c), s	8.5	17.9	10.1	6.5	18.4	38.0	2.9	69.1	33.8	14.5	80.6	36.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	192	932	417	147	885	547	67	2290	713	325	2671	832
V/C Ratio(X)	1.71	0.52	0.31	1.60	0.56	1.31	0.95	1.50	0.64	1.82	1.12	0.64
Avail Cap(c_a), veh/h	192	932	417	147	885	547	67	2290	713	325	2671	832
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.0	47.1	44.3	72.0	48.9	49.0	73.7	40.7	31.2	68.0	35.0	24.7
Incr Delay (d2), s/veh	342.5	0.3	0.2	300.8	0.5	151.8	91.7	229.5	1.5	379.7	59.8	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.1	8.7	4.4	9.2	8.9	45.7	2.2	80.3	14.8	23.9	51.6	15.8
LnGrp Delay(d),s/veh	413.5	47.4	44.4	372.8	49.4	200.8	165.4	270.2	32.7	447.7	94.7	26.0
LnGrp LOS	F	D	D	F	D	F	F	F	C	F	F	C
Approach Vol, veh/h		950			1444			3966			4115	
Approach Delay, s/veh		174.2			177.3			241.2			136.5	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	85.4	14.0	42.6	20.0	73.9	12.0	44.6
Change Period (Y+Rc), s	5.5	4.8	5.5	* 4.6	5.5	* 4.8	5.5	4.6
Max Green Setting (Gmax), s	3.0	80.4	8.5	* 38	14.5	* 69	6.5	39.7
Max Q Clear Time (g_c+I1), s	4.9	82.6	10.5	40.0	16.5	71.1	8.5	19.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1

Intersection Summary	
HCM 2010 Ctrl Delay	185.2
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	329	23	149	410	832	34	2829	206	422	2387	0
Future Volume (veh/h)	0	329	23	149	410	832	34	2829	206	422	2387	0
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	0	329	23	149	410	832	34	2829	206	422	2387	0
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	3	555	248	117	828	587	61	2492	776	467	3094	963
Arrive On Green	0.00	0.16	0.16	0.03	0.24	0.24	0.02	0.50	0.50	0.14	0.62	0.00
Sat Flow, veh/h	3375	3471	1553	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	0	329	23	149	410	832	34	2829	206	422	2387	0
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	0.0	11.5	1.7	4.5	13.3	31.0	1.3	65.6	10.0	16.2	45.8	0.0
Cycle Q Clear(g_c), s	0.0	11.5	1.7	4.5	13.3	31.0	1.3	65.6	10.0	16.2	45.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	3	555	248	117	828	587	61	2492	776	467	3094	963
V/C Ratio(X)	0.00	0.59	0.09	1.28	0.50	1.42	0.56	1.14	0.27	0.90	0.77	0.00
Avail Cap(c_a), veh/h	77	783	350	117	828	587	77	2492	776	476	3094	963
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	51.2	47.0	63.4	43.4	41.1	64.0	32.8	18.9	55.7	18.2	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.1	174.6	0.2	197.3	3.0	66.4	0.1	19.6	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.6	0.7	4.9	6.5	53.4	0.6	45.3	4.3	8.8	21.1	0.0
LnGrp Delay(d),s/veh	0.0	51.5	47.1	238.0	43.5	238.3	67.0	99.2	19.0	75.3	19.3	0.0
LnGrp LOS		D	D	F	D	F	E	F	B	E	B	
Approach Vol, veh/h		352			1391			3069			2809	
Approach Delay, s/veh		51.3			180.9			93.5			27.7	
Approach LOS		D			F			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	86.7	0.0	36.7	23.7	70.9	10.0	26.7
Change Period (Y+Rc), s	5.5	5.3	5.5	* 5.7	5.5	* 5.3	5.5	* 5.7
Max Green Setting (Gmax), s	3.0	81.0	3.0	* 31	18.5	* 66	4.5	* 30
Max Q Clear Time (g_c+I1), s	3.3	47.8	0.0	33.0	18.2	67.6	6.5	13.5
Green Ext Time (p_c), s	0.0	29.4	0.0	0.0	0.0	0.0	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	83.2
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	1488	677	98	1960	977	763	1984	74	1096	1563	188
Future Volume (veh/h)	85	1488	677	98	1960	977	763	1984	74	1096	1563	188
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	85	1488	677	98	1960	0	763	1984	74	1096	1563	188
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	4	4	4	4	4	4
Cap, veh/h	66	1537	478	115	1625	506	710	1533	477	719	1523	474
Arrive On Green	0.02	0.31	0.31	0.03	0.33	0.00	0.21	0.31	0.31	0.21	0.31	0.31
Sat Flow, veh/h	3312	4893	1524	3312	4893	1524	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	85	1488	677	98	1960	0	763	1984	74	1096	1563	188
Grp Sat Flow(s),veh/h/ln	1656	1631	1524	1656	1631	1524	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	3.0	45.0	47.2	4.4	49.9	0.0	31.6	46.2	5.2	32.0	45.9	14.4
Cycle Q Clear(g_c), s	3.0	45.0	47.2	4.4	49.9	0.0	31.6	46.2	5.2	32.0	45.9	14.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	66	1537	478	115	1625	506	710	1533	477	719	1523	474
V/C Ratio(X)	1.29	0.97	1.41	0.86	1.21	0.00	1.08	1.29	0.16	1.53	1.03	0.40
Avail Cap(c_a), veh/h	66	1537	478	115	1625	506	710	1533	477	719	1523	474
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.7	50.8	51.6	72.2	50.2	0.0	59.4	52.1	37.9	59.2	52.2	41.3
Incr Delay (d2), s/veh	205.4	15.9	198.8	41.6	99.0	0.0	55.8	137.3	0.1	243.3	30.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	22.5	46.2	2.7	37.3	0.0	20.2	40.6	2.2	39.2	25.2	6.2
LnGrp Delay(d),s/veh	279.0	66.7	250.3	113.8	149.2	0.0	115.2	189.4	37.9	302.5	82.2	41.5
LnGrp LOS	F	E	F	F	F		F	F	D	F	F	D
Approach Vol, veh/h		2250			2058			2821			2847	
Approach Delay, s/veh		130.0			147.5			165.3			164.3	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	55.3	36.3	50.7	10.7	52.6	36.0	51.0
Change Period (Y+Rc), s	5.0	* 5.4	* 4.7	4.8	5.5	* 5.4	4.0	4.8
Max Green Setting (Gmax), s	3.0	* 50	* 32	45.9	5.2	* 47	32.0	46.2
Max Q Clear Time (g_c+I1), s	5.0	51.9	33.6	47.9	6.4	49.2	34.0	48.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	153.4
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	612	57	401	826	273	325	2116	555	131	1767	432
Future Volume (veh/h)	108	612	57	401	826	273	325	2116	555	131	1767	432
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1845	1845	1827	1827
Adj Flow Rate, veh/h	108	612	57	401	826	273	325	2116	555	131	1767	432
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	3	3	4	4
Cap, veh/h	143	625	280	416	895	400	351	2228	701	160	1979	616
Arrive On Green	0.04	0.18	0.18	0.12	0.26	0.26	0.10	0.45	0.45	0.05	0.40	0.40
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1568	3408	4988	1553
Grp Volume(v), veh/h	108	612	57	401	826	273	325	2116	555	131	1767	432
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1568	1704	1663	1553
Q Serve(g_s), s	3.1	17.4	3.1	11.7	23.0	15.7	9.6	40.8	30.3	3.8	33.1	23.3
Cycle Q Clear(g_c), s	3.1	17.4	3.1	11.7	23.0	15.7	9.6	40.8	30.3	3.8	33.1	23.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	143	625	280	416	895	400	351	2228	701	160	1979	616
V/C Ratio(X)	0.75	0.98	0.20	0.97	0.92	0.68	0.93	0.95	0.79	0.82	0.89	0.70
Avail Cap(c_a), veh/h	143	625	280	416	914	409	351	2233	702	160	1984	618
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.4	40.9	35.0	43.7	36.3	33.6	44.5	26.6	23.7	47.3	28.2	25.2
Incr Delay (d2), s/veh	18.3	30.4	0.1	34.8	14.1	3.6	29.5	9.6	5.7	25.7	5.4	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	11.1	1.4	7.5	12.9	7.2	5.9	20.6	14.1	2.4	16.0	10.4
LnGrp Delay(d),s/veh	65.7	71.3	35.2	78.5	50.4	37.2	74.0	36.2	29.4	72.9	33.6	28.2
LnGrp LOS	E	E	D	E	D	D	E	D	C	E	C	C
Approach Vol, veh/h		777			1500			2996			2330	
Approach Delay, s/veh		67.9			55.5			39.1			34.8	
Approach LOS		E			E			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	44.5	9.7	30.9	10.0	49.5	17.4	23.2
Change Period (Y+Rc), s	* 4.6	4.8	5.5	* 5.3	* 5.3	4.8	* 5.2	* 5.3
Max Green Setting (Gmax), s	* 10	39.8	4.2	* 26	* 4.7	44.8	* 12	* 18
Max Q Clear Time (g_c+I1), s	11.6	35.1	5.1	25.0	5.8	42.8	13.7	19.4
Green Ext Time (p_c), s	0.0	4.3	0.0	0.6	0.0	1.9	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	44.0
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1342	414	134	13	510	7	933	2195	129	9	816	800
Future Volume (veh/h)	1342	414	134	13	510	7	933	2195	129	9	816	800
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	1342	414	134	13	510	7	933	2195	129	9	816	800
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	1055	1985	618	28	465	145	744	2235	696	21	1186	369
Arrive On Green	0.31	0.40	0.40	0.01	0.09	0.09	0.22	0.45	0.45	0.01	0.24	0.24
Sat Flow, veh/h	3375	4988	1553	3375	4988	1553	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	1342	414	134	13	510	7	933	2195	129	9	816	800
Grp Sat Flow(s),veh/h/ln	1688	1663	1553	1688	1663	1553	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	46.9	8.2	8.5	0.6	14.0	0.6	33.1	65.1	7.5	0.4	22.4	35.7
Cycle Q Clear(g_c), s	46.9	8.2	8.5	0.6	14.0	0.6	33.1	65.1	7.5	0.4	22.4	35.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1055	1985	618	28	465	145	744	2235	696	21	1186	369
V/C Ratio(X)	1.27	0.21	0.22	0.46	1.10	0.05	1.25	0.98	0.19	0.43	0.69	2.17
Avail Cap(c_a), veh/h	1055	1985	618	67	465	145	744	2235	696	67	1186	369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.6	29.7	29.8	74.1	68.1	62.0	58.5	40.8	24.9	74.3	52.1	57.2
Incr Delay (d2), s/veh	130.1	0.2	0.8	4.3	70.4	0.6	125.0	15.3	0.6	5.0	3.3	533.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	40.9	3.8	3.8	0.3	9.5	0.3	28.3	33.0	3.3	0.2	10.6	70.1
LnGrp Delay(d),s/veh	181.7	29.9	30.6	78.4	138.5	62.6	183.5	56.1	25.5	79.3	55.4	590.8
LnGrp LOS	F	C	C	E	F	E	F	E	C	E	E	F
Approach Vol, veh/h		1890			530			3257			1625	
Approach Delay, s/veh		137.7			136.0			91.4			319.1	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	38.0	40.9	52.0	19.2	6.4	72.5	6.3	64.9
Change Period (Y+Rc), s	* 4.9	* 5.2	* 5.1	* 5.2	5.5	* 5.2	5.0	* 5.2
Max Green Setting (Gmax), s	* 33	* 36	* 47	* 14	3.0	* 65	3.0	* 58
Max Q Clear Time (g_c+I1), s	35.1	37.7	48.9	16.0	2.4	67.1	2.6	10.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.1

Intersection Summary	
HCM 2010 Ctrl Delay	157.3
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	2345	133	27	2398	8	517	42	211	7	16	55
Future Volume (veh/h)	14	2345	133	27	2398	8	517	42	211	7	16	55
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	14	2345	133	27	2398	8	517	42	211	7	16	55
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	21	2389	134	33	2574	9	498	625	532	12	103	87
Arrive On Green	0.01	0.50	0.50	0.02	0.51	0.51	0.28	0.34	0.34	0.01	0.06	0.06
Sat Flow, veh/h	1707	4741	267	1707	5035	17	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	14	1607	871	27	1553	853	517	42	211	7	16	55
Grp Sat Flow(s),veh/h/ln	1707	1631	1745	1707	1631	1789	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	1.1	65.6	67.3	2.1	60.5	60.6	38.6	2.1	14.0	0.5	1.1	4.7
Cycle Q Clear(g_c), s	1.1	65.6	67.3	2.1	60.5	60.6	38.6	2.1	14.0	0.5	1.1	4.7
Prop In Lane	1.00		0.15	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	21	1644	879	33	1668	915	498	625	532	12	103	87
V/C Ratio(X)	0.68	0.98	0.99	0.81	0.93	0.93	1.04	0.07	0.40	0.58	0.16	0.63
Avail Cap(c_a), veh/h	50	1644	879	50	1668	915	498	753	640	52	285	242
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.0	33.0	33.4	66.5	31.0	31.1	48.8	30.4	34.4	67.4	61.2	62.9
Incr Delay (d2), s/veh	23.3	17.2	27.9	35.0	10.1	16.1	50.5	0.0	0.4	26.9	0.6	6.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	33.4	39.0	1.3	29.5	33.9	25.7	1.1	6.1	0.4	0.6	2.2
LnGrp Delay(d),s/veh	90.3	50.2	61.4	101.5	41.1	47.2	99.3	30.5	34.8	94.3	61.9	69.5
LnGrp LOS	F	D	E	F	D	D	F	C	C	F	E	E
Approach Vol, veh/h		2492			2433			770			78	
Approach Delay, s/veh		54.3			43.9			77.9			70.1	
Approach LOS		D			D			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	75.0	43.0	12.0	5.1	76.0	4.4	50.6
Change Period (Y+Rc), s	3.5	6.4	4.4	* 4.4	3.5	6.4	3.5	4.4
Max Green Setting (Gmax), s	4.0	68.6	38.6	* 21	4.0	68.6	4.0	55.6
Max Q Clear Time (g_c+I1), s	4.1	69.3	40.6	6.7	3.1	62.6	2.5	16.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.9	0.0	6.0	0.0	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	53.3
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	1326	686	5	1390	461	608	422	107	253	235	76
Future Volume (veh/h)	69	1326	686	5	1390	461	608	422	107	253	235	76
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	69	1326	686	5	1390	461	608	422	107	253	235	76
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	47	1113	530	7	1205	382	480	480	408	258	246	209
Arrive On Green	0.03	0.48	0.48	0.00	0.46	0.46	0.27	0.26	0.26	0.15	0.13	0.13
Sat Flow, veh/h	1757	2306	1098	1757	2619	831	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	69	980	1032	5	909	942	608	422	107	253	235	76
Grp Sat Flow(s),veh/h/ln	1757	1752	1651	1757	1752	1698	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	4.0	72.4	72.4	0.4	69.0	69.0	41.0	32.9	8.1	21.5	19.0	6.6
Cycle Q Clear(g_c), s	4.0	72.4	72.4	0.4	69.0	69.0	41.0	32.9	8.1	21.5	19.0	6.6
Prop In Lane	1.00		0.66	1.00		0.49	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	47	846	797	7	806	781	480	480	408	258	246	209
V/C Ratio(X)	1.47	1.16	1.29	0.76	1.13	1.21	1.27	0.88	0.26	0.98	0.96	0.36
Avail Cap(c_a), veh/h	47	846	797	35	806	781	480	480	408	258	246	209
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.0	38.8	38.8	74.6	40.5	40.5	54.5	53.3	44.1	63.8	64.6	59.2
Incr Delay (d2), s/veh	298.2	84.4	141.7	97.0	73.0	104.6	135.5	17.0	0.3	50.8	45.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	54.9	64.4	0.4	49.7	55.0	38.0	19.0	3.6	14.1	12.7	2.9
LnGrp Delay(d),s/veh	371.2	123.2	180.4	171.7	113.5	145.1	190.0	70.2	44.4	114.6	109.6	60.3
LnGrp LOS	F	F	F	F	F	F	F	E	D	F	F	E
Approach Vol, veh/h		2081			1856			1137			564	
Approach Delay, s/veh		159.8			129.7			131.9			105.2	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	43.0	4.6	76.4	45.0	24.0	8.0	73.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	22.0	39.0	3.0	70.0	41.0	20.0	4.0	69.0
Max Q Clear Time (g_c+I1), s	23.5	34.9	2.4	74.4	43.0	21.0	6.0	71.0
Green Ext Time (p_c), s	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	138.8
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	373	1980	182	246	2151	3	109	1802	305	3	1650	155
Future Volume (veh/h)	373	1980	182	246	2151	3	109	1802	305	3	1650	155
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1792	1845	1845	1792	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	373	1980	182	246	2151	3	109	1802	305	3	1650	155
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	6	3	3	6	3	3	3	3	3	3	3
Cap, veh/h	341	2132	683	268	2027	650	122	1859	579	8	1691	526
Arrive On Green	0.10	0.44	0.44	0.08	0.41	0.41	0.04	0.37	0.37	0.00	0.34	0.34
Sat Flow, veh/h	3408	4893	1568	3408	4893	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	373	1980	182	246	2151	3	109	1802	305	3	1650	155
Grp Sat Flow(s),veh/h/ln	1704	1631	1568	1704	1631	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	14.0	53.7	10.4	10.0	58.0	0.2	4.5	49.2	21.3	0.1	45.3	10.2
Cycle Q Clear(g_c), s	14.0	53.7	10.4	10.0	58.0	0.2	4.5	49.2	21.3	0.1	45.3	10.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	341	2132	683	268	2027	650	122	1859	579	8	1691	526
V/C Ratio(X)	1.09	0.93	0.27	0.92	1.06	0.00	0.90	0.97	0.53	0.37	0.98	0.29
Avail Cap(c_a), veh/h	341	2132	683	268	2027	650	122	1859	579	97	1691	526
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.0	37.4	25.2	64.1	41.0	24.1	67.2	43.4	34.6	69.7	45.9	34.3
Incr Delay (d2), s/veh	76.5	7.8	0.2	34.2	38.5	0.0	50.9	14.3	0.9	26.3	16.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.2	25.7	4.5	6.0	33.3	0.1	3.0	25.3	9.4	0.1	23.5	4.5
LnGrp Delay(d),s/veh	139.5	45.3	25.4	98.3	79.5	24.1	118.1	57.7	35.5	96.0	62.4	34.6
LnGrp LOS	F	D	C	F	F	C	F	E	D	F	E	C
Approach Vol, veh/h		2535			2400			2216			1808	
Approach Delay, s/veh		57.7			81.3			57.6			60.1	
Approach LOS		E			F			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.3	55.7	15.0	65.0	9.0	51.0	18.0	62.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	48.0	11.0	61.0	5.0	47.0	14.0	58.0
Max Q Clear Time (g_c+I1), s	2.1	51.2	12.0	55.7	6.5	47.3	16.0	60.0
Green Ext Time (p_c), s	0.0	0.0	0.0	5.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	64.5
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	524	1035	93	731	1021	255	245	1568	441	115	1159	234
Future Volume (veh/h)	524	1035	93	731	1021	255	245	1568	441	115	1159	234
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	524	1035	93	731	1021	255	245	1568	441	115	1159	234
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	568	962	300	699	1156	360	297	1548	693	167	1415	633
Arrive On Green	0.17	0.19	0.19	0.21	0.23	0.23	0.09	0.44	0.44	0.05	0.40	0.40
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	524	1035	93	731	1021	255	245	1568	441	115	1159	234
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	21.4	27.0	7.2	29.0	27.7	21.2	10.0	62.4	30.9	4.7	41.6	14.8
Cycle Q Clear(g_c), s	21.4	27.0	7.2	29.0	27.7	21.2	10.0	62.4	30.9	4.7	41.6	14.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	568	962	300	699	1156	360	297	1548	693	167	1415	633
V/C Ratio(X)	0.92	1.08	0.31	1.05	0.88	0.71	0.83	1.01	0.64	0.69	0.82	0.37
Avail Cap(c_a), veh/h	579	962	300	699	1156	360	386	1548	693	434	1537	688
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.0	57.2	49.2	56.2	52.6	50.1	63.5	39.5	30.7	66.2	37.6	29.5
Incr Delay (d2), s/veh	20.3	51.7	0.6	46.5	8.3	6.3	10.8	26.1	1.9	5.0	3.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.7	17.1	3.2	18.1	13.7	9.8	5.2	35.7	13.7	2.3	20.8	6.5
LnGrp Delay(d),s/veh	78.3	108.9	49.8	102.7	60.9	56.4	74.3	65.6	32.6	71.1	41.0	29.9
LnGrp LOS	E	F	D	F	E	E	E	F	C	E	D	C
Approach Vol, veh/h		1652			2007			2254			1508	
Approach Delay, s/veh		95.9			75.5			60.1			41.5	
Approach LOS		F			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	66.4	33.0	31.0	16.3	61.1	27.6	36.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	18.0	60.0	29.0	27.0	16.0	62.0	24.0	32.0
Max Q Clear Time (g_c+I1), s	6.7	64.4	31.0	29.0	12.0	43.6	23.4	29.7
Green Ext Time (p_c), s	0.2	0.0	0.0	0.0	0.3	13.4	0.1	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	68.5
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	40	32	307	30	388	57	2863	368	680	1890	59
Future Volume (veh/h)	76	40	32	307	30	388	57	2863	368	680	1890	59
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	76	40	32	307	30	388	57	2863	368	680	1890	59
Adj No. of Lanes	1	1	0	2	1	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	64	222	177	503	295	251	72	2470	769	551	3080	96
Arrive On Green	0.04	0.23	0.23	0.16	0.16	0.16	0.04	0.50	0.50	0.16	0.62	0.62
Sat Flow, veh/h	1757	950	760	2541	1845	1568	1740	4988	1553	3375	4970	155
Grp Volume(v), veh/h	76	0	72	307	30	388	57	2863	368	680	1264	685
Grp Sat Flow(s),veh/h/ln	1757	0	1711	1271	1845	1568	1740	1663	1553	1688	1663	1800
Q Serve(g_s), s	5.5	0.0	5.1	17.3	2.1	24.0	4.9	74.3	23.5	24.5	35.0	35.1
Cycle Q Clear(g_c), s	5.5	0.0	5.1	17.3	2.1	24.0	4.9	74.3	23.5	24.5	35.0	35.1
Prop In Lane	1.00		0.44	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	64	0	399	503	295	251	72	2470	769	551	2061	1115
V/C Ratio(X)	1.18	0.00	0.18	0.61	0.10	1.55	0.79	1.16	0.48	1.23	0.61	0.61
Avail Cap(c_a), veh/h	64	0	399	503	295	251	123	2470	769	551	2061	1115
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.3	0.0	46.0	60.2	53.8	63.0	71.2	37.8	25.0	62.8	17.5	17.5
Incr Delay (d2), s/veh	168.8	0.0	0.1	1.6	0.1	264.8	6.9	76.5	0.2	120.1	0.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.0	2.4	6.2	1.1	28.8	2.5	51.6	10.1	20.6	16.1	17.5
LnGrp Delay(d),s/veh	241.1	0.0	46.1	61.8	53.9	327.8	78.1	114.3	25.2	182.9	17.9	18.3
LnGrp LOS	F		D	E	D	F	E	F	C	F	B	B
Approach Vol, veh/h		148			725			3288			2629	
Approach Delay, s/veh		146.2			203.8			103.7			60.7	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.3	98.2		40.5	30.0	79.5	11.0	29.5
Change Period (Y+Rc), s	* 5.1	* 5.2		5.5	5.5	* 5.2	5.5	5.5
Max Green Setting (Gmax), s	* 11	* 89		35.0	24.5	* 74	5.5	24.0
Max Q Clear Time (g_c+I1), s	6.9	37.1		7.1	26.5	76.3	7.5	26.0
Green Ext Time (p_c), s	0.0	38.5		0.7	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	98.7
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	224	1179	429	252	1471	826	359	2029	361	577	839	158
Future Volume (veh/h)	224	1179	429	252	1471	826	359	2029	361	577	839	158
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	224	1179	429	252	1471	826	359	2029	361	577	839	158
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	193	1413	440	294	1564	487	403	1771	551	438	1823	567
Arrive On Green	0.06	0.28	0.28	0.09	0.31	0.31	0.12	0.36	0.36	0.13	0.37	0.37
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	224	1179	429	252	1471	826	359	2029	361	577	839	158
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	8.5	33.1	40.8	11.0	42.8	46.7	15.8	53.4	29.4	19.5	19.3	10.8
Cycle Q Clear(g_c), s	8.5	33.1	40.8	11.0	42.8	46.7	15.8	53.4	29.4	19.5	19.3	10.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	193	1413	440	294	1564	487	403	1771	551	438	1823	567
V/C Ratio(X)	1.16	0.83	0.97	0.86	0.94	1.70	0.89	1.15	0.65	1.32	0.46	0.28
Avail Cap(c_a), veh/h	193	1413	440	315	1564	487	532	1771	551	438	1823	567
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.9	50.8	53.6	67.8	50.5	51.9	65.3	48.5	40.8	65.4	36.4	33.7
Incr Delay (d2), s/veh	115.6	4.2	36.1	18.0	11.4	322.2	11.9	72.8	2.2	158.7	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	15.8	22.1	5.9	21.5	63.8	8.0	36.4	13.0	18.7	8.9	4.6
LnGrp Delay(d),s/veh	186.6	55.0	89.7	85.7	61.9	374.1	77.2	121.3	43.0	224.1	36.5	33.8
LnGrp LOS	F	E	F	F	E	F	E	F	D	F	D	C
Approach Vol, veh/h		1832			2549			2749			1574	
Approach Delay, s/veh		79.2			165.4			105.3			105.0	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.4	60.6	14.0	52.4	25.0	59.0	18.5	47.9
Change Period (Y+Rc), s	5.5	* 5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	23.7	* 49	8.5	* 47	19.5	* 53	13.9	* 41
Max Q Clear Time (g_c+I1), s	17.8	21.3	10.5	48.7	21.5	55.4	13.0	42.8
Green Ext Time (p_c), s	0.2	13.5	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	117.3
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	350	1491	494	163	2278	530	71	2559	158	521	865	90
Future Volume (veh/h)	350	1491	494	163	2278	530	71	2559	158	521	865	90
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1845	1845	1792	1792	1845	1845	1845	1827	1845	1827
Adj Flow Rate, veh/h	350	1491	494	163	2278	530	71	2559	158	521	865	0
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	3	3	6	6	3	3	3	4	3	4
Cap, veh/h	258	1679	538	207	1612	502	110	1810	563	338	2137	659
Arrive On Green	0.08	0.34	0.34	0.06	0.33	0.33	0.03	0.36	0.36	0.10	0.42	0.00
Sat Flow, veh/h	3312	4893	1568	3408	4893	1524	3408	5036	1568	3375	5036	1553
Grp Volume(v), veh/h	350	1491	494	163	2278	530	71	2559	158	521	865	0
Grp Sat Flow(s),veh/h/ln	1656	1631	1568	1704	1631	1524	1704	1679	1568	1688	1679	1553
Q Serve(g_s), s	11.7	43.2	45.3	7.1	49.4	49.4	3.1	53.9	10.8	15.0	17.9	0.0
Cycle Q Clear(g_c), s	11.7	43.2	45.3	7.1	49.4	49.4	3.1	53.9	10.8	15.0	17.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	1679	538	207	1612	502	110	1810	563	338	2137	659
V/C Ratio(X)	1.35	0.89	0.92	0.79	1.41	1.06	0.65	1.41	0.28	1.54	0.40	0.00
Avail Cap(c_a), veh/h	258	1679	538	232	1612	502	204	1810	563	338	2137	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	69.1	46.5	47.2	69.5	50.3	50.3	71.7	48.1	34.2	67.5	30.0	0.0
Incr Delay (d2), s/veh	182.9	6.0	20.5	14.8	189.8	55.9	2.4	189.7	0.3	258.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.9	20.4	22.6	3.8	50.6	28.5	1.5	56.8	4.7	19.1	8.3	0.0
LnGrp Delay(d),s/veh	252.1	52.5	67.7	84.3	240.1	106.2	74.1	237.8	34.5	326.4	30.0	0.0
LnGrp LOS	F	D	E	F	F	F	E	F	C	F	C	
Approach Vol, veh/h		2335			2971			2788			1386	
Approach Delay, s/veh		85.7			207.7			222.1			141.4	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.2	68.8	16.0	55.0	20.0	59.0	13.9	57.1
Change Period (Y+Rc), s	* 5.4	5.1	* 4.3	5.6	5.0	5.1	* 4.8	* 5.6
Max Green Setting (Gmax), s	* 9	59.5	* 12	49.4	15.0	53.9	* 10	* 51
Max Q Clear Time (g_c+I1), s	5.1	19.9	13.7	51.4	17.0	55.9	9.1	47.3
Green Ext Time (p_c), s	0.0	35.1	0.0	0.0	0.0	0.0	0.1	3.3

Intersection Summary	
HCM 2010 Ctrl Delay	172.2
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	753	154	443	1112	52	424	2790	175	38	945	77
Future Volume (veh/h)	102	753	154	443	1112	52	424	2790	175	38	945	77
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	102	753	154	443	1112	52	424	2790	175	38	945	77
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	145	1002	312	427	1419	442	482	2586	805	66	1971	614
Arrive On Green	0.04	0.20	0.20	0.13	0.28	0.28	0.14	0.51	0.51	0.02	0.39	0.39
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	102	753	154	443	1112	52	424	2790	175	38	945	77
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	4.4	20.9	12.9	18.6	30.2	3.7	18.1	76.2	9.1	1.6	20.9	4.7
Cycle Q Clear(g_c), s	4.4	20.9	12.9	18.6	30.2	3.7	18.1	76.2	9.1	1.6	20.9	4.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	145	1002	312	427	1419	442	482	2586	805	66	1971	614
V/C Ratio(X)	0.71	0.75	0.49	1.04	0.78	0.12	0.88	1.08	0.22	0.57	0.48	0.13
Avail Cap(c_a), veh/h	156	1052	328	427	1452	452	615	2586	805	69	1971	614
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.1	56.0	52.8	64.9	49.1	39.6	62.5	36.1	19.8	72.2	33.8	28.9
Incr Delay (d2), s/veh	12.4	2.9	1.2	53.5	2.8	0.1	11.5	43.3	0.1	10.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	10.0	5.7	11.9	14.4	1.6	9.3	45.6	3.9	0.9	9.7	2.0
LnGrp Delay(d),s/veh	82.5	58.9	54.0	118.4	51.9	39.7	73.9	79.4	19.9	82.5	33.9	28.9
LnGrp LOS	F	E	D	F	D	D	E	F	B	F	C	C
Approach Vol, veh/h		1009			1607			3389			1060	
Approach Delay, s/veh		60.6			69.9			75.7			35.3	
Approach LOS		E			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.5	63.1	24.1	34.7	8.4	81.2	11.8	47.0
Change Period (Y+Rc), s	5.5	5.0	5.5	* 5.2	5.5	5.0	5.5	* 5.2
Max Green Setting (Gmax), s	26.8	52.4	18.6	* 31	3.0	76.2	6.8	* 43
Max Q Clear Time (g_c+I1), s	20.1	22.9	20.6	22.9	3.6	78.2	6.4	32.2
Green Ext Time (p_c), s	0.9	27.9	0.0	6.6	0.0	0.0	0.0	8.4

Intersection Summary	
HCM 2010 Ctrl Delay	66.1
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	665	799	268	156	941	220	392	2588	124	75	870	283
Future Volume (veh/h)	665	799	268	156	941	220	392	2588	124	75	870	283
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1831	1900	1845	1792	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	665	799	268	156	941	220	392	2588	124	75	870	283
Adj No. of Lanes	2	2	0	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	4	4	3	6	3	3	3	3	3	3	3
Cap, veh/h	580	824	276	186	1010	324	448	2314	720	80	1769	551
Arrive On Green	0.17	0.32	0.32	0.05	0.21	0.21	0.13	0.46	0.46	0.02	0.35	0.35
Sat Flow, veh/h	3408	2561	859	3408	4893	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	665	543	524	156	941	220	392	2588	124	75	870	283
Grp Sat Flow(s),veh/h/ln	1704	1740	1680	1704	1631	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	25.5	46.1	46.2	6.8	28.3	19.4	16.9	68.9	7.0	3.3	20.3	21.4
Cycle Q Clear(g_c), s	25.5	46.1	46.2	6.8	28.3	19.4	16.9	68.9	7.0	3.3	20.3	21.4
Prop In Lane	1.00		0.51	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	580	560	541	186	1010	324	448	2314	720	80	1769	551
V/C Ratio(X)	1.15	0.97	0.97	0.84	0.93	0.68	0.88	1.12	0.17	0.94	0.49	0.51
Avail Cap(c_a), veh/h	580	560	541	186	1012	324	570	2314	720	80	1769	551
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.2	50.1	50.1	70.2	58.5	54.9	63.9	40.5	23.8	73.1	38.1	38.5
Incr Delay (d2), s/veh	85.2	30.1	30.9	27.0	14.4	4.7	11.9	59.9	0.1	81.5	0.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.8	26.8	26.0	3.9	14.2	8.9	8.7	44.8	3.0	2.5	9.5	9.4
LnGrp Delay(d),s/veh	147.4	80.2	81.0	97.2	72.8	59.6	75.8	100.4	23.9	154.7	38.3	39.3
LnGrp LOS	F	F	F	F	E	E	E	F	C	F	D	D
Approach Vol, veh/h		1732			1317			3104			1228	
Approach Delay, s/veh		106.2			73.5			94.2			45.7	
Approach LOS		F			E			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	74.0	31.0	36.0	25.2	57.8	13.7	53.3
Change Period (Y+Rc), s	5.5	* 5.1	5.5	* 5	5.5	* 5.1	5.5	* 5
Max Green Setting (Gmax), s	3.5	* 69	25.5	* 31	25.1	* 47	8.2	* 48
Max Q Clear Time (g_c+I1), s	5.3	70.9	27.5	30.3	18.9	23.4	8.8	48.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.5	0.8	23.0	0.0	0.1

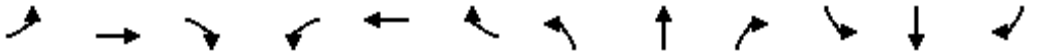
Intersection Summary	
HCM 2010 Ctrl Delay	85.3
HCM 2010 LOS	F

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	725	266	506	730	144	751
Future Volume (veh/h)	725	266	506	730	144	751
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1900	1845	1845	1845	1845
Adj Flow Rate, veh/h	725	266	506	730	144	751
Adj No. of Lanes	2	0	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	781	287	549	2367	388	836
Arrive On Green	0.31	0.31	0.31	0.68	0.22	0.22
Sat Flow, veh/h	2605	922	1757	3597	1757	1568
Grp Volume(v), veh/h	506	485	506	730	144	751
Grp Sat Flow(s),veh/h/ln	1752	1682	1757	1752	1757	1568
Q Serve(g_s), s	21.5	21.5	21.4	6.6	5.4	17.0
Cycle Q Clear(g_c), s	21.5	21.5	21.4	6.6	5.4	17.0
Prop In Lane		0.55	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	545	523	549	2367	388	836
V/C Ratio(X)	0.93	0.93	0.92	0.31	0.37	0.90
Avail Cap(c_a), veh/h	546	524	616	2503	388	836
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.7	25.7	25.6	5.1	25.5	16.1
Incr Delay (d2), s/veh	22.3	23.0	18.2	0.1	0.6	12.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.8	13.3	13.2	3.2	2.7	17.1
LnGrp Delay(d),s/veh	48.1	48.7	43.8	5.2	26.1	28.6
LnGrp LOS	D	D	D	A	C	C
Approach Vol, veh/h	991			1236	895	
Approach Delay, s/veh	48.4			21.0	28.2	
Approach LOS	D			C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		21.0	28.1	27.9				56.0
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		17.0	27.0	24.0				55.0
Max Q Clear Time (g_c+I1), s		19.0	23.4	23.5				8.6
Green Ext Time (p_c), s		0.0	0.7	0.4				18.1

Intersection Summary	
HCM 2010 Ctrl Delay	31.8
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	171	981	84	886	1977	331	160	953	869	352	534	132
Future Volume (veh/h)	171	981	84	886	1977	331	160	953	869	352	534	132
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1792	1845	1845	1792	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	171	981	84	886	1977	331	160	953	869	352	534	132
Adj No. of Lanes	2	3	1	2	3	1	1	1	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	6	3	3	6	3	3	3	3	3	3	3
Cap, veh/h	170	1044	334	824	1982	635	146	538	457	341	1081	483
Arrive On Green	0.05	0.21	0.21	0.24	0.41	0.41	0.08	0.29	0.29	0.10	0.31	0.31
Sat Flow, veh/h	3408	4893	1568	3408	4893	1568	1757	1845	1568	3408	3505	1568
Grp Volume(v), veh/h	171	981	84	886	1977	331	160	953	869	352	534	132
Grp Sat Flow(s),veh/h/ln	1704	1631	1568	1704	1631	1568	1757	1845	1568	1704	1752	1568
Q Serve(g_s), s	6.0	23.7	5.3	29.0	48.4	19.1	10.0	35.0	35.0	12.0	14.9	7.6
Cycle Q Clear(g_c), s	6.0	23.7	5.3	29.0	48.4	19.1	10.0	35.0	35.0	12.0	14.9	7.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	170	1044	334	824	1982	635	146	538	457	341	1081	483
V/C Ratio(X)	1.00	0.94	0.25	1.08	1.00	0.52	1.09	1.77	1.90	1.03	0.49	0.27
Avail Cap(c_a), veh/h	170	1044	334	824	1982	635	146	538	457	341	1081	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.0	46.4	39.2	45.5	35.6	26.9	55.0	42.5	42.5	54.0	33.9	31.3
Incr Delay (d2), s/veh	69.8	15.6	0.6	53.7	19.6	1.0	101.4	354.6	413.2	57.5	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	12.1	2.4	19.8	25.4	8.4	9.0	70.8	67.6	8.4	7.2	3.3
LnGrp Delay(d),s/veh	126.8	62.1	39.8	99.2	55.3	28.0	156.4	397.1	455.7	111.5	34.2	31.6
LnGrp LOS	F	E	D	F	E	C	F	F	F	F	C	C
Approach Vol, veh/h		1236			3194			1982			1018	
Approach Delay, s/veh		69.5			64.6			403.4			60.6	
Approach LOS		E			E			F			E	

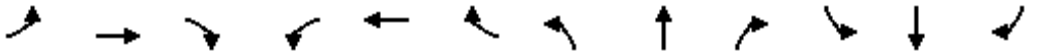
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	33.0	32.0	14.0	41.0	10.0	55.0	16.0	39.0
Change Period (Y+Rc), s	4.0	6.4	4.0	4.0	4.0	6.4	4.0	4.0
Max Green Setting (Gmax), s	29.0	25.6	10.0	37.0	6.0	48.6	12.0	35.0
Max Q Clear Time (g_c+I1), s	31.0	25.7	12.0	16.9	8.0	50.4	14.0	37.0
Green Ext Time (p_c), s	0.0	0.0	0.0	15.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	155.3
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	594	29	179	626	12	29	828	162	5	286	13
Future Volume (veh/h)	104	594	29	179	626	12	29	828	162	5	286	13
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1759	1759	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	104	594	29	179	626	12	29	828	162	5	286	13
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	8	8	8	3	3	3	3	3	3
Cap, veh/h	136	630	31	208	717	14	67	916	179	67	549	25
Arrive On Green	0.08	0.37	0.37	0.12	0.42	0.42	0.04	0.31	0.31	0.04	0.31	0.31
Sat Flow, veh/h	1707	1695	83	1675	1720	33	1757	2924	572	1757	1751	80
Grp Volume(v), veh/h	104	0	623	179	0	638	29	496	494	5	0	299
Grp Sat Flow(s),veh/h/ln	1707	0	1778	1675	0	1753	1757	1752	1744	1757	0	1831
Q Serve(g_s), s	6.3	0.0	35.6	11.0	0.0	35.0	1.7	28.5	28.5	0.3	0.0	14.1
Cycle Q Clear(g_c), s	6.3	0.0	35.6	11.0	0.0	35.0	1.7	28.5	28.5	0.3	0.0	14.1
Prop In Lane	1.00		0.05	1.00		0.02	1.00		0.33	1.00		0.04
Lane Grp Cap(c), veh/h	136	0	661	208	0	730	67	549	546	67	0	574
V/C Ratio(X)	0.76	0.00	0.94	0.86	0.00	0.87	0.43	0.90	0.90	0.07	0.00	0.52
Avail Cap(c_a), veh/h	228	0	711	223	0	730	234	568	565	234	0	593
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.3	0.0	31.9	45.1	0.0	28.1	49.4	34.5	34.5	48.7	0.0	29.6
Incr Delay (d2), s/veh	8.6	0.0	20.1	25.9	0.0	11.4	4.4	17.6	17.7	0.5	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	21.2	6.6	0.0	19.1	0.9	16.5	16.4	0.1	0.0	7.2
LnGrp Delay(d),s/veh	55.9	0.0	52.0	70.9	0.0	39.5	53.8	52.1	52.2	49.2	0.0	30.3
LnGrp LOS	E		D	E		D	D	D	D	D		C
Approach Vol, veh/h		727			817			1019			304	
Approach Delay, s/veh		52.6			46.4			52.2			30.7	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	36.9	17.0	43.1	8.0	36.9	12.4	47.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	14.0	34.0	14.0	42.0	14.0	34.0	14.0	42.0
Max Q Clear Time (g_c+I1), s	2.3	30.5	13.0	37.6	3.7	16.1	8.3	37.0
Green Ext Time (p_c), s	0.0	2.4	0.0	1.5	0.0	8.2	0.1	3.3

Intersection Summary			
HCM 2010 Ctrl Delay		48.4	
HCM 2010 LOS		D	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	538	47	971	25	63	161	999	1153	13	105	1699	1114
Future Volume (veh/h)	538	47	971	25	63	161	999	1153	13	105	1699	1114
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1900	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	572	0	971	25	63	161	999	1153	13	105	1699	0
Adj No. of Lanes	2	0	1	0	1	1	1	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	712	0	318	19	48	57	549	2813	32	126	1536	478
Arrive On Green	0.20	0.00	0.20	0.04	0.04	0.04	0.32	0.55	0.55	0.07	0.31	0.00
Sat Flow, veh/h	3480	0	1553	517	1302	1568	1740	5084	57	1740	4988	1553
Grp Volume(v), veh/h	572	0	971	88	0	161	999	754	412	105	1699	0
Grp Sat Flow(s),veh/h/ln	1740	0	1553	1819	0	1568	1740	1663	1817	1740	1663	1553
Q Serve(g_s), s	23.5	0.0	30.7	5.5	0.0	5.5	47.3	19.7	19.7	8.9	46.2	0.0
Cycle Q Clear(g_c), s	23.5	0.0	30.7	5.5	0.0	5.5	47.3	19.7	19.7	8.9	46.2	0.0
Prop In Lane	1.00		1.00	0.28		1.00	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	712	0	318	67	0	57	549	1839	1005	126	1536	478
V/C Ratio(X)	0.80	0.00	3.06	1.32	0.00	2.80	1.82	0.41	0.41	0.84	1.11	0.00
Avail Cap(c_a), veh/h	712	0	318	67	0	57	549	1839	1005	194	1536	478
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.8	0.0	59.6	72.3	0.0	72.3	51.3	19.4	19.4	68.7	51.9	0.0
Incr Delay (d2), s/veh	6.1	0.0	933.2	217.5	0.0	856.3	376.5	0.1	0.1	10.2	57.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.9	0.0	95.6	6.8	0.0	16.1	80.1	9.0	9.9	4.7	29.4	0.0
LnGrp Delay(d),s/veh	62.9	0.0	992.8	289.7	0.0	928.5	427.9	19.4	19.5	78.9	109.7	0.0
LnGrp LOS	E		F	F		F	F	B	B	E	F	
Approach Vol, veh/h		1543			249			2165			1804	
Approach Delay, s/veh		648.1			702.8			207.9			107.9	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	52.0	51.0		11.0	15.2	87.8		36.0
Change Period (Y+Rc), s	* 4.7	4.8		5.5	* 4.4	* 4.8		5.3
Max Green Setting (Gmax), s	* 47	46.2		5.5	* 17	* 77		30.7
Max Q Clear Time (g_c+I1), s	49.3	48.2		7.5	10.9	21.7		32.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	13.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	315.9
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	234	900	52	486	1987	757	92	660	221	463	493	107
Future Volume (veh/h)	234	900	52	486	1987	757	92	660	221	463	493	107
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	234	900	52	486	1987	757	92	660	221	463	493	107
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	261	1659	516	538	2052	639	139	725	324	493	1089	487
Arrive On Green	0.08	0.33	0.33	0.16	0.41	0.41	0.04	0.21	0.21	0.14	0.31	0.31
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	234	900	52	486	1987	757	92	660	221	463	493	107
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	8.7	18.7	2.9	17.9	49.4	52.1	3.4	23.5	16.6	17.2	14.4	6.5
Cycle Q Clear(g_c), s	8.7	18.7	2.9	17.9	49.4	52.1	3.4	23.5	16.6	17.2	14.4	6.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	261	1659	516	538	2052	639	139	725	324	493	1089	487
V/C Ratio(X)	0.90	0.54	0.10	0.90	0.97	1.18	0.66	0.91	0.68	0.94	0.45	0.22
Avail Cap(c_a), veh/h	261	1659	516	730	2052	639	365	932	417	493	1089	487
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.5	35.0	29.7	52.9	37.1	37.9	60.4	49.5	46.8	54.1	35.3	32.6
Incr Delay (d2), s/veh	29.4	0.2	0.0	9.8	13.1	98.4	2.0	9.4	1.6	25.7	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	8.7	1.3	9.2	25.3	40.0	1.6	12.3	7.3	9.9	7.0	2.8
LnGrp Delay(d),s/veh	87.9	35.2	29.8	62.6	50.2	136.3	62.4	59.0	48.4	79.8	35.5	32.7
LnGrp LOS	F	D	C	E	D	F	E	E	D	E	D	C
Approach Vol, veh/h		1186			3230			973			1063	
Approach Delay, s/veh		45.4			72.3			56.9			54.5	
Approach LOS		D			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.3	57.0	10.7	44.8	25.3	47.0	24.0	31.6
Change Period (Y+Rc), s	5.5	* 4.9	5.5	* 5.1	* 5.1	* 4.9	5.5	* 5.1
Max Green Setting (Gmax), s	9.8	* 52	13.7	* 39	* 27	* 35	18.5	* 34
Max Q Clear Time (g_c+I1), s	10.7	54.1	5.4	16.4	19.9	20.7	19.2	25.5
Green Ext Time (p_c), s	0.0	0.0	0.0	1.8	0.3	9.5	0.0	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	62.1
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	341	560	175	40	1828	848	389	2034	20	78	834	632
Future Volume (veh/h)	341	560	175	40	1828	848	389	2034	20	78	834	632
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	341	560	175	40	1828	848	389	2034	20	78	834	632
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	278	2142	667	70	1834	571	299	1824	568	84	1506	469
Arrive On Green	0.08	0.43	0.43	0.02	0.36	0.36	0.09	0.37	0.37	0.02	0.30	0.30
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	341	560	175	40	1828	848	389	2034	20	78	834	632
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	11.5	10.1	10.2	1.6	51.1	51.4	12.5	51.6	1.2	3.3	19.8	42.6
Cycle Q Clear(g_c), s	11.5	10.1	10.2	1.6	51.1	51.4	12.5	51.6	1.2	3.3	19.8	42.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	278	2142	667	70	1834	571	299	1824	568	84	1506	469
V/C Ratio(X)	1.23	0.26	0.26	0.57	1.00	1.48	1.30	1.12	0.04	0.93	0.55	1.35
Avail Cap(c_a), veh/h	278	2142	667	121	1834	571	299	1824	568	84	1506	469
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.8	26.2	26.2	68.5	44.8	44.8	64.3	44.8	28.8	68.7	41.3	49.3
Incr Delay (d2), s/veh	130.0	0.0	0.1	2.7	20.1	227.4	157.7	60.1	0.0	74.7	0.3	170.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.4	4.7	4.4	0.8	27.1	58.2	12.4	33.8	0.5	2.4	9.1	40.5
LnGrp Delay(d),s/veh	194.8	26.2	26.3	71.2	64.9	272.2	222.0	104.8	28.8	143.4	41.5	219.5
LnGrp LOS	F	C	C	E	E	F	F	F	C	F	D	F
Approach Vol, veh/h		1076			2716			2443			1544	
Approach Delay, s/veh		79.7			129.7			122.9			119.5	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	48.6	17.0	57.5	9.0	57.6	8.4	66.1
Change Period (Y+Rc), s	5.5	6.0	5.5	* 6.1	5.5	* 6	5.5	* 6.1
Max Green Setting (Gmax), s	12.5	42.0	11.5	* 51	3.5	* 52	5.0	* 57
Max Q Clear Time (g_c+I1), s	14.5	44.6	13.5	53.4	5.3	53.6	3.6	12.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.6

Intersection Summary	
HCM 2010 Ctrl Delay	118.6
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	582	806	165	87	1809	926	786	2137	187	177	984	721
Future Volume (veh/h)	582	806	165	87	1809	926	786	2137	187	177	984	721
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1759	1759	1759	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	582	806	165	87	1809	926	786	2137	187	177	984	721
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	8	8	8	4	4	4	4	4	4
Cap, veh/h	352	2020	629	126	1617	503	484	1879	585	124	1347	419
Arrive On Green	0.10	0.40	0.40	0.04	0.34	0.34	0.14	0.38	0.38	0.04	0.27	0.27
Sat Flow, veh/h	3408	5036	1568	3250	4803	1495	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	582	806	165	87	1809	926	786	2137	187	177	984	721
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1625	1601	1495	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	15.5	17.1	10.6	4.0	50.5	50.5	21.5	56.5	12.8	5.5	26.9	40.5
Cycle Q Clear(g_c), s	15.5	17.1	10.6	4.0	50.5	50.5	21.5	56.5	12.8	5.5	26.9	40.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	352	2020	629	126	1617	503	484	1879	585	124	1347	419
V/C Ratio(X)	1.65	0.40	0.26	0.69	1.12	1.84	1.62	1.14	0.32	1.43	0.73	1.72
Avail Cap(c_a), veh/h	352	2020	629	186	1617	503	484	1879	585	124	1347	419
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.3	32.0	30.1	71.2	49.8	49.7	64.3	46.7	33.1	72.3	49.8	54.8
Incr Delay (d2), s/veh	306.1	0.0	0.1	2.5	62.4	385.4	290.4	69.0	0.1	233.6	1.8	333.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.3	7.9	4.6	1.8	31.7	74.7	29.5	37.9	5.5	6.6	12.6	56.3
LnGrp Delay(d),s/veh	373.3	32.1	30.1	73.7	112.2	435.1	354.7	115.7	33.2	305.9	51.6	388.5
LnGrp LOS	F	C	C	E	F	F	F	F	C	F	D	F
Approach Vol, veh/h		1553			2822			3110			1882	
Approach Delay, s/veh		159.7			217.0			171.2			204.6	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.0	46.0	21.0	56.0	11.0	62.0	11.3	65.7
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	21.5	40.5	15.5	50.5	5.5	56.5	8.6	57.4
Max Q Clear Time (g_c+I1), s	23.5	42.5	17.5	52.5	7.5	58.5	6.0	19.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.4

Intersection Summary	
HCM 2010 Ctrl Delay	189.8
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	588	536	132	369	1386	329	178	1527	146	116	833	833
Future Volume (veh/h)	588	536	132	369	1386	329	178	1527	146	116	833	833
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1845
Adj Flow Rate, veh/h	588	536	132	369	1386	329	178	1527	146	116	833	833
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	4	4	4	4	3
Cap, veh/h	540	555	248	1127	1159	519	131	1611	502	132	1650	519
Arrive On Green	0.16	0.16	0.16	0.33	0.33	0.33	0.04	0.32	0.32	0.04	0.33	0.33
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	4988	1553	3375	4988	1568
Grp Volume(v), veh/h	588	536	132	369	1386	329	178	1527	146	116	833	833
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1663	1553	1688	1663	1568
Q Serve(g_s), s	20.6	19.8	10.1	10.6	43.0	23.1	5.0	38.8	9.1	4.4	17.4	43.0
Cycle Q Clear(g_c), s	20.6	19.8	10.1	10.6	43.0	23.1	5.0	38.8	9.1	4.4	17.4	43.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	540	555	248	1127	1159	519	131	1611	502	132	1650	519
V/C Ratio(X)	1.09	0.97	0.53	0.33	1.20	0.63	1.36	0.95	0.29	0.88	0.50	1.61
Avail Cap(c_a), veh/h	540	555	248	1127	1159	519	131	1611	502	132	1650	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.7	54.3	50.3	32.6	43.5	36.8	62.5	42.9	32.9	62.1	34.9	43.5
Incr Delay (d2), s/veh	65.0	29.5	2.2	0.2	96.6	2.5	202.5	12.2	0.3	43.5	0.2	281.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.6	11.8	4.5	5.0	36.3	10.3	6.0	19.6	4.0	2.9	8.1	59.2
LnGrp Delay(d),s/veh	119.7	83.8	52.4	32.8	140.1	39.4	265.0	55.1	33.2	105.6	35.2	325.2
LnGrp LOS	F	F	D	C	F	D	F	E	C	F	D	F
Approach Vol, veh/h		1256			2084			1851			1782	
Approach Delay, s/veh		97.3			105.2			73.6			175.3	
Approach LOS		F			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.0	48.0		26.0	10.0	47.0		47.0
Change Period (Y+Rc), s	4.0	5.0		* 5.4	* 4.9	5.0		4.0
Max Green Setting (Gmax), s	5.0	43.0		* 21	* 5.1	42.0		43.0
Max Q Clear Time (g_c+I1), s	7.0	45.0		22.6	6.4	40.8		45.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	1.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	113.3
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	839	61	386	1867	370	83	1214	301	216	711	430
Future Volume (veh/h)	188	839	61	386	1867	370	83	1214	301	216	711	430
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1792	1845	1845	1845	1827	1845	1845
Adj Flow Rate, veh/h	188	839	61	386	1867	370	83	1214	301	216	711	430
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	6	3	3	3	4	3	3
Cap, veh/h	207	1471	458	457	1839	662	132	1158	518	235	1267	662
Arrive On Green	0.06	0.29	0.29	0.13	0.37	0.37	0.04	0.33	0.33	0.07	0.36	0.36
Sat Flow, veh/h	3408	5036	1568	3408	5036	1524	3408	3505	1568	3375	3505	1568
Grp Volume(v), veh/h	188	839	61	386	1867	370	83	1214	301	216	711	430
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1524	1704	1752	1568	1688	1752	1568
Q Serve(g_s), s	6.3	16.3	3.3	12.7	42.0	20.8	2.8	38.0	18.3	7.3	18.7	25.1
Cycle Q Clear(g_c), s	6.3	16.3	3.3	12.7	42.0	20.8	2.8	38.0	18.3	7.3	18.7	25.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	207	1471	458	457	1839	662	132	1158	518	235	1267	662
V/C Ratio(X)	0.91	0.57	0.13	0.85	1.02	0.56	0.63	1.05	0.58	0.92	0.56	0.65
Avail Cap(c_a), veh/h	207	1471	458	593	1839	662	178	1158	518	235	1267	662
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.7	34.6	30.0	48.6	36.5	24.3	54.5	38.5	31.9	53.2	29.4	26.4
Incr Delay (d2), s/veh	37.7	0.5	0.1	8.7	24.8	1.1	4.9	40.0	1.6	37.0	0.6	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	7.6	1.4	6.6	23.6	8.9	1.4	24.8	8.2	4.6	9.1	11.2
LnGrp Delay(d),s/veh	91.4	35.1	30.1	57.3	61.3	25.3	59.4	78.5	33.5	90.2	30.0	28.7
LnGrp LOS	F	D	C	E	F	C	E	F	C	F	C	C
Approach Vol, veh/h		1088			2623			1598			1357	
Approach Delay, s/veh		44.6			55.6			69.1			39.2	
Approach LOS		D			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.4	39.6	8.4	47.6	11.0	48.0	12.0	44.0
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	20.0	29.0	6.0	40.0	7.0	42.0	8.0	38.0
Max Q Clear Time (g_c+I1), s	14.7	18.3	4.8	27.1	8.3	44.0	9.3	40.0
Green Ext Time (p_c), s	0.7	10.1	0.0	10.9	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	53.7
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	609	393	58	58	770	103	2	646	40	94	1017	1130
Future Volume (veh/h)	609	393	58	58	770	103	2	646	40	94	1017	1130
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1810	1810	1810	1810	1810	1810
Adj Flow Rate, veh/h	609	393	58	58	770	103	2	646	40	94	1017	1130
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	5	5	5	5	5	5
Cap, veh/h	549	1241	555	93	773	346	5	1451	649	139	1588	710
Arrive On Green	0.17	0.36	0.36	0.03	0.23	0.23	0.00	0.42	0.42	0.04	0.46	0.46
Sat Flow, veh/h	3312	3406	1524	3312	3406	1524	3343	3438	1538	3343	3438	1538
Grp Volume(v), veh/h	609	393	58	58	770	103	2	646	40	94	1017	1130
Grp Sat Flow(s),veh/h/ln	1656	1703	1524	1656	1703	1524	1672	1719	1538	1672	1719	1538
Q Serve(g_s), s	24.4	12.2	3.7	2.6	33.3	8.3	0.1	19.7	2.3	4.1	33.3	68.0
Cycle Q Clear(g_c), s	24.4	12.2	3.7	2.6	33.3	8.3	0.1	19.7	2.3	4.1	33.3	68.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	549	1241	555	93	773	346	5	1451	649	139	1588	710
V/C Ratio(X)	1.11	0.32	0.10	0.62	1.00	0.30	0.37	0.45	0.06	0.68	0.64	1.59
Avail Cap(c_a), veh/h	549	1241	555	137	773	346	68	1455	651	198	1588	710
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.4	33.6	30.9	70.8	56.9	47.2	73.4	30.3	25.3	69.6	30.3	39.6
Incr Delay (d2), s/veh	72.1	0.3	0.2	2.5	31.5	1.0	15.3	0.2	0.0	2.2	0.9	272.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.6	5.8	1.6	1.2	19.0	3.6	0.1	9.4	1.0	1.9	16.0	82.6
LnGrp Delay(d),s/veh	133.5	33.9	31.1	73.3	88.4	48.2	88.7	30.5	25.3	71.7	31.2	312.1
LnGrp LOS	F	C	C	E	F	D	F	C	C	E	C	F
Approach Vol, veh/h		1060			931			688			2241	
Approach Delay, s/veh		91.0			83.0			30.4			174.5	
Approach LOS		F			F			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.0	39.4	4.8	74.0	8.7	59.7	10.7	68.1
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	24.4	33.4	3.0	68.0	6.1	51.7	8.7	62.3
Max Q Clear Time (g_c+I1), s	26.4	35.3	2.1	70.0	4.6	14.2	6.1	21.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	20.8	0.0	29.2

Intersection Summary	
HCM 2010 Ctrl Delay	119.0
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	319	1303	168	229	1446	142	179	1559	217	127	367	127
Future Volume (veh/h)	319	1303	168	229	1446	142	179	1559	217	127	367	127
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	319	1303	168	229	1446	142	179	1559	217	127	367	127
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	307	1451	452	276	1406	438	240	1546	692	123	1426	638
Arrive On Green	0.09	0.29	0.29	0.08	0.28	0.28	0.07	0.45	0.45	0.04	0.41	0.41
Sat Flow, veh/h	3375	4988	1553	3375	4988	1553	3375	3471	1553	3375	3471	1553
Grp Volume(v), veh/h	319	1303	168	229	1446	142	179	1559	217	127	367	127
Grp Sat Flow(s),veh/h/ln	1688	1663	1553	1688	1663	1553	1688	1736	1553	1688	1736	1553
Q Serve(g_s), s	10.0	27.6	9.5	7.4	31.0	8.0	5.7	49.0	9.9	4.0	7.7	5.8
Cycle Q Clear(g_c), s	10.0	27.6	9.5	7.4	31.0	8.0	5.7	49.0	9.9	4.0	7.7	5.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	307	1451	452	276	1406	438	240	1546	692	123	1426	638
V/C Ratio(X)	1.04	0.90	0.37	0.83	1.03	0.32	0.75	1.01	0.31	1.03	0.26	0.20
Avail Cap(c_a), veh/h	307	1451	452	276	1406	438	307	1546	692	123	1426	638
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.0	37.4	31.0	49.7	39.5	31.2	50.1	30.5	19.7	53.0	21.3	20.8
Incr Delay (d2), s/veh	62.0	7.8	0.5	18.6	31.7	0.4	7.2	24.9	0.3	90.8	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	13.7	4.1	4.2	18.3	3.4	2.9	28.8	4.3	3.4	3.7	2.5
LnGrp Delay(d),s/veh	112.0	45.3	31.5	68.4	71.2	31.6	57.4	55.4	19.9	144.3	21.4	20.9
LnGrp LOS	F	D	C	E	F	C	E	F	B	F	C	C
Approach Vol, veh/h		1790			1817			1955			621	
Approach Delay, s/veh		55.9			67.7			51.7			46.5	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	53.0	13.0	36.0	11.8	49.2	14.0	35.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	49.0	9.0	32.0	10.0	43.0	10.0	31.0
Max Q Clear Time (g_c+I1), s	6.0	51.0	9.4	29.6	7.7	9.7	12.0	33.0
Green Ext Time (p_c), s	0.0	0.0	0.0	2.3	0.1	22.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	57.1
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1	163	110	3	1	301	1904	37	0	1609	0
Future Volume (veh/h)	0	1	163	110	3	1	301	1904	37	0	1609	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1759	1845	1845	1845	1792	1792	1900	1792	1792	1900
Adj Flow Rate, veh/h	0	1	163	110	3	1	301	1904	37	0	1609	0
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	8	8	8	3	3	3	6	6	6	6	6	6
Cap, veh/h	176	185	433	139	146	124	315	2111	41	108	1692	0
Arrive On Green	0.00	0.11	0.11	0.08	0.08	0.08	0.18	0.62	0.62	0.00	0.50	0.00
Sat Flow, veh/h	1675	1759	1495	1757	1845	1568	1707	3417	66	1707	3495	0
Grp Volume(v), veh/h	0	1	163	110	3	1	301	946	995	0	1609	0
Grp Sat Flow(s),veh/h/ln	1675	1759	1495	1757	1845	1568	1707	1703	1781	1707	1703	0
Q Serve(g_s), s	0.0	0.1	10.4	7.3	0.2	0.1	20.8	56.9	57.7	0.0	53.7	0.0
Cycle Q Clear(g_c), s	0.0	0.1	10.4	7.3	0.2	0.1	20.8	56.9	57.7	0.0	53.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		0.00
Lane Grp Cap(c), veh/h	176	185	433	139	146	124	315	1052	1100	108	1692	0
V/C Ratio(X)	0.00	0.01	0.38	0.79	0.02	0.01	0.96	0.90	0.90	0.00	0.95	0.00
Avail Cap(c_a), veh/h	225	236	477	236	248	210	315	1114	1165	108	1714	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	47.8	33.8	53.9	50.6	50.6	48.1	19.6	19.7	0.0	28.6	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.5	9.5	0.1	0.0	38.8	9.6	9.8	0.0	12.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	4.4	3.9	0.1	0.0	13.2	29.3	31.2	0.0	27.9	0.0
LnGrp Delay(d),s/veh	0.0	47.8	34.3	63.4	50.7	50.6	86.9	29.2	29.5	0.0	40.6	0.0
LnGrp LOS		D	C	E	D	D	F	C	C		D	
Approach Vol, veh/h		164			114			2242			1609	
Approach Delay, s/veh		34.4			62.9			37.1			40.6	
Approach LOS		C			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.6	77.7		16.5	26.0	63.2		13.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	78.0		16.0	22.0	60.0		16.0
Max Q Clear Time (g_c+I1), s	0.0	59.7		12.4	22.8	55.7		9.3
Green Ext Time (p_c), s	0.0	13.9		0.2	0.0	3.5		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	39.1
HCM 2010 LOS	D

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	507	27	21	1789	1648	392
Future Volume (veh/h)	507	27	21	1789	1648	392
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	507	27	21	1789	1648	392
Adj No. of Lanes	2	1	2	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	659	303	67	2348	2039	912
Arrive On Green	0.19	0.19	0.02	0.67	0.58	0.58
Sat Flow, veh/h	3408	1568	3408	3597	3597	1568
Grp Volume(v), veh/h	507	27	21	1789	1648	392
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1752	1752	1568
Q Serve(g_s), s	8.3	0.8	0.4	20.2	21.7	8.2
Cycle Q Clear(g_c), s	8.3	0.8	0.4	20.2	21.7	8.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	659	303	67	2348	2039	912
V/C Ratio(X)	0.77	0.09	0.31	0.76	0.81	0.43
Avail Cap(c_a), veh/h	931	428	233	2454	2039	912
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.4	19.4	28.3	6.5	9.7	6.8
Incr Delay (d2), s/veh	2.5	0.1	2.6	1.4	2.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	0.8	0.2	9.9	11.0	3.6
LnGrp Delay(d),s/veh	24.9	19.5	30.9	7.9	12.2	7.1
LnGrp LOS	C	B	C	A	B	A
Approach Vol, veh/h	534			1810	2040	
Approach Delay, s/veh	24.6			8.2	11.2	
Approach LOS	C			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		43.2		15.3	5.2	38.1		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		41.0		16.0	4.0	33.0		
Max Q Clear Time (g_c+I1), s		22.2		10.3	2.4	23.7		
Green Ext Time (p_c), s		17.1		1.1	0.0	9.1		

Intersection Summary	
HCM 2010 Ctrl Delay	11.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	278	518	588	90	1297	6	242	1029	64	2	1412	336
Future Volume (veh/h)	278	518	588	90	1297	6	242	1029	64	2	1412	336
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	278	518	588	90	1297	6	242	1029	64	2	1412	336
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	262	1348	603	131	1213	543	236	1583	708	7	1348	603
Arrive On Green	0.08	0.38	0.38	0.04	0.35	0.35	0.07	0.45	0.45	0.00	0.38	0.38
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	278	518	588	90	1297	6	242	1029	64	2	1412	336
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	10.0	13.9	48.0	3.4	45.0	0.3	9.0	29.6	3.0	0.1	50.0	21.8
Cycle Q Clear(g_c), s	10.0	13.9	48.0	3.4	45.0	0.3	9.0	29.6	3.0	0.1	50.0	21.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	262	1348	603	131	1213	543	236	1583	708	7	1348	603
V/C Ratio(X)	1.06	0.38	0.98	0.69	1.07	0.01	1.03	0.65	0.09	0.27	1.05	0.56
Avail Cap(c_a), veh/h	262	1348	603	131	1213	543	236	1583	708	105	1348	603
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.0	28.9	39.4	61.7	42.5	27.9	60.5	27.7	20.4	64.8	40.0	31.3
Incr Delay (d2), s/veh	72.4	0.2	30.3	13.9	46.4	0.0	65.4	0.9	0.1	19.0	37.9	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	6.7	25.8	1.9	29.6	0.1	6.4	14.5	1.3	0.1	31.3	9.6
LnGrp Delay(d),s/veh	132.4	29.1	69.7	75.6	88.9	27.9	126.0	28.6	20.4	83.7	77.9	32.5
LnGrp LOS	F	C	E	E	F	C	F	C	C	F	F	C
Approach Vol, veh/h		1384			1393			1335			1750	
Approach Delay, s/veh		67.1			87.8			45.9			69.2	
Approach LOS		E			F			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.3	62.7	9.0	54.0	13.0	54.0	14.0	49.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	55.0	5.0	50.0	9.0	50.0	10.0	45.0
Max Q Clear Time (g_c+I1), s	2.1	31.6	5.4	50.0	11.0	52.0	12.0	47.0
Green Ext Time (p_c), s	0.0	19.8	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	67.8
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	605	301	402	1256	856	661	1097	239	357	329	0
Future Volume (veh/h)	0	605	301	402	1256	856	661	1097	239	357	329	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	0	605	301	402	1256	856	661	1097	239	357	329	0
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	4	1076	335	494	2043	636	753	1177	527	400	814	364
Arrive On Green	0.00	0.21	0.21	0.15	0.41	0.41	0.22	0.34	0.34	0.12	0.23	0.00
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	0	605	301	402	1256	856	661	1097	239	357	329	0
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	0.0	9.1	15.9	9.7	16.8	34.6	16.0	25.8	10.2	8.8	6.8	0.0
Cycle Q Clear(g_c), s	0.0	9.1	15.9	9.7	16.8	34.6	16.0	25.8	10.2	8.8	6.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	4	1076	335	494	2043	636	753	1177	527	400	814	364
V/C Ratio(X)	0.00	0.56	0.90	0.81	0.61	1.35	0.88	0.93	0.45	0.89	0.40	0.00
Avail Cap(c_a), veh/h	160	1124	350	640	2043	636	840	1194	534	400	814	364
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	29.9	32.6	35.3	20.0	25.3	32.1	27.3	22.2	37.0	27.7	0.0
Incr Delay (d2), s/veh	0.0	0.6	24.2	6.2	0.6	165.8	9.7	12.9	0.6	21.4	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.3	9.1	5.0	7.9	44.1	8.5	14.4	4.4	5.3	3.3	0.0
LnGrp Delay(d),s/veh	0.0	30.5	56.8	41.4	20.6	191.1	41.7	40.2	22.8	58.5	28.0	0.0
LnGrp LOS		C	E	D	C	F	D	D	C	E	C	
Approach Vol, veh/h		906			2514			1997			686	
Approach Delay, s/veh		39.2			82.0			38.6			43.9	
Approach LOS		D			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	32.6	16.4	22.2	22.8	23.8	0.0	38.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	29.0	16.0	19.0	21.0	18.0	4.0	31.0
Max Q Clear Time (g_c+I1), s	10.8	27.8	11.7	17.9	18.0	8.8	0.0	36.6
Green Ext Time (p_c), s	0.0	0.8	0.6	0.3	0.9	6.5	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	57.2
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	319	1103	492	231	2150	8	859	600	151	48	635	259
Future Volume (veh/h)	319	1103	492	231	2150	8	859	600	151	48	635	259
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	319	1103	492	231	2150	8	859	600	151	48	635	259
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	292	1993	621	282	1978	616	779	1343	601	81	626	280
Arrive On Green	0.09	0.40	0.40	0.08	0.39	0.39	0.23	0.38	0.38	0.02	0.18	0.18
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	319	1103	492	231	2150	8	859	600	151	48	635	259
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	12.0	23.7	38.7	9.3	55.0	0.4	32.0	17.8	9.2	2.0	25.0	22.8
Cycle Q Clear(g_c), s	12.0	23.7	38.7	9.3	55.0	0.4	32.0	17.8	9.2	2.0	25.0	22.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	292	1993	621	282	1978	616	779	1343	601	81	626	280
V/C Ratio(X)	1.09	0.55	0.79	0.82	1.09	0.01	1.10	0.45	0.25	0.59	1.01	0.93
Avail Cap(c_a), veh/h	292	1993	621	365	1978	616	779	1343	601	122	626	280
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.0	32.7	37.2	63.2	42.5	25.9	54.0	32.1	29.5	67.6	57.5	56.6
Incr Delay (d2), s/veh	79.5	0.3	7.0	10.8	48.3	0.0	64.1	0.2	0.2	6.6	39.7	34.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	11.1	18.0	4.8	34.3	0.2	22.0	8.7	4.0	1.0	15.5	12.5
LnGrp Delay(d),s/veh	143.5	33.1	44.2	73.9	90.8	25.9	118.1	32.4	29.7	74.3	97.2	91.1
LnGrp LOS	F	C	D	E	F	C	F	C	C	E	F	F
Approach Vol, veh/h		1914			2389			1610			942	
Approach Delay, s/veh		54.3			88.9			77.8			94.3	
Approach LOS		D			F			E			F	

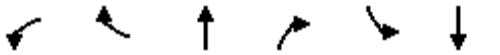
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	57.7	15.6	59.4	36.0	29.0	16.0	59.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	52.0	15.0	52.0	32.0	25.0	12.0	55.0
Max Q Clear Time (g_c+I1), s	4.0	19.8	11.3	40.7	34.0	27.0	14.0	57.0
Green Ext Time (p_c), s	0.0	12.8	0.3	11.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	77.4
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	984	950	35	791	895	0	133	2154	1044	54	691	791
Future Volume (veh/h)	984	950	35	791	895	0	133	2154	1044	54	691	791
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	984	950	35	791	895	0	133	2154	1044	54	691	791
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	909	1007	314	795	839	261	186	2056	640	85	1908	594
Arrive On Green	0.27	0.20	0.20	0.23	0.17	0.00	0.05	0.41	0.41	0.03	0.38	0.38
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	984	950	35	791	895	0	133	2154	1044	54	691	791
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	32.0	22.3	2.2	27.8	20.0	0.0	4.6	49.0	49.0	1.9	11.9	45.5
Cycle Q Clear(g_c), s	32.0	22.3	2.2	27.8	20.0	0.0	4.6	49.0	49.0	1.9	11.9	45.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	909	1007	314	795	839	261	186	2056	640	85	1908	594
V/C Ratio(X)	1.08	0.94	0.11	0.99	1.07	0.00	0.72	1.05	1.63	0.63	0.36	1.33
Avail Cap(c_a), veh/h	909	1007	314	795	839	261	199	2056	640	85	1908	594
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.0	47.3	39.3	45.9	50.0	0.0	55.8	35.5	35.5	58.0	26.8	37.3
Incr Delay (d2), s/veh	54.8	16.5	0.2	30.5	50.3	0.0	10.8	33.6	290.9	14.3	0.1	160.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.9	11.9	1.0	16.4	13.2	0.0	2.5	29.1	72.9	1.1	5.5	46.1
LnGrp Delay(d),s/veh	98.8	63.8	39.4	76.4	100.3	0.0	66.6	69.1	326.4	72.3	27.0	197.9
LnGrp LOS	F	E	D	E	F		E	F	F	E	C	F
Approach Vol, veh/h		1969			1686			3331			1536	
Approach Delay, s/veh		80.9			89.1			149.7			116.6	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	53.0	32.0	28.0	10.5	49.5	36.0	24.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	49.0	28.0	24.0	7.0	45.0	32.0	20.0
Max Q Clear Time (g_c+I1), s	3.9	51.0	29.8	24.3	6.6	47.5	34.0	22.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

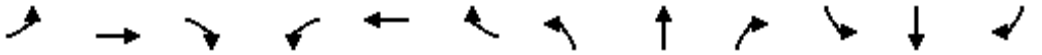
Intersection Summary	
HCM 2010 Ctrl Delay	115.8
HCM 2010 LOS	F



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	365	408	2767	435	710	734
Future Volume (veh/h)	365	408	2767	435	710	734
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	365	408	2767	435	710	734
Adj No. of Lanes	1	1	3	1	1	3
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	278	248	2224	693	527	3903
Arrive On Green	0.16	0.16	0.44	0.44	0.30	0.77
Sat Flow, veh/h	1757	1568	5202	1568	1757	5202
Grp Volume(v), veh/h	365	408	2767	435	710	734
Grp Sat Flow(s),veh/h/ln	1757	1568	1679	1568	1757	1679
Q Serve(g_s), s	19.0	19.0	53.0	25.7	36.0	4.6
Cycle Q Clear(g_c), s	19.0	19.0	53.0	25.7	36.0	4.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	278	248	2224	693	527	3903
V/C Ratio(X)	1.31	1.64	1.24	0.63	1.35	0.19
Avail Cap(c_a), veh/h	278	248	2224	693	527	3903
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.5	50.5	33.5	25.9	42.0	3.6
Incr Delay (d2), s/veh	163.8	307.0	113.8	1.8	168.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.9	29.4	47.9	11.5	42.1	2.1
LnGrp Delay(d),s/veh	214.3	357.5	147.3	27.7	210.5	3.6
LnGrp LOS	F	F	F	C	F	A
Approach Vol, veh/h	773		3202			1444
Approach Delay, s/veh	289.9		131.1			105.3
Approach LOS	F		F			F

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	40.0	57.0				97.0		23.0
Change Period (Y+Rc), s	4.0	4.0				4.0		4.0
Max Green Setting (Gmax), s	36.0	53.0				93.0		19.0
Max Q Clear Time (g_c+I1), s	38.0	55.0				6.6		21.0
Green Ext Time (p_c), s	0.0	0.0				78.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	146.9
HCM 2010 LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	347	996	631	20	1649	37	1225	741	22	50	782	585
Future Volume (veh/h)	347	996	631	20	1649	37	1225	741	22	50	782	585
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	347	996	631	20	1649	37	1225	741	22	50	782	585
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	288	1722	536	40	1356	422	944	1746	781	85	863	386
Arrive On Green	0.08	0.34	0.34	0.01	0.27	0.27	0.28	0.50	0.50	0.03	0.25	0.25
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	347	996	631	20	1649	37	1225	741	22	50	782	585
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	11.0	21.1	44.5	0.8	35.0	2.3	36.0	17.5	0.9	1.9	28.1	32.0
Cycle Q Clear(g_c), s	11.0	21.1	44.5	0.8	35.0	2.3	36.0	17.5	0.9	1.9	28.1	32.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	288	1722	536	40	1356	422	944	1746	781	85	863	386
V/C Ratio(X)	1.20	0.58	1.18	0.49	1.22	0.09	1.30	0.42	0.03	0.59	0.91	1.52
Avail Cap(c_a), veh/h	288	1722	536	79	1356	422	944	1746	781	131	863	386
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.5	35.1	42.8	63.8	47.5	35.6	47.0	20.8	16.6	62.7	47.5	49.0
Incr Delay (d2), s/veh	119.7	0.5	97.7	9.0	104.3	0.1	141.9	0.2	0.0	6.2	13.1	245.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	9.9	33.7	0.4	29.3	1.0	35.5	8.5	0.4	1.0	15.2	40.1
LnGrp Delay(d),s/veh	179.2	35.6	140.5	72.9	151.8	35.6	188.9	20.9	16.6	68.9	60.7	294.0
LnGrp LOS	F	D	F	E	F	D	F	C	B	E	E	F
Approach Vol, veh/h		1974			1706			1988			1417	
Approach Delay, s/veh		94.4			148.3			124.4			157.3	
Approach LOS		F			F			F			F	

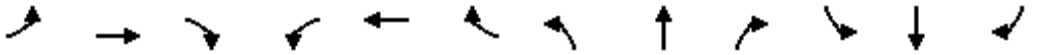
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	68.7	5.5	48.5	40.0	36.0	15.0	39.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	63.0	3.0	43.0	36.0	32.0	11.0	35.0
Max Q Clear Time (g_c+I1), s	3.9	19.5	2.8	46.5	38.0	34.0	13.0	37.0
Green Ext Time (p_c), s	0.0	20.7	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	128.4
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	1582	114	356	2405	9	9	1722	114	15	1410	85
Future Volume (veh/h)	102	1582	114	356	2405	9	9	1722	114	15	1410	85
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	102	1582	114	356	2405	9	9	1722	114	15	1410	85
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	92	1669	520	369	2078	647	28	1541	689	42	1555	696
Arrive On Green	0.03	0.33	0.33	0.11	0.41	0.41	0.01	0.44	0.44	0.01	0.44	0.44
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	102	1582	114	356	2405	9	9	1722	114	15	1410	85
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	4.0	45.3	7.7	15.4	61.0	0.5	0.4	65.0	6.5	0.6	55.4	4.7
Cycle Q Clear(g_c), s	4.0	45.3	7.7	15.4	61.0	0.5	0.4	65.0	6.5	0.6	55.4	4.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	92	1669	520	369	2078	647	28	1541	689	42	1555	696
V/C Ratio(X)	1.11	0.95	0.22	0.97	1.16	0.01	0.32	1.12	0.17	0.35	0.91	0.12
Avail Cap(c_a), veh/h	92	1669	520	369	2078	647	92	1541	689	92	1555	696
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.9	48.2	35.6	65.6	43.4	25.7	72.9	41.4	25.0	72.4	38.3	24.2
Incr Delay (d2), s/veh	125.3	11.9	0.2	37.6	76.7	0.0	6.2	62.3	0.1	4.9	8.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	22.8	3.4	9.1	42.9	0.2	0.2	44.6	2.8	0.3	28.6	2.1
LnGrp Delay(d),s/veh	197.2	60.1	35.8	103.2	120.1	25.7	79.1	103.7	25.1	77.3	46.3	24.3
LnGrp LOS	F	E	D	F	F	C	E	F	C	E	D	C
Approach Vol, veh/h		1798			2770			1845			1510	
Approach Delay, s/veh		66.3			117.7			98.7			45.4	
Approach LOS		E			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.8	69.0	20.0	53.0	5.2	69.6	8.0	65.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	65.0	16.0	49.0	4.0	65.0	4.0	61.0
Max Q Clear Time (g_c+I1), s	2.6	67.0	17.4	47.3	2.4	57.4	6.0	63.0
Green Ext Time (p_c), s	0.0	0.0	0.0	1.7	0.0	7.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	87.8
HCM 2010 LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	238	672	0	1035	708	68	0	699	1197	118	797	238
Future Volume (veh/h)	238	672	0	1035	708	68	0	699	1197	118	797	238
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	238	672	0	1035	708	68	0	699	1197	118	797	238
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	294	620	193	944	1580	492	3	1537	687	131	1779	796
Arrive On Green	0.09	0.12	0.00	0.28	0.31	0.31	0.00	0.44	0.44	0.04	0.51	0.51
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	238	672	0	1035	708	68	0	699	1197	118	797	238
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	8.9	16.0	0.0	36.0	14.6	4.0	0.0	18.2	57.0	4.5	18.8	11.5
Cycle Q Clear(g_c), s	8.9	16.0	0.0	36.0	14.6	4.0	0.0	18.2	57.0	4.5	18.8	11.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	294	620	193	944	1580	492	3	1537	687	131	1779	796
V/C Ratio(X)	0.81	1.08	0.00	1.10	0.45	0.14	0.00	0.45	1.74	0.90	0.45	0.30
Avail Cap(c_a), veh/h	393	620	193	944	1580	492	105	1537	687	131	1779	796
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.3	57.0	0.0	47.0	35.6	32.0	0.0	25.6	36.5	62.3	20.4	18.6
Incr Delay (d2), s/veh	9.0	61.1	0.0	59.3	0.2	0.1	0.0	0.2	339.5	49.6	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	10.9	0.0	24.7	6.8	1.8	0.0	8.8	89.5	3.0	9.1	5.0
LnGrp Delay(d),s/veh	67.3	118.1	0.0	106.3	35.8	32.1	0.0	25.8	376.0	111.9	20.6	18.8
LnGrp LOS	E	F		F	D	C		C	F	F	C	B
Approach Vol, veh/h		910			1811			1896			1153	
Approach Delay, s/veh		104.8			76.0			246.9			29.5	
Approach LOS		F			E			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	61.0	40.0	20.0	0.0	70.0	15.2	44.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	57.0	36.0	16.0	4.0	58.0	15.0	37.0
Max Q Clear Time (g_c+I1), s	6.5	59.0	38.0	18.0	0.0	20.8	10.9	16.6
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	27.6	0.3	10.2

Intersection Summary	
HCM 2010 Ctrl Delay	127.4
HCM 2010 LOS	F

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Approach	EB	NB	SB
Entry Lanes	1	2	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	132	917	1033
Demand Flow Rate, veh/h	136	945	1064
Vehicles Circulating, veh/h	986	79	25
Vehicles Exiting, veh/h	103	1043	999
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	9.8	8.5	8.8
Approach LOS	A	A	A

Lane	Left	Left	Right	Left	Right
Designated Moves	LR	LT	TR	LT	TR
Assumed Moves	LR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Critical Headway, s	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	136	444	501	500	564
Cap Entry Lane, veh/h	567	1065	1069	1109	1110
Entry HV Adj Factor	0.971	0.971	0.970	0.971	0.971
Flow Entry, veh/h	132	431	486	486	548
Cap Entry, veh/h	550	1034	1037	1077	1078
V/C Ratio	0.240	0.417	0.469	0.451	0.508
Control Delay, s/veh	9.8	8.0	8.8	8.3	9.3
LOS	A	A	A	A	A
95th %tile Queue, veh	1	2	3	2	3

Intersection	
Intersection Delay, s/veh	15.5
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	0	2	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	0	659	652	152
Demand Flow Rate, veh/h	0	679	671	156
Vehicles Circulating, veh/h	62	671	0	612
Vehicles Exiting, veh/h	706	0	62	738
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	21.5	10.9	9.4
Approach LOS	-	C	B	A

Lane	Left	Right	Left	Left
Designated Moves	LT	R	LT	TR
Assumed Moves	LT	R	LT	TR
RT Channelized				
Lane Util	0.630	0.370	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	428	251	671	156
Cap Entry Lane, veh/h	578	578	1130	613
Entry HV Adj Factor	0.970	0.972	0.971	0.973
Flow Entry, veh/h	415	244	652	152
Cap Entry, veh/h	560	562	1098	596
V/C Ratio	0.741	0.435	0.594	0.255
Control Delay, s/veh	26.3	13.4	10.9	9.4
LOS	D	B	B	A
95th %tile Queue, veh	6	2	4	1

Intersection	
Intersection Delay, s/veh	181.2
Intersection LOS	F

Approach	EB	WB	NB	SB
Entry Lanes	0	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	0	314	2552	2097
Demand Flow Rate, veh/h	0	323	2629	2159
Vehicles Circulating, veh/h	2110	2629	0	598
Vehicles Exiting, veh/h	647	0	2110	2354
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	427.5	103.1	239.4
Approach LOS	-	F	F	F

Lane	Left	Left	Right	Left	Right
Designated Moves	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Critical Headway, s	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	323	1236	1393	1015	1144
Cap Entry Lane, veh/h	179	1130	1130	722	743
Entry HV Adj Factor	0.971	0.971	0.971	0.971	0.971
Flow Entry, veh/h	314	1200	1353	985	1111
Cap Entry, veh/h	174	1097	1097	701	722
V/C Ratio	1.800	1.094	1.233	1.407	1.539
Control Delay, s/veh	427.5	74.8	128.2	209.5	265.9
LOS	F	F	F	F	F
95th %tile Queue, veh	23	29	44	44	56

Intersection	
Intersection Delay, s/veh	171.2
Intersection LOS	F

Approach	EB	WB	NB	SB
Entry Lanes	1	0	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	535	0	2405	2049
Demand Flow Rate, veh/h	550	0	2477	2110
Vehicles Circulating, veh/h	2110	2628	331	0
Vehicles Exiting, veh/h	0	180	2329	2628
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	554.4	0.0	201.7	35.4
Approach LOS	F	-	F	E

Lane	Left	Left	Right	Left	Right
Designated Moves	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Critical Headway, s	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	550	1164	1313	992	1118
Cap Entry Lane, veh/h	258	882	896	1130	1130
Entry HV Adj Factor	0.972	0.971	0.971	0.971	0.971
Flow Entry, veh/h	535	1130	1274	963	1086
Cap Entry, veh/h	251	856	870	1097	1097
V/C Ratio	2.132	1.320	1.465	0.878	0.989
Control Delay, s/veh	554.4	169.0	230.7	25.5	44.1
LOS	F	F	F	D	E
95th %tile Queue, veh	40	44	59	12	19

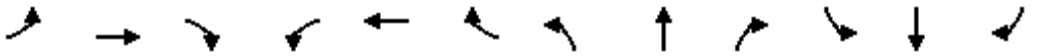
Cumulative Plus All Projects

County Standard Mitigation

PM

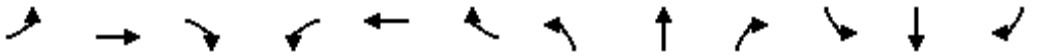
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	271	571	338	152	934	981	475	1225	49	1391	1798	150
Future Volume (vph)	271	571	338	152	934	981	475	1225	49	1391	1798	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		0.97	0.95	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	3278		3367	3471	2733	3367	4988	1553	3367	4988	1553
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	3278		3367	3471	2733	3367	4988	1553	3367	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	271	571	338	152	934	981	475	1225	49	1391	1798	150
RTOR Reduction (vph)	0	67	0	0	0	755	0	0	37	0	0	63
Lane Group Flow (vph)	271	842	0	152	934	226	475	1225	12	1391	1798	87
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	8.0	32.0		6.0	30.0	30.0	20.6	31.0	31.0	45.0	55.4	55.4
Effective Green, g (s)	8.0	32.0		6.0	30.0	30.0	20.6	31.0	31.0	45.0	55.4	55.4
Actuated g/C Ratio	0.06	0.25		0.05	0.23	0.23	0.16	0.24	0.24	0.35	0.43	0.43
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	207	806		155	801	630	533	1189	370	1165	2125	661
v/s Ratio Prot	c0.08	0.26		0.05	c0.27		0.14	c0.25		c0.41	0.36	
v/s Ratio Perm						0.08			0.01			0.06
v/c Ratio	1.31	1.04		0.98	1.17	0.36	0.89	1.03	0.03	1.19	0.85	0.13
Uniform Delay, d1	61.0	49.0		61.9	50.0	41.9	53.6	49.5	38.0	42.5	33.5	22.7
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	169.4	43.9		66.2	88.1	0.4	16.9	34.2	0.0	95.9	3.3	0.1
Delay (s)	230.4	92.9		128.2	138.1	42.3	70.5	83.7	38.0	138.4	36.8	22.8
Level of Service	F	F		F	F	D	E	F	D	F	D	C
Approach Delay (s)		124.5			91.9			78.8			78.5	
Approach LOS		F			F			E			E	

Intersection Summary			
HCM 2000 Control Delay	88.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	110.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	656	259	244	735	531	241	904	190	786	1656	91
Future Volume (vph)	74	656	259	244	735	531	241	904	190	786	1656	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.91	0.91	1.00	0.91		1.00	0.91	1.00
Frt	1.00	0.96		1.00	0.98	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	3356		1736	3244	1413	1736	4858		1736	4988	1553
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	3356		1736	3244	1413	1736	4858		1736	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	74	656	259	244	735	531	241	904	190	786	1656	91
RTOR Reduction (vph)	0	28	0	0	10	291	0	21	0	0	0	38
Lane Group Flow (vph)	74	887	0	244	868	97	241	1073	0	786	1656	53
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	11.6	31.0		18.0	37.4	37.4	23.5	31.0		54.0	61.5	61.5
Effective Green, g (s)	11.6	31.0		18.0	37.4	37.4	23.5	31.0		54.0	61.5	61.5
Actuated g/C Ratio	0.08	0.21		0.12	0.25	0.25	0.16	0.21		0.36	0.41	0.41
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	135	693		208	808	352	271	1003		624	2045	636
v/s Ratio Prot	0.04	c0.26		c0.14	0.27		0.14	c0.22		c0.45	0.33	
v/s Ratio Perm						0.07						0.03
v/c Ratio	0.55	1.28		1.17	1.07	0.28	0.89	1.07		1.26	0.81	0.08
Uniform Delay, d1	66.7	59.5		66.0	56.3	45.4	62.0	59.5		48.0	39.1	27.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.5	137.0		116.9	53.6	0.4	27.7	48.9		129.5	2.5	0.1
Delay (s)	71.2	196.5		182.9	109.9	45.8	89.7	108.4		177.5	41.6	27.1
Level of Service	E	F		F	F	D	F	F		F	D	C
Approach Delay (s)		187.2			105.3			105.0			83.2	
Approach LOS		F			F			F			F	

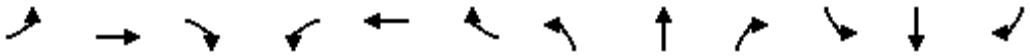
Intersection Summary			
HCM 2000 Control Delay	109.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	118.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	853	161	196	828	364	131	430	116	356	520	22
Future Volume (vph)	65	853	161	196	828	364	131	430	116	356	520	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	4.6		5.0	4.8	4.8	5.5	4.4	4.4	5.5	4.3	4.3
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	3421		1752	3505	1568	1752	1845	1568	1752	1845	1568
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1752	3421		1752	3505	1568	1752	1845	1568	1752	1845	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	65	853	161	196	828	364	131	430	116	356	520	22
RTOR Reduction (vph)	0	12	0	0	0	233	0	0	89	0	0	14
Lane Group Flow (vph)	65	1002	0	196	828	131	131	430	27	356	520	8
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						2			8			4
Actuated Green, G (s)	6.5	39.8		14.0	46.9	46.9	11.9	31.0	31.0	26.5	45.7	45.7
Effective Green, g (s)	6.5	39.8		14.0	46.9	46.9	11.9	31.0	31.0	26.5	45.7	45.7
Actuated g/C Ratio	0.05	0.30		0.11	0.36	0.36	0.09	0.24	0.24	0.20	0.35	0.35
Clearance Time (s)	5.2	4.6		5.0	4.8	4.8	5.5	4.4	4.4	5.5	4.3	4.3
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lane Grp Cap (vph)	87	1040		187	1256	562	159	437	371	354	644	547
v/s Ratio Prot	0.04	c0.29		c0.11	0.24		0.07	c0.23		c0.20	0.28	
v/s Ratio Perm						0.08			0.02			0.00
v/c Ratio	0.75	0.96		1.05	0.66	0.23	0.82	0.98	0.07	1.01	0.81	0.01
Uniform Delay, d1	61.3	44.8		58.4	35.2	29.4	58.4	49.7	38.8	52.2	38.6	27.8
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	25.9	19.4		79.1	1.0	0.1	26.8	38.5	0.0	49.3	6.9	0.0
Delay (s)	87.2	64.2		137.5	36.2	29.4	85.2	88.1	38.8	101.4	45.5	27.8
Level of Service	F	E		F	D	C	F	F	D	F	D	C
Approach Delay (s)		65.6			48.7			79.1			67.2	
Approach LOS		E			D			E			E	

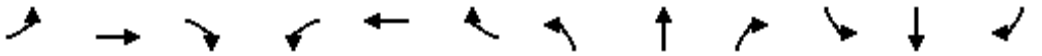
Intersection Summary			
HCM 2000 Control Delay	62.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	130.8	Sum of lost time (s)	19.9
Intersection Capacity Utilization	98.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



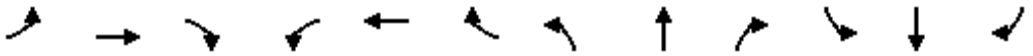
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	196	553	8	2	501	1	9	188	0	1	280	323
Future Volume (vph)	196	553	8	2	501	1	9	188	0	1	280	323
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		1.00			1.00			1.00			0.93	
Flt Protected		0.99			1.00			1.00			1.00	
Satd. Flow (prot)		1734			1726			1755			1632	
Flt Permitted		0.99			1.00			0.94			1.00	
Satd. Flow (perm)		1734			1726			1650			1632	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	196	553	8	2	501	1	9	188	0	1	280	323
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	30	0
Lane Group Flow (vph)	0	757	0	0	504	0	0	197	0	0	574	0
Heavy Vehicles (%)	8%	8%	8%	10%	10%	10%	8%	8%	8%	8%	8%	8%
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)		52.0			35.0			41.0			41.0	
Effective Green, g (s)		52.0			35.0			41.0			41.0	
Actuated g/C Ratio		0.37			0.25			0.29			0.29	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		644			431			483			477	
v/s Ratio Prot		c0.44			c0.29							
v/s Ratio Perm								0.12			0.35	
v/c Ratio		1.18			1.17			0.41			1.20	
Uniform Delay, d1		44.0			52.5			39.8			49.5	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		94.6			98.5			0.6			110.3	
Delay (s)		138.6			151.0			40.3			159.8	
Level of Service		F			F			D			F	
Approach Delay (s)		138.6			151.0			40.3			159.8	
Approach LOS		F			F			D			F	

Intersection Summary			
HCM 2000 Control Delay	138.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	111.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	549	1024	9	2	750	6	7	15	2	5	21	1108
Future Volume (vph)	549	1024	9	2	750	6	7	15	2	5	21	1108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.9	6.9	5.5	6.0			6.1			6.2	5.5
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95			1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00			0.99			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (prot)	3303	3406	1524	1719	3434			1798			1810	1553
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (perm)	3303	3406	1524	1719	3434			1798			1810	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	549	1024	9	2	750	6	7	15	2	5	21	1108
RTOR Reduction (vph)	0	0	2	0	0	0	0	2	0	0	0	33
Lane Group Flow (vph)	549	1024	7	2	756	0	0	22	0	0	26	1075
Heavy Vehicles (%)	6%	6%	6%	5%	5%	5%	3%	3%	3%	4%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	pm+ov
Protected Phases	1	6		5	2		8	8		4	4	1
Permitted Phases			6									4
Actuated Green, G (s)	70.0	105.0	105.0	0.6	36.5			1.7			3.6	73.6
Effective Green, g (s)	70.0	105.0	105.0	0.6	36.5			1.7			3.6	73.6
Actuated g/C Ratio	0.52	0.77	0.77	0.00	0.27			0.01			0.03	0.54
Clearance Time (s)	5.5	6.9	6.9	5.5	6.0			6.1			6.2	5.5
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0			1.0			1.0	1.0
Lane Grp Cap (vph)	1705	2637	1180	7	924			22			48	842
v/s Ratio Prot	0.17	0.30		0.00	c0.22			c0.01			0.01	c0.66
v/s Ratio Perm			0.00									0.03
v/c Ratio	0.32	0.39	0.01	0.29	0.82			1.00			0.54	1.28
Uniform Delay, d1	19.0	4.9	3.5	67.3	46.4			67.0			65.2	31.0
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.0	0.0	0.0	8.0	5.4			192.2			6.5	133.5
Delay (s)	19.1	5.0	3.5	75.3	51.9			259.2			71.7	164.5
Level of Service	B	A	A	E	D			F			E	F
Approach Delay (s)		9.9			51.9			259.2			162.4	
Approach LOS		A			D			F			F	

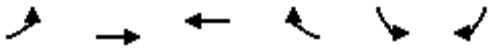
Intersection Summary			
HCM 2000 Control Delay	70.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	135.6	Sum of lost time (s)	24.7
Intersection Capacity Utilization	107.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	13	43	148	6	202	38	1451	183	714	1482	1
Future Volume (vph)	12	13	43	148	6	202	38	1451	183	714	1482	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.88		1.00	1.00	0.85	1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1632		1752	1845	1568	1752	3446		1752	3504	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1752	1632		1752	1845	1568	1752	3446		1752	3504	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	12	13	43	148	6	202	38	1451	183	714	1482	1
RTOR Reduction (vph)	0	41	0	0	0	180	0	6	0	0	0	0
Lane Group Flow (vph)	12	15	0	148	6	22	38	1628	0	714	1483	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	1.9	7.7		10.0	15.8	15.8	6.1	58.9		50.1	102.9	
Effective Green, g (s)	1.9	7.7		10.0	15.8	15.8	6.1	58.9		50.1	102.9	
Actuated g/C Ratio	0.01	0.05		0.07	0.11	0.11	0.04	0.41		0.35	0.72	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	23	88		122	204	173	74	1422		615	2526	
v/s Ratio Prot	0.01	c0.01		c0.08	0.00		0.02	c0.47		c0.41	0.42	
v/s Ratio Perm						0.01						
v/c Ratio	0.52	0.17		1.21	0.03	0.13	0.51	1.14		1.16	0.59	
Uniform Delay, d1	69.9	64.5		66.3	56.6	57.2	66.8	41.9		46.3	9.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	19.7	0.9		149.7	0.1	0.3	5.9	73.9		89.5	0.4	
Delay (s)	89.7	65.4		216.1	56.7	57.6	72.7	115.8		135.8	10.0	
Level of Service	F	E		F	E	E	E	F		F	A	
Approach Delay (s)		69.7			123.4			114.8			50.9	
Approach LOS		E			F			F			D	

Intersection Summary			
HCM 2000 Control Delay	82.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	142.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	110.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	1215	804	1686	1898	0
Future Volume (vph)	2	1215	804	1686	1898	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	
Frt	1.00	1.00	1.00	0.85	1.00	
Flt Protected	0.95	1.00	1.00	1.00	0.95	
Satd. Flow (prot)	3400	3505	3505	1568	3400	
Flt Permitted	0.95	1.00	1.00	1.00	0.95	
Satd. Flow (perm)	3400	3505	3505	1568	3400	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2	1215	804	1686	1898	0
RTOR Reduction (vph)	0	0	0	717	0	0
Lane Group Flow (vph)	2	1215	804	969	1898	0
Turn Type	Prot	NA	NA	Perm	Prot	
Protected Phases	4	5	5		6	
Permitted Phases				5		
Actuated Green, G (s)	1.1	46.0	46.0	46.0	76.1	
Effective Green, g (s)	1.1	46.0	46.0	46.0	76.1	
Actuated g/C Ratio	0.01	0.34	0.34	0.34	0.56	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	27	1192	1192	533	1913	
v/s Ratio Prot	c0.00	0.35	0.23		c0.56	
v/s Ratio Perm				c0.62		
v/c Ratio	0.07	1.02	0.67	1.82	0.99	
Uniform Delay, d1	66.5	44.6	38.2	44.6	29.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.2	31.0	1.5	375.9	18.6	
Delay (s)	67.7	75.6	39.7	420.5	47.9	
Level of Service	E	E	D	F	D	
Approach Delay (s)		75.6	297.5		47.9	
Approach LOS		E	F		D	

Intersection Summary			
HCM 2000 Control Delay	164.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.29		
Actuated Cycle Length (s)	135.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	114.4%	ICU Level of Service	H
Analysis Period (min)	15		

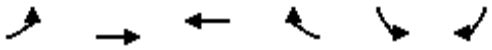
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	390	690	1158	312	475	2678
Future Volume (vph)	390	690	1158	312	475	2678
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.91	1.00	1.00	0.91
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1752	1568	5036	1568	1752	5036
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1752	1568	5036	1568	1752	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	390	690	1158	312	475	2678
RTOR Reduction (vph)	0	393	0	227	0	0
Lane Group Flow (vph)	390	297	1158	85	475	2678
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		3		2		
Actuated Green, G (s)	15.8	15.8	17.6	17.6	19.4	41.0
Effective Green, g (s)	15.8	15.8	17.6	17.6	19.4	41.0
Actuated g/C Ratio	0.24	0.24	0.27	0.27	0.30	0.63
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	427	382	1367	425	524	3186
v/s Ratio Prot	c0.22		0.23		c0.27	c0.53
v/s Ratio Perm		0.19		0.05		
v/c Ratio	0.91	0.78	0.85	0.20	0.91	0.84
Uniform Delay, d1	23.8	22.9	22.3	18.2	21.8	9.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	23.7	9.6	5.1	0.2	19.2	2.2
Delay (s)	47.5	32.4	27.4	18.4	41.0	11.5
Level of Service	D	C	C	B	D	B
Approach Delay (s)	37.9		25.5			15.9
Approach LOS	D		C			B

Intersection Summary			
HCM 2000 Control Delay	22.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	64.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	818	2167	1641	62	134	761
Future Volume (vph)	818	2167	1641	62	134	761
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	0.91	0.91		1.00	0.88
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3400	5036	5008		1752	2760
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3400	5036	5008		1752	2760
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	818	2167	1641	62	134	761
RTOR Reduction (vph)	0	0	5	0	0	630
Lane Group Flow (vph)	818	2167	1698	0	134	131
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	18.1	47.2	25.1		11.5	11.5
Effective Green, g (s)	18.1	47.2	25.1		11.5	11.5
Actuated g/C Ratio	0.27	0.71	0.38		0.17	0.17
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	922	3563	1884		302	475
v/s Ratio Prot	c0.24	0.43	c0.34		c0.08	
v/s Ratio Perm						0.05
v/c Ratio	0.89	0.61	0.90		0.44	0.28
Uniform Delay, d1	23.3	5.0	19.6		24.7	24.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	10.3	0.3	6.4		1.0	0.3
Delay (s)	33.6	5.3	26.0		25.8	24.3
Level of Service	C	A	C		C	C
Approach Delay (s)		13.1	26.0		24.5	
Approach LOS		B	C		C	

Intersection Summary			
HCM 2000 Control Delay	18.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	66.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	265	500	145	479	516	787	128	0	288	670	0	403
Future Volume (veh/h)	265	500	145	479	516	787	128	0	288	670	0	403
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	265	500	145	479	516	787	128	0	288	670	0	403
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	319	1041	466	446	1171	835	182	1007	314	669	1727	538
Arrive On Green	0.09	0.30	0.30	0.13	0.33	0.33	0.05	0.00	0.20	0.20	0.00	0.35
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	265	500	145	479	516	787	128	0	288	670	0	403
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	9.1	13.9	8.5	15.5	13.6	39.6	4.4	0.0	21.5	23.5	0.0	27.2
Cycle Q Clear(g_c), s	9.1	13.9	8.5	15.5	13.6	39.6	4.4	0.0	21.5	23.5	0.0	27.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	319	1041	466	446	1171	835	182	1007	314	669	1727	538
V/C Ratio(X)	0.83	0.48	0.31	1.07	0.44	0.94	0.70	0.00	0.92	1.00	0.00	0.75
Avail Cap(c_a), veh/h	379	1094	489	446	1171	835	276	1422	443	669	1994	621
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.8	34.2	32.3	51.5	30.8	26.0	55.2	0.0	46.3	47.5	0.0	34.2
Incr Delay (d2), s/veh	10.7	0.1	0.1	64.2	0.1	18.6	1.9	0.0	16.0	35.1	0.0	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	6.8	3.7	11.2	6.6	28.2	2.1	0.0	10.6	14.1	0.0	12.1
LnGrp Delay(d),s/veh	63.5	34.3	32.4	115.7	30.9	44.6	57.0	0.0	62.4	82.7	0.0	37.6
LnGrp LOS	E	C	C	F	C	D	E		E	F		D
Approach Vol, veh/h		910			1782			416			1073	
Approach Delay, s/veh		42.5			59.8			60.7			65.8	
Approach LOS		D			E			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	45.9	16.6	44.2	29.0	28.7	21.0	39.8
Change Period (Y+Rc), s	5.5	4.8	5.5	* 4.6	5.5	* 4.8	5.5	4.6
Max Green Setting (Gmax), s	9.7	47.4	13.2	* 40	23.5	* 34	15.5	37.0
Max Q Clear Time (g_c+I1), s	6.4	29.2	11.1	41.6	25.5	23.5	17.5	15.9
Green Ext Time (p_c), s	0.1	0.4	0.1	0.0	0.0	0.4	0.0	3.4

Intersection Summary	
HCM 2010 Ctrl Delay	57.6
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	580	23	194	198	704	9	2256	129	749	2558	1
Future Volume (veh/h)	0	580	23	194	198	704	9	2256	129	749	2558	1
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	0	580	23	194	198	704	9	2256	129	749	2558	1
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	2	627	280	173	941	734	21	2097	653	673	3061	953
Arrive On Green	0.00	0.18	0.18	0.05	0.27	0.27	0.01	0.42	0.42	0.20	0.61	0.61
Sat Flow, veh/h	3375	3471	1553	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	0	580	23	194	198	704	9	2256	129	749	2558	1
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	0.0	24.3	1.8	7.5	6.5	39.7	0.4	62.2	7.8	29.5	60.2	0.0
Cycle Q Clear(g_c), s	0.0	24.3	1.8	7.5	6.5	39.7	0.4	62.2	7.8	29.5	60.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	2	627	280	173	941	734	21	2097	653	673	3061	953
V/C Ratio(X)	0.00	0.93	0.08	1.12	0.21	0.96	0.43	1.08	0.20	1.11	0.84	0.00
Avail Cap(c_a), veh/h	68	681	304	173	941	734	68	2097	653	673	3061	953
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	59.6	50.4	70.2	41.9	38.0	73.2	42.9	27.1	59.2	22.7	11.0
Incr Delay (d2), s/veh	0.0	17.2	0.0	105.2	0.0	23.5	4.9	43.5	0.1	69.8	2.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	13.2	0.8	6.0	3.1	32.5	0.2	36.8	3.3	20.2	28.1	0.0
LnGrp Delay(d),s/veh	0.0	76.8	50.5	175.4	42.0	61.5	78.2	86.4	27.1	129.0	24.7	11.0
LnGrp LOS		E	D	F	D	E	E	F	C	F	C	B
Approach Vol, veh/h		603			1096			2394			3308	
Approach Delay, s/veh		75.8			78.1			83.2			48.3	
Approach LOS		E			E			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	96.1	0.0	45.4	35.0	67.5	13.0	32.4
Change Period (Y+Rc), s	5.5	5.3	5.5	* 5.7	5.5	* 5.3	5.5	* 5.7
Max Green Setting (Gmax), s	3.0	88.6	3.0	* 33	29.5	* 62	7.5	* 29
Max Q Clear Time (g_c+I1), s	2.4	62.2	0.0	41.7	31.5	64.2	9.5	26.3
Green Ext Time (p_c), s	0.0	22.6	0.0	0.0	0.0	0.0	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	66.2
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	153	1828	773	61	1518	875	613	1675	106	935	1669	126
Future Volume (veh/h)	153	1828	773	61	1518	875	613	1675	106	935	1669	126
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	153	1828	773	61	1518	0	613	1675	106	935	1669	126
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	4	4	4	4	4	4
Cap, veh/h	154	1673	521	66	1560	486	591	1434	446	741	1633	508
Arrive On Green	0.05	0.34	0.34	0.02	0.32	0.00	0.17	0.29	0.29	0.22	0.33	0.33
Sat Flow, veh/h	3312	4893	1524	3312	4893	1524	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	153	1828	773	61	1518	0	613	1675	106	935	1669	126
Grp Sat Flow(s),veh/h/ln	1656	1631	1524	1656	1631	1524	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	6.9	51.4	51.4	2.8	46.1	0.0	26.3	43.2	7.8	33.0	49.2	8.9
Cycle Q Clear(g_c), s	6.9	51.4	51.4	2.8	46.1	0.0	26.3	43.2	7.8	33.0	49.2	8.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	154	1673	521	66	1560	486	591	1434	446	741	1633	508
V/C Ratio(X)	0.99	1.09	1.48	0.92	0.97	0.00	1.04	1.17	0.24	1.26	1.02	0.25
Avail Cap(c_a), veh/h	154	1673	521	66	1560	486	591	1434	446	741	1633	508
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.6	49.4	49.4	73.5	50.6	0.0	62.0	53.6	41.0	58.7	50.5	37.0
Incr Delay (d2), s/veh	69.9	51.8	227.7	82.6	16.7	0.0	47.2	83.7	0.1	128.5	28.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	31.1	54.5	2.0	23.2	0.0	16.1	30.9	3.4	28.6	26.8	3.8
LnGrp Delay(d),s/veh	141.5	101.2	277.2	156.2	67.3	0.0	109.2	137.2	41.1	187.1	78.6	37.1
LnGrp LOS	F	F	F	F	E		F	F	D	F	F	D
Approach Vol, veh/h		2754			1579			2394			2730	
Approach Delay, s/veh		152.8			70.7			125.8			113.9	
Approach LOS		F			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	53.3	31.0	54.0	8.5	56.8	37.0	48.0
Change Period (Y+Rc), s	5.0	* 5.4	* 4.7	4.8	5.5	* 5.4	4.0	4.8
Max Green Setting (Gmax), s	7.0	* 48	* 26	49.2	3.0	* 51	33.0	43.2
Max Q Clear Time (g_c+I1), s	8.9	48.1	28.3	51.2	4.8	53.4	35.0	45.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	121.0
HCM 2010 LOS	F

Notes

HCM 2010 Signalized Intersection Summary
17: S. Watt Avenue & Fruitridge Road

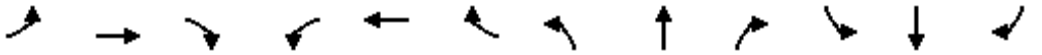
12/07/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	444	839	252	373	704	219	108	1704	446	182	2034	203
Future Volume (veh/h)	444	839	252	373	704	219	108	1704	446	182	2034	203
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1845	1845	1827	1827
Adj Flow Rate, veh/h	444	839	252	373	704	219	108	1704	446	182	2034	203
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	3	3	4	4
Cap, veh/h	476	855	383	396	763	341	135	1946	612	213	2091	651
Arrive On Green	0.14	0.24	0.24	0.12	0.22	0.22	0.04	0.39	0.39	0.06	0.42	0.42
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1568	3408	4988	1553
Grp Volume(v), veh/h	444	839	252	373	704	219	108	1704	446	182	2034	203
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1568	1704	1663	1553
Q Serve(g_s), s	14.2	26.2	16.0	12.0	21.7	14.0	3.5	34.9	26.7	5.8	44.1	9.6
Cycle Q Clear(g_c), s	14.2	26.2	16.0	12.0	21.7	14.0	3.5	34.9	26.7	5.8	44.1	9.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	476	855	383	396	763	341	135	1946	612	213	2091	651
V/C Ratio(X)	0.93	0.98	0.66	0.94	0.92	0.64	0.80	0.88	0.73	0.85	0.97	0.31
Avail Cap(c_a), veh/h	476	855	383	396	779	349	135	1946	612	213	2091	651
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.9	41.4	37.5	48.3	42.2	39.2	52.5	31.1	28.6	51.1	31.4	21.4
Incr Delay (d2), s/veh	25.0	25.9	3.3	30.5	15.9	2.9	26.4	4.6	3.8	25.7	13.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	15.8	7.2	7.3	12.1	6.3	2.1	16.8	12.2	3.5	22.8	4.1
LnGrp Delay(d),s/veh	71.8	67.3	40.8	78.8	58.1	42.1	78.8	35.8	32.5	76.8	45.1	21.5
LnGrp LOS	E	E	D	E	E	D	E	D	C	E	D	C
Approach Vol, veh/h		1535			1296			2258			2419	
Approach Delay, s/veh		64.3			61.3			37.2			45.5	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	51.0	20.9	29.3	12.2	47.8	18.0	32.2
Change Period (Y+Rc), s	* 4.6	4.8	5.5	* 5.3	* 5.3	4.8	* 5.2	* 5.3
Max Green Setting (Gmax), s	* 4.4	46.2	15.4	* 25	* 6.9	43.0	* 13	* 27
Max Q Clear Time (g_c+I1), s	5.5	46.1	16.2	23.7	7.8	36.9	14.0	28.2
Green Ext Time (p_c), s	0.0	0.1	0.0	0.3	0.0	5.5	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	49.6
HCM 2010 LOS	D

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	821	455	804	91	557	9	188	1038	11	22	1978	1340
Future Volume (veh/h)	821	455	804	91	557	9	188	1038	11	22	1978	1340
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	821	455	804	91	557	9	188	1038	11	22	1978	1340
Adj No. of Lanes	2	2	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	817	1171	524	104	625	195	184	2287	712	43	2101	654
Arrive On Green	0.24	0.34	0.34	0.03	0.13	0.13	0.05	0.46	0.46	0.01	0.42	0.42
Sat Flow, veh/h	3375	3471	1553	3375	4988	1553	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	821	455	804	91	557	9	188	1038	11	22	1978	1340
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1688	1663	1553	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	31.5	13.0	43.9	3.5	14.3	0.7	7.1	18.5	0.5	0.8	49.5	54.8
Cycle Q Clear(g_c), s	31.5	13.0	43.9	3.5	14.3	0.7	7.1	18.5	0.5	0.8	49.5	54.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	817	1171	524	104	625	195	184	2287	712	43	2101	654
V/C Ratio(X)	1.00	0.39	1.53	0.88	0.89	0.05	1.02	0.45	0.02	0.52	0.94	2.05
Avail Cap(c_a), veh/h	817	1171	524	104	625	195	184	2287	712	140	2101	654
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.3	32.9	43.1	62.8	56.0	50.1	61.5	24.1	19.2	63.8	36.1	37.7
Incr Delay (d2), s/veh	32.6	1.0	250.0	50.1	17.4	0.4	71.8	0.7	0.0	3.5	10.0	477.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.3	6.4	55.2	2.4	7.6	0.3	5.1	8.6	0.2	0.4	24.7	110.2
LnGrp Delay(d),s/veh	81.9	33.8	293.1	112.9	73.5	50.5	133.5	24.7	19.2	67.4	46.1	514.8
LnGrp LOS	F	C	F	F	E	D	F	C	B	E	D	F
Approach Vol, veh/h		2080			657			1237			3340	
Approach Delay, s/veh		153.0			78.6			41.2			234.3	
Approach LOS		F			E			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	60.0	36.6	21.5	7.1	64.9	9.0	49.1
Change Period (Y+Rc), s	* 4.9	* 5.2	* 5.1	* 5.2	5.5	* 5.2	5.0	* 5.2
Max Green Setting (Gmax), s	* 7.1	* 55	* 32	* 16	5.4	* 56	4.0	* 44
Max Q Clear Time (g_c+I1), s	9.1	56.8	33.5	16.3	2.8	20.5	5.5	45.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	35.5	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	164.5
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	2296	387	153	2224	5	138	30	79	4	32	23
Future Volume (veh/h)	14	2296	387	153	2224	5	138	30	79	4	32	23
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	14	2296	387	153	2224	5	138	30	79	4	32	23
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	21	2659	432	176	3618	8	162	241	205	7	66	56
Arrive On Green	0.01	0.63	0.63	0.10	0.72	0.72	0.09	0.13	0.13	0.00	0.04	0.04
Sat Flow, veh/h	1707	4244	689	1707	5041	11	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	14	1745	938	153	1439	790	138	30	79	4	32	23
Grp Sat Flow(s),veh/h/ln	1707	1631	1671	1707	1631	1790	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	1.1	56.5	62.9	11.6	29.3	29.3	10.2	1.9	6.1	0.3	2.2	1.9
Cycle Q Clear(g_c), s	1.1	56.5	62.9	11.6	29.3	29.3	10.2	1.9	6.1	0.3	2.2	1.9
Prop In Lane	1.00		0.41	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	21	2044	1047	176	2341	1285	162	241	205	7	66	56
V/C Ratio(X)	0.67	0.85	0.90	0.87	0.61	0.61	0.85	0.12	0.39	0.55	0.48	0.41
Avail Cap(c_a), veh/h	73	2078	1065	188	2341	1285	172	419	356	53	295	250
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.7	19.7	20.9	58.1	9.4	9.4	58.8	50.5	52.3	65.4	62.2	62.1
Incr Delay (d2), s/veh	22.7	3.9	10.3	30.2	0.6	1.1	29.4	0.2	1.1	37.6	4.9	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	26.3	31.7	7.0	13.2	14.7	6.3	1.0	2.7	0.2	1.2	0.9
LnGrp Delay(d),s/veh	87.4	23.6	31.3	88.3	10.0	10.5	88.3	50.7	53.4	102.9	67.1	66.3
LnGrp LOS	F	C	C	F	B	B	F	D	D	F	E	E
Approach Vol, veh/h		2697			2382			247			59	
Approach Delay, s/veh		26.6			15.2			72.6			69.2	
Approach LOS		C			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.1	88.8	16.5	9.1	5.1	100.8	4.0	21.6
Change Period (Y+Rc), s	3.5	6.4	4.4	* 4.4	3.5	6.4	3.5	4.4
Max Green Setting (Gmax), s	14.5	83.8	12.9	* 21	5.6	92.7	4.0	29.9
Max Q Clear Time (g_c+I1), s	13.6	64.9	12.2	4.2	3.1	31.3	2.3	8.1
Green Ext Time (p_c), s	0.0	17.5	0.0	0.5	0.0	61.1	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	24.1
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	1249	518	91	1235	265	575	191	8	318	374	87
Future Volume (veh/h)	77	1249	518	91	1235	265	575	191	8	318	374	87
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	77	1249	518	91	1235	265	575	191	8	318	374	87
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	82	981	389	70	1132	240	445	476	405	343	369	314
Arrive On Green	0.05	0.40	0.40	0.04	0.39	0.39	0.25	0.26	0.26	0.20	0.20	0.20
Sat Flow, veh/h	1757	2453	972	1757	2878	611	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	77	876	891	91	747	753	575	191	8	318	374	87
Grp Sat Flow(s),veh/h/ln	1757	1752	1673	1757	1752	1737	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	6.6	60.0	60.0	6.0	59.0	59.0	38.0	12.9	0.6	26.7	30.0	7.0
Cycle Q Clear(g_c), s	6.6	60.0	60.0	6.0	59.0	59.0	38.0	12.9	0.6	26.7	30.0	7.0
Prop In Lane	1.00		0.58	1.00		0.35	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	82	701	669	70	689	683	445	476	405	343	369	314
V/C Ratio(X)	0.94	1.25	1.33	1.29	1.08	1.10	1.29	0.40	0.02	0.93	1.01	0.28
Avail Cap(c_a), veh/h	82	701	669	70	689	683	445	476	405	422	369	314
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.3	45.0	45.0	72.0	45.5	45.5	56.0	46.0	41.5	59.3	60.0	50.8
Incr Delay (d2), s/veh	79.0	123.8	159.4	205.4	59.1	65.9	147.3	0.5	0.0	23.9	50.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
%ile BackOfQ(50%),veh/ln	5.0	53.1	57.3	6.9	39.8	40.8	36.6	6.7	0.2	15.3	20.4	3.1
LnGrp Delay(d),s/veh	150.2	168.8	204.4	277.4	104.6	111.4	203.3	46.6	41.5	83.2	110.4	51.3
LnGrp LOS	F	F	F	F	F	F	F	D	D	F	F	D
Approach Vol, veh/h		1844			1591			774			779	
Approach Delay, s/veh		185.3			117.7			163.0			92.7	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	33.3	42.7	10.0	64.0	42.0	34.0	11.0	63.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	36.0	32.0	6.0	60.0	38.0	30.0	7.0	59.0
Max Q Clear Time (g_c+I1), s	28.7	14.9	8.0	62.0	40.0	32.0	8.6	61.0
Green Ext Time (p_c), s	0.6	3.5	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	145.8
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	286	2049	114	324	1944	1	229	1489	258	30	1589	212
Future Volume (veh/h)	286	2049	114	324	1944	1	229	1489	258	30	1589	212
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1792	1845	1845	1792	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	286	2049	114	324	1944	1	229	1489	258	30	1589	212
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	6	3	3	6	3	3	3	3	3	3	3
Cap, veh/h	312	1957	627	312	1957	627	227	1808	563	55	1553	483
Arrive On Green	0.09	0.40	0.40	0.09	0.40	0.40	0.07	0.36	0.36	0.02	0.31	0.31
Sat Flow, veh/h	3408	4893	1568	3408	4893	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	286	2049	114	324	1944	1	229	1489	258	30	1589	212
Grp Sat Flow(s),veh/h/ln	1704	1631	1568	1704	1631	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	10.0	48.0	5.6	11.0	47.5	0.0	8.0	32.3	15.2	1.0	37.0	13.0
Cycle Q Clear(g_c), s	10.0	48.0	5.6	11.0	47.5	0.0	8.0	32.3	15.2	1.0	37.0	13.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	312	1957	627	312	1957	627	227	1808	563	55	1553	483
V/C Ratio(X)	0.92	1.05	0.18	1.04	0.99	0.00	1.01	0.82	0.46	0.55	1.02	0.44
Avail Cap(c_a), veh/h	312	1957	627	312	1957	627	227	1808	563	114	1553	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.0	36.0	23.3	54.5	35.8	21.6	56.0	35.0	29.5	58.6	41.5	33.2
Incr Delay (d2), s/veh	30.2	33.9	0.1	60.9	18.7	0.0	61.7	3.2	0.6	8.3	28.9	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	27.7	2.5	7.8	24.6	0.0	5.7	15.4	6.6	0.6	21.3	5.7
LnGrp Delay(d),s/veh	84.2	69.9	23.4	115.4	54.5	21.6	117.8	38.2	30.1	66.9	70.4	33.8
LnGrp LOS	F	F	C	F	D	C	F	D	C	E	F	C
Approach Vol, veh/h		2449			2269			1976			1831	
Approach Delay, s/veh		69.4			63.2			46.4			66.1	
Approach LOS		E			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.9	47.1	15.0	52.0	12.0	41.0	15.0	52.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	41.0	11.0	48.0	8.0	37.0	11.0	48.0
Max Q Clear Time (g_c+I1), s	3.0	34.3	13.0	50.0	10.0	39.0	12.0	49.5
Green Ext Time (p_c), s	0.0	6.5	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	61.7
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	240	805	124	512	971	135	71	1129	660	205	1386	442
Future Volume (veh/h)	240	805	124	512	971	135	71	1129	660	205	1386	442
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	240	805	124	512	971	135	71	1129	660	205	1386	442
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	313	1032	321	476	1273	396	119	1338	599	298	1522	681
Arrive On Green	0.09	0.21	0.21	0.14	0.25	0.25	0.03	0.38	0.38	0.09	0.43	0.43
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	240	805	124	512	971	135	71	1129	660	205	1386	442
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	5.9	13.0	5.9	12.0	15.3	6.0	1.8	25.2	32.8	5.0	31.8	19.1
Cycle Q Clear(g_c), s	5.9	13.0	5.9	12.0	15.3	6.0	1.8	25.2	32.8	5.0	31.8	19.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	313	1032	321	476	1273	396	119	1338	599	298	1522	681
V/C Ratio(X)	0.77	0.78	0.39	1.08	0.76	0.34	0.60	0.84	1.10	0.69	0.91	0.65
Avail Cap(c_a), veh/h	317	1055	328	476	1289	401	119	1338	599	714	1672	748
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.1	32.3	29.5	37.0	29.7	26.2	40.9	24.2	26.6	38.1	22.7	19.2
Incr Delay (d2), s/veh	10.6	3.7	0.8	63.1	2.7	0.5	7.9	5.1	68.0	2.8	7.4	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	6.4	2.6	9.8	7.4	2.7	1.0	13.2	25.5	2.5	16.8	8.5
LnGrp Delay(d),s/veh	48.7	36.1	30.2	100.0	32.4	26.8	48.8	29.3	94.6	40.9	30.2	20.9
LnGrp LOS	D	D	C	F	C	C	D	C	F	D	C	C
Approach Vol, veh/h		1169			1618			1860			2033	
Approach Delay, s/veh		38.0			53.4			53.2			29.3	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	36.8	16.0	21.6	7.0	41.3	11.9	25.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	18.0	26.0	12.0	18.0	3.0	41.0	8.0	22.0
Max Q Clear Time (g_c+I1), s	7.0	34.8	14.0	15.0	3.8	33.8	7.9	17.3
Green Ext Time (p_c), s	0.5	0.0	0.0	2.6	0.0	3.5	0.0	4.0

Intersection Summary	
HCM 2010 Ctrl Delay	43.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	31	17	472	44	537	48	2143	294	530	2550	59
Future Volume (veh/h)	73	31	17	472	44	537	48	2143	294	530	2550	59
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	73	31	17	472	44	537	48	2143	294	530	2550	59
Adj No. of Lanes	1	1	0	2	1	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	81	124	68	531	387	329	61	2207	687	529	2843	65
Arrive On Green	0.05	0.11	0.11	0.16	0.21	0.21	0.04	0.44	0.44	0.16	0.57	0.57
Sat Flow, veh/h	1757	1121	615	3408	1845	1568	1740	4988	1553	3375	5016	116
Grp Volume(v), veh/h	73	0	48	472	44	537	48	2143	294	530	1686	923
Grp Sat Flow(s),veh/h/ln	1757	0	1736	1704	1845	1568	1740	1663	1553	1688	1663	1807
Q Serve(g_s), s	6.2	0.0	3.8	20.3	2.9	31.5	4.1	63.0	19.5	23.5	66.9	67.8
Cycle Q Clear(g_c), s	6.2	0.0	3.8	20.3	2.9	31.5	4.1	63.0	19.5	23.5	66.9	67.8
Prop In Lane	1.00		0.35	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	81	0	191	531	387	329	61	2207	687	529	1884	1024
V/C Ratio(X)	0.90	0.00	0.25	0.89	0.11	1.63	0.78	0.97	0.43	1.00	0.89	0.90
Avail Cap(c_a), veh/h	81	0	191	659	387	329	63	2208	688	529	1885	1024
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.2	0.0	61.1	62.0	47.9	59.2	71.8	40.9	28.7	63.2	28.6	28.8
Incr Delay (d2), s/veh	67.1	0.0	0.3	12.1	0.0	297.2	42.3	12.9	0.2	39.6	5.8	10.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	0.0	1.8	10.5	1.5	40.9	2.7	31.6	8.4	13.9	32.0	36.6
LnGrp Delay(d),s/veh	138.3	0.0	61.3	74.1	48.0	356.4	114.1	53.8	28.9	102.9	34.4	39.4
LnGrp LOS	F		E	E	D	F	F	D	C	F	C	D
Approach Vol, veh/h		121			1053			2485			3139	
Approach Delay, s/veh		107.8			217.0			52.0			47.4	
Approach LOS		F			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.4	90.2	27.4	22.0	29.0	71.6	12.4	37.0
Change Period (Y+Rc), s	* 5.1	* 5.2	4.0	5.5	5.5	* 5.2	5.5	5.5
Max Green Setting (Gmax), s	* 5.4	* 85	29.0	10.9	23.5	* 66	6.9	31.5
Max Q Clear Time (g_c+I1), s	6.1	69.8	22.3	5.8	25.5	65.0	8.2	33.5
Green Ext Time (p_c), s	0.0	13.5	1.0	0.4	0.0	1.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	76.4
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	1261	464	577	1079	740	495	1079	154	825	1824	181
Future Volume (veh/h)	184	1261	464	577	1079	740	495	1079	154	825	1824	181
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	184	1261	464	577	1079	740	495	1079	154	825	1824	181
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	208	1160	361	509	1605	500	437	1166	363	805	1709	532
Arrive On Green	0.06	0.23	0.23	0.15	0.32	0.32	0.13	0.23	0.23	0.24	0.34	0.34
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	184	1261	464	577	1079	740	495	1079	154	825	1824	181
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	8.1	34.7	34.7	22.5	28.0	48.0	19.5	31.9	12.7	35.9	51.6	13.1
Cycle Q Clear(g_c), s	8.1	34.7	34.7	22.5	28.0	48.0	19.5	31.9	12.7	35.9	51.6	13.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	208	1160	361	509	1605	500	437	1166	363	805	1709	532
V/C Ratio(X)	0.88	1.09	1.28	1.13	0.67	1.48	1.13	0.93	0.42	1.03	1.07	0.34
Avail Cap(c_a), veh/h	208	1160	361	509	1605	500	437	1166	363	805	1709	532
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.2	58.0	58.0	64.1	44.5	51.3	65.6	56.4	49.1	57.4	49.5	36.8
Incr Delay (d2), s/veh	32.0	53.3	147.5	81.9	0.9	226.9	84.5	12.2	0.3	38.3	42.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	21.7	29.8	16.3	13.1	52.3	14.2	16.0	5.5	20.9	30.3	5.6
LnGrp Delay(d),s/veh	102.2	111.2	205.4	146.0	45.4	278.2	150.0	68.6	49.4	95.7	91.8	37.0
LnGrp LOS	F	F	F	F	D	F	F	E	D	F	F	D
Approach Vol, veh/h		1909			2396			1728			2830	
Approach Delay, s/veh		133.3			141.5			90.2			89.4	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	57.2	14.7	53.7	41.4	40.8	28.0	40.4
Change Period (Y+Rc), s	5.5	* 5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	19.5	* 52	9.2	* 48	35.9	* 35	22.5	* 34
Max Q Clear Time (g_c+I1), s	21.5	53.6	10.1	50.0	37.9	33.9	24.5	36.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	113.1
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	2208	58	290	1548	492	476	1059	118	521	2559	161
Future Volume (veh/h)	260	2208	58	290	1548	492	476	1059	118	521	2559	161
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1845	1845	1792	1792	1845	1845	1845	1827	1845	1827
Adj Flow Rate, veh/h	260	2208	58	290	1548	492	476	1059	118	521	2559	0
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	3	3	6	6	3	3	3	4	3	4
Cap, veh/h	297	1655	530	231	1564	487	331	1466	456	563	1804	556
Arrive On Green	0.09	0.34	0.34	0.07	0.32	0.32	0.10	0.29	0.29	0.17	0.36	0.00
Sat Flow, veh/h	3312	4893	1568	3408	4893	1524	3408	5036	1568	3375	5036	1553
Grp Volume(v), veh/h	260	2208	58	290	1548	492	476	1059	118	521	2559	0
Grp Sat Flow(s),veh/h/ln	1656	1631	1568	1704	1631	1524	1704	1679	1568	1688	1679	1553
Q Serve(g_s), s	11.7	50.9	3.8	10.2	47.4	48.1	14.6	28.4	8.7	22.9	53.9	0.0
Cycle Q Clear(g_c), s	11.7	50.9	3.8	10.2	47.4	48.1	14.6	28.4	8.7	22.9	53.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	297	1655	530	231	1564	487	331	1466	456	563	1804	556
V/C Ratio(X)	0.88	1.33	0.11	1.26	0.99	1.01	1.44	0.72	0.26	0.93	1.42	0.00
Avail Cap(c_a), veh/h	297	1655	530	231	1564	487	331	1466	456	628	1804	556
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	67.7	49.8	34.2	70.2	51.0	51.2	67.9	47.9	40.9	61.8	48.3	0.0
Incr Delay (d2), s/veh	23.2	154.6	0.0	145.3	20.3	43.4	214.3	1.8	0.3	17.9	191.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	46.5	1.7	9.4	24.3	26.1	16.7	13.4	3.8	12.1	56.9	0.0
LnGrp Delay(d),s/veh	90.8	204.4	34.3	215.4	71.2	94.6	282.3	49.7	41.2	79.7	240.1	0.0
LnGrp LOS	F	F	C	F	E	F	F	D	D	E	F	
Approach Vol, veh/h		2526			2330			1653			3080	
Approach Delay, s/veh		188.8			94.1			116.0			213.0	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	59.0	17.8	53.7	30.1	48.9	15.0	56.5
Change Period (Y+Rc), s	* 5.4	5.1	* 4.3	5.6	5.0	5.1	* 4.8	* 5.6
Max Green Setting (Gmax), s	* 15	53.9	* 14	47.6	28.0	40.9	* 10	* 51
Max Q Clear Time (g_c+I1), s	16.6	55.9	13.7	50.1	24.9	30.4	12.2	52.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.2	9.5	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	161.0
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	990	322	121	782	54	118	1246	458	17	2647	150
Future Volume (veh/h)	46	990	322	121	782	54	118	1246	458	17	2647	150
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	46	990	322	121	782	54	118	1246	458	17	2647	150
Adj No. of Lanes	2	3	1	2	3	1	1	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	79	1108	345	139	1197	373	126	2907	905	35	2598	809
Arrive On Green	0.02	0.22	0.22	0.04	0.24	0.24	0.07	0.58	0.58	0.01	0.52	0.52
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	1757	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	46	990	322	121	782	54	118	1246	458	17	2647	150
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1757	1679	1568	1704	1679	1568
Q Serve(g_s), s	1.9	26.7	28.2	4.9	19.6	3.8	9.3	19.4	24.4	0.7	72.1	7.2
Cycle Q Clear(g_c), s	1.9	26.7	28.2	4.9	19.6	3.8	9.3	19.4	24.4	0.7	72.1	7.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	79	1108	345	139	1197	373	126	2907	905	35	2598	809
V/C Ratio(X)	0.59	0.89	0.93	0.87	0.65	0.14	0.94	0.43	0.51	0.48	1.02	0.19
Avail Cap(c_a), veh/h	93	1117	348	139	1197	373	126	2907	905	83	2598	809
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.6	52.9	53.5	66.6	48.1	42.0	64.6	16.6	17.6	68.8	33.8	18.1
Incr Delay (d2), s/veh	6.8	9.4	31.6	40.8	1.3	0.2	61.4	0.1	0.5	9.8	22.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	13.3	15.2	3.1	9.3	1.7	6.7	9.0	10.6	0.4	38.6	3.1
LnGrp Delay(d),s/veh	74.4	62.3	85.1	107.4	49.3	42.2	125.9	16.7	18.1	78.6	56.3	18.1
LnGrp LOS	E	E	F	F	D	D	F	B	B	E	F	B
Approach Vol, veh/h		1358			957			1822			2814	
Approach Delay, s/veh		68.1			56.3			24.1			54.4	
Approach LOS		E			E			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.5	77.1	11.2	35.9	6.9	85.7	8.7	38.4
Change Period (Y+Rc), s	5.5	5.0	5.5	* 5.2	5.5	5.0	5.5	* 5.2
Max Green Setting (Gmax), s	10.0	72.1	5.7	* 31	3.4	78.7	3.8	* 33
Max Q Clear Time (g_c+I1), s	11.3	74.1	6.9	30.2	2.7	26.4	3.9	21.6
Green Ext Time (p_c), s	0.0	0.0	0.0	0.6	0.0	42.5	0.0	8.8

Intersection Summary	
HCM 2010 Ctrl Delay	49.4
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	372	863	364	95	966	107	228	1076	100	201	2253	584
Future Volume (veh/h)	372	863	364	95	966	107	228	1076	100	201	2253	584
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1832	1900	1845	1792	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	372	863	364	95	966	107	228	1076	100	201	2253	584
Adj No. of Lanes	2	2	0	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	4	4	3	6	3	3	3	3	3	3	3
Cap, veh/h	420	769	323	114	1134	363	231	2117	659	252	2147	669
Arrive On Green	0.12	0.32	0.32	0.03	0.23	0.23	0.07	0.42	0.42	0.07	0.43	0.43
Sat Flow, veh/h	3408	2392	1004	3408	4893	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	372	627	600	95	966	107	228	1076	100	201	2253	584
Grp Sat Flow(s),veh/h/ln	1704	1741	1655	1704	1631	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	15.0	45.0	45.0	3.9	26.5	7.9	9.4	22.0	5.5	8.1	59.7	47.7
Cycle Q Clear(g_c), s	15.0	45.0	45.0	3.9	26.5	7.9	9.4	22.0	5.5	8.1	59.7	47.7
Prop In Lane	1.00		0.61	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	420	559	532	114	1134	363	231	2117	659	252	2147	669
V/C Ratio(X)	0.89	1.12	1.13	0.83	0.85	0.29	0.99	0.51	0.15	0.80	1.05	0.87
Avail Cap(c_a), veh/h	450	559	532	114	1134	363	231	2117	659	341	2147	669
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.4	47.5	47.5	67.3	51.5	44.3	65.2	29.9	25.1	63.8	40.2	36.7
Incr Delay (d2), s/veh	17.9	75.7	79.3	37.8	6.1	0.2	55.0	0.2	0.1	9.2	33.8	12.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	33.4	32.3	2.4	12.5	3.4	6.2	10.2	2.4	4.1	34.4	22.9
LnGrp Delay(d),s/veh	78.2	123.2	126.8	105.0	57.6	44.5	120.2	30.1	25.2	73.0	74.0	49.0
LnGrp LOS	E	F	F	F	E	D	F	C	C	E	F	D
Approach Vol, veh/h		1599			1168			1404			3038	
Approach Delay, s/veh		114.1			60.2			44.4			69.1	
Approach LOS		F			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.8	64.0	22.8	37.4	15.0	64.8	10.2	50.0
Change Period (Y+Rc), s	5.5	* 5.1	5.5	* 5	5.5	* 5.1	5.5	* 5
Max Green Setting (Gmax), s	14.0	* 55	18.5	* 31	9.5	* 60	4.7	* 45
Max Q Clear Time (g_c+I1), s	10.1	24.0	17.0	28.5	11.4	61.7	5.9	47.0
Green Ext Time (p_c), s	0.2	29.6	0.2	1.9	0.0	0.0	0.0	0.0

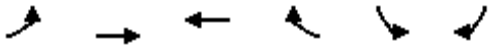
Intersection Summary	
HCM 2010 Ctrl Delay	72.8
HCM 2010 LOS	E

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	689	182	775	773	232	570
Future Volume (veh/h)	689	182	775	773	232	570
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1900	1845	1845	1845	1845
Adj Flow Rate, veh/h	689	182	775	773	232	570
Adj No. of Lanes	2	0	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	671	177	781	2570	312	976
Arrive On Green	0.24	0.24	0.44	0.73	0.18	0.18
Sat Flow, veh/h	2837	725	1757	3597	1757	1568
Grp Volume(v), veh/h	440	431	775	773	232	570
Grp Sat Flow(s),veh/h/ln	1752	1717	1757	1752	1757	1568
Q Serve(g_s), s	22.0	22.0	39.5	6.8	11.3	16.0
Cycle Q Clear(g_c), s	22.0	22.0	39.5	6.8	11.3	16.0
Prop In Lane		0.42	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	428	420	781	2570	312	976
V/C Ratio(X)	1.03	1.03	0.99	0.30	0.74	0.58
Avail Cap(c_a), veh/h	428	420	781	2570	312	976
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.0	34.0	24.9	4.1	35.1	10.1
Incr Delay (d2), s/veh	50.5	51.1	30.3	0.1	9.2	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.6	16.3	25.5	3.2	6.3	8.5
LnGrp Delay(d),s/veh	84.5	85.1	55.1	4.2	44.3	11.0
LnGrp LOS	F	F	E	A	D	B
Approach Vol, veh/h	871			1548	802	
Approach Delay, s/veh	84.8			29.7	20.6	
Approach LOS	F			C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		20.0	44.0	26.0				70.0
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		16.0	40.0	22.0				66.0
Max Q Clear Time (g_c+I1), s		18.0	41.5	24.0				8.8
Green Ext Time (p_c), s		0.0	0.0	0.0				17.7

Intersection Summary	
HCM 2010 Ctrl Delay	42.3
HCM 2010 LOS	D



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	141	2274	1641	657	777	316
Future Volume (veh/h)	141	2274	1641	657	777	316
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845
Adj Flow Rate, veh/h	141	2274	1641	657	777	316
Adj No. of Lanes	1	3	3	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	132	2644	1493	573	717	640
Arrive On Green	0.08	0.52	0.42	0.42	0.41	0.41
Sat Flow, veh/h	1757	5202	3749	1376	1757	1568
Grp Volume(v), veh/h	141	2274	1533	765	777	316
Grp Sat Flow(s),veh/h/ln	1757	1679	1679	1602	1757	1568
Q Serve(g_s), s	9.0	46.9	50.0	50.0	49.0	17.9
Cycle Q Clear(g_c), s	9.0	46.9	50.0	50.0	49.0	17.9
Prop In Lane	1.00			0.86	1.00	1.00
Lane Grp Cap(c), veh/h	132	2644	1399	667	717	640
V/C Ratio(X)	1.07	0.86	1.10	1.15	1.08	0.49
Avail Cap(c_a), veh/h	132	2644	1399	667	717	640
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.5	24.7	35.0	35.0	35.5	26.3
Incr Delay (d2), s/veh	98.4	3.1	54.8	82.5	58.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	22.4	33.8	37.4	35.3	16.8
LnGrp Delay(d),s/veh	153.9	27.8	89.8	117.5	93.9	26.9
LnGrp LOS	F	C	F	F	F	C
Approach Vol, veh/h		2415	2298		1093	
Approach Delay, s/veh		35.2	99.0		74.5	
Approach LOS		D	F		E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				67.0		53.0	13.0	54.0
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				63.0		49.0	9.0	50.0
Max Q Clear Time (g_c+I1), s				48.9		51.0	11.0	52.0
Green Ext Time (p_c), s				14.0		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	67.8
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	283	1805	98	956	1148	361	89	625	769	411	838	82
Future Volume (veh/h)	283	1805	98	956	1148	361	89	625	769	411	838	82
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1792	1845	1845	1792	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	283	1805	98	956	1148	361	89	625	769	411	838	82
Adj No. of Lanes	2	3	1	2	3	1	1	1	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	6	3	3	6	3	3	3	3	3	3	3
Cap, veh/h	333	1553	498	704	2085	668	109	492	418	295	1021	457
Arrive On Green	0.10	0.32	0.32	0.21	0.43	0.43	0.06	0.27	0.27	0.09	0.29	0.29
Sat Flow, veh/h	3408	4893	1568	3408	4893	1568	1757	1845	1568	3408	3505	1568
Grp Volume(v), veh/h	283	1805	98	956	1148	361	89	625	769	411	838	82
Grp Sat Flow(s),veh/h/ln	1704	1631	1568	1704	1631	1568	1757	1845	1568	1704	1752	1568
Q Serve(g_s), s	12.3	47.6	6.8	31.0	26.4	25.7	7.5	40.0	40.0	13.0	33.4	5.9
Cycle Q Clear(g_c), s	12.3	47.6	6.8	31.0	26.4	25.7	7.5	40.0	40.0	13.0	33.4	5.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	333	1553	498	704	2085	668	109	492	418	295	1021	457
V/C Ratio(X)	0.85	1.16	0.20	1.36	0.55	0.54	0.82	1.27	1.84	1.39	0.82	0.18
Avail Cap(c_a), veh/h	432	1553	498	704	2085	668	129	492	418	295	1021	457
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.6	51.2	37.3	59.5	32.3	32.1	69.5	55.0	55.0	68.5	49.5	39.7
Incr Delay (d2), s/veh	11.9	80.6	0.3	169.9	0.4	1.1	28.3	137.0	386.8	195.6	5.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	33.0	3.0	31.2	12.0	11.4	4.5	39.1	62.2	14.1	16.9	2.6
LnGrp Delay(d),s/veh	78.4	131.8	37.6	229.4	32.7	33.2	97.8	192.0	441.8	264.1	54.9	39.9
LnGrp LOS	E	F	D	F	C	C	F	F	F	F	D	D
Approach Vol, veh/h		2186			2465			1483			1331	
Approach Delay, s/veh		120.7			109.1			315.9			118.6	
Approach LOS		F			F			F			F	

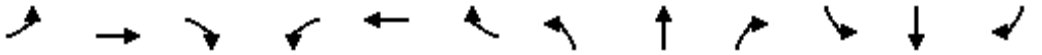
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.0	54.0	13.3	47.7	18.7	70.3	17.0	44.0
Change Period (Y+Rc), s	4.0	6.4	4.0	4.0	4.0	6.4	4.0	4.0
Max Green Setting (Gmax), s	31.0	47.6	11.0	42.0	19.0	59.6	13.0	40.0
Max Q Clear Time (g_c+I1), s	33.0	49.6	9.5	35.4	14.3	28.4	15.0	42.0
Green Ext Time (p_c), s	0.0	0.0	0.0	5.6	0.4	30.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	155.3
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	577	37	168	638	12	39	299	157	2	657	123
Future Volume (veh/h)	9	577	37	168	638	12	39	299	157	2	657	123
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1759	1759	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	9	577	37	168	638	12	39	299	157	2	657	123
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	8	8	8	3	3	3	3	3	3
Cap, veh/h	48	579	37	166	720	14	64	924	474	50	611	114
Arrive On Green	0.03	0.35	0.35	0.10	0.42	0.42	0.04	0.41	0.41	0.03	0.40	0.40
Sat Flow, veh/h	1707	1667	107	1675	1721	32	1757	2244	1150	1757	1512	283
Grp Volume(v), veh/h	9	0	614	168	0	650	39	232	224	2	0	780
Grp Sat Flow(s),veh/h/ln	1707	0	1774	1675	0	1754	1757	1752	1642	1757	0	1795
Q Serve(g_s), s	0.7	0.0	48.8	14.0	0.0	48.4	3.1	12.7	13.1	0.2	0.0	57.0
Cycle Q Clear(g_c), s	0.7	0.0	48.8	14.0	0.0	48.4	3.1	12.7	13.1	0.2	0.0	57.0
Prop In Lane	1.00		0.06	1.00		0.02	1.00		0.70	1.00		0.16
Lane Grp Cap(c), veh/h	48	0	616	166	0	733	64	722	676	50	0	725
V/C Ratio(X)	0.19	0.00	1.00	1.01	0.00	0.89	0.61	0.32	0.33	0.04	0.00	1.08
Avail Cap(c_a), veh/h	169	0	616	166	0	733	174	722	676	174	0	725
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	67.0	0.0	46.0	63.6	0.0	38.0	67.0	28.1	28.3	66.7	0.0	42.1
Incr Delay (d2), s/veh	1.8	0.0	35.5	72.6	0.0	12.6	9.1	0.3	0.3	0.3	0.0	55.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	29.9	9.8	0.0	26.0	1.7	6.2	6.0	0.1	0.0	39.4
LnGrp Delay(d),s/veh	68.8	0.0	81.5	136.3	0.0	50.6	76.2	28.4	28.6	67.0	0.0	97.8
LnGrp LOS	E		F	F		D	E	C	C	E		F
Approach Vol, veh/h		623			818			495			782	
Approach Delay, s/veh		81.3			68.2			32.2			97.7	
Approach LOS		F			E			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	62.1	18.0	53.0	9.1	61.0	8.0	63.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	14.0	57.0	14.0	49.0	14.0	57.0	14.0	49.0
Max Q Clear Time (g_c+I1), s	2.2	15.1	16.0	50.8	5.1	59.0	2.7	50.4
Green Ext Time (p_c), s	0.0	11.7	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	73.1
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1059	44	925	27	77	110	645	2110	17	146	1045	974
Future Volume (veh/h)	1059	44	925	27	77	110	645	2110	17	146	1045	974
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1900	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	1090	0	925	27	77	110	645	2110	17	146	1045	0
Adj No. of Lanes	2	0	1	0	1	1	1	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	982	0	438	22	62	72	427	2249	18	111	1279	398
Arrive On Green	0.28	0.00	0.28	0.05	0.05	0.05	0.25	0.44	0.44	0.06	0.26	0.00
Sat Flow, veh/h	3480	0	1553	473	1348	1568	1740	5104	41	1740	4988	1553
Grp Volume(v), veh/h	1090	0	925	104	0	110	645	1374	753	146	1045	0
Grp Sat Flow(s),veh/h/ln	1740	0	1553	1821	0	1568	1740	1663	1820	1740	1663	1553
Q Serve(g_s), s	33.7	0.0	33.7	5.5	0.0	5.5	29.3	47.1	47.1	7.6	23.5	0.0
Cycle Q Clear(g_c), s	33.7	0.0	33.7	5.5	0.0	5.5	29.3	47.1	47.1	7.6	23.5	0.0
Prop In Lane	1.00		1.00	0.26		1.00	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	982	0	438	84	0	72	427	1465	802	111	1279	398
V/C Ratio(X)	1.11	0.00	2.11	1.24	0.00	1.52	1.51	0.94	0.94	1.32	0.82	0.00
Avail Cap(c_a), veh/h	982	0	438	84	0	72	427	1487	814	111	1303	406
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	42.9	0.0	42.9	57.0	0.0	57.0	45.1	31.8	31.9	55.9	41.8	0.0
Incr Delay (d2), s/veh	63.9	0.0	507.6	176.1	0.0	293.7	241.8	11.4	18.0	193.3	3.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.8	0.0	76.2	6.9	0.0	8.3	42.7	23.9	27.6	9.6	11.3	0.0
LnGrp Delay(d),s/veh	106.7	0.0	550.5	233.0	0.0	350.7	286.9	43.2	49.8	249.2	45.6	0.0
LnGrp LOS	F		F	F		F	F	D	D	F	D	
Approach Vol, veh/h		2015			214			2772			1191	
Approach Delay, s/veh		310.4			293.5			101.7			70.5	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	34.0	35.4		11.0	12.0	57.4		39.0
Change Period (Y+Rc), s	* 4.7	4.8		5.5	* 4.4	* 4.8		5.3
Max Green Setting (Gmax), s	* 29	31.2		5.5	* 7.6	* 53		33.7
Max Q Clear Time (g_c+I1), s	31.3	25.5		7.5	9.6	49.1		35.7
Green Ext Time (p_c), s	0.0	4.5		0.0	0.0	3.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	170.3
HCM 2010 LOS	F

Notes

HCM 2010 Signalized Intersection Summary
58: Zinfandel Drive & Douglas Road

12/07/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	1594	135	456	1143	436	80	503	412	624	692	266
Future Volume (veh/h)	159	1594	135	456	1143	436	80	503	412	624	692	266
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	159	1594	135	456	1143	436	80	503	412	624	692	266
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	204	1556	485	457	1916	597	121	820	367	617	1330	595
Arrive On Green	0.06	0.31	0.31	0.13	0.38	0.38	0.04	0.23	0.23	0.18	0.38	0.38
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	159	1594	135	456	1143	436	80	503	412	624	692	266
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	6.7	44.9	9.5	19.4	26.4	34.7	3.4	18.6	34.0	26.3	22.2	18.4
Cycle Q Clear(g_c), s	6.7	44.9	9.5	19.4	26.4	34.7	3.4	18.6	34.0	26.3	22.2	18.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	204	1556	485	457	1916	597	121	820	367	617	1330	595
V/C Ratio(X)	0.78	1.02	0.28	1.00	0.60	0.73	0.66	0.61	1.12	1.01	0.52	0.45
Avail Cap(c_a), veh/h	277	1556	485	457	1916	597	171	820	367	617	1330	595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.3	50.2	38.0	62.9	36.1	38.6	69.2	49.8	55.7	59.5	34.9	33.7
Incr Delay (d2), s/veh	6.3	29.2	0.1	41.2	0.4	4.0	2.3	1.0	84.6	39.1	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	25.0	4.1	11.7	12.3	15.7	1.6	9.1	23.3	15.7	10.8	8.0
LnGrp Delay(d),s/veh	73.7	79.4	38.1	104.1	36.4	42.6	71.5	50.8	140.3	98.6	35.0	33.9
LnGrp LOS	E	F	D	F	D	D	E	D	F	F	D	C
Approach Vol, veh/h		1888			2035			995			1582	
Approach Delay, s/veh		76.0			52.9			89.5			59.9	
Approach LOS		E			D			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.2	60.2	10.7	60.2	24.6	49.8	31.8	39.1
Change Period (Y+Rc), s	5.5	* 4.9	5.5	* 5.1	* 5.1	* 4.9	5.5	* 5.1
Max Green Setting (Gmax), s	11.8	* 52	7.3	* 53	* 20	* 45	26.3	* 34
Max Q Clear Time (g_c+I1), s	8.7	36.7	5.4	24.2	21.4	46.9	28.3	36.0
Green Ext Time (p_c), s	0.0	9.2	0.0	2.5	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	66.9
HCM 2010 LOS	E

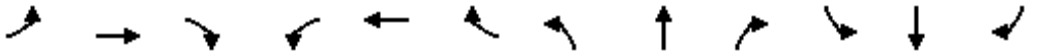
Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	706	1569	392	42	860	300	283	1290	46	729	1761	372
Future Volume (veh/h)	706	1569	392	42	860	300	283	1290	46	729	1761	372
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	706	1569	392	42	860	300	283	1290	46	729	1761	372
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	625	1923	599	72	1106	344	277	1230	383	664	1801	561
Arrive On Green	0.18	0.38	0.38	0.02	0.22	0.22	0.08	0.25	0.25	0.20	0.36	0.36
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	706	1569	392	42	860	300	283	1290	46	729	1761	372
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	27.5	42.0	30.9	1.8	24.1	27.7	12.3	37.0	3.5	29.5	52.3	30.2
Cycle Q Clear(g_c), s	27.5	42.0	30.9	1.8	24.1	27.7	12.3	37.0	3.5	29.5	52.3	30.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	625	1923	599	72	1106	344	277	1230	383	664	1801	561
V/C Ratio(X)	1.13	0.82	0.65	0.58	0.78	0.87	1.02	1.05	0.12	1.10	0.98	0.66
Avail Cap(c_a), veh/h	625	1923	599	84	1141	355	277	1230	383	664	1801	561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.3	41.7	38.2	72.8	55.1	56.5	68.9	56.5	43.9	60.3	47.3	40.3
Incr Delay (d2), s/veh	77.5	2.7	2.1	2.8	3.0	19.0	60.1	39.5	0.1	65.0	16.1	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.7	19.9	13.7	0.9	11.5	13.8	8.0	21.5	1.5	19.7	26.7	13.3
LnGrp Delay(d),s/veh	138.8	44.3	40.3	75.6	58.1	75.5	129.0	96.0	43.9	125.3	63.4	42.6
LnGrp LOS	F	D	D	E	E	E	F	F	D	F	E	D
Approach Vol, veh/h		2667			1202			1619			2862	
Approach Delay, s/veh		68.7			63.1			100.3			76.5	
Approach LOS		E			E			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.8	60.2	33.0	39.1	35.0	43.0	8.7	63.4
Change Period (Y+Rc), s	5.5	6.0	5.5	* 6.1	5.5	* 6	5.5	* 6.1
Max Green Setting (Gmax), s	12.3	53.6	27.5	* 34	29.5	* 37	3.7	* 57
Max Q Clear Time (g_c+I1), s	14.3	54.3	29.5	29.7	31.5	39.0	3.8	44.0
Green Ext Time (p_c), s	0.0	0.0	0.0	3.2	0.0	0.0	0.0	7.5

Intersection Summary	
HCM 2010 Ctrl Delay	76.7
HCM 2010 LOS	E

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	677	1598	347	112	865	360	264	1249	102	701	1858	829
Future Volume (veh/h)	677	1598	347	112	865	360	264	1249	102	701	1858	829
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1759	1759	1759	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	677	1598	347	112	865	360	264	1249	102	701	1858	829
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	8	8	8	4	4	4	4	4	4
Cap, veh/h	669	1698	529	135	875	272	277	1293	403	692	1906	593
Arrive On Green	0.20	0.34	0.34	0.04	0.18	0.18	0.08	0.26	0.26	0.20	0.38	0.38
Sat Flow, veh/h	3408	5036	1568	3250	4803	1495	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	677	1598	347	112	865	360	264	1249	102	701	1858	829
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1625	1601	1495	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	27.5	43.1	26.4	4.8	25.2	25.5	10.9	34.6	7.3	28.7	51.4	53.5
Cycle Q Clear(g_c), s	27.5	43.1	26.4	4.8	25.2	25.5	10.9	34.6	7.3	28.7	51.4	53.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	669	1698	529	135	875	272	277	1293	403	692	1906	593
V/C Ratio(X)	1.01	0.94	0.66	0.83	0.99	1.32	0.95	0.97	0.25	1.01	0.97	1.40
Avail Cap(c_a), veh/h	669	1698	529	135	875	272	277	1293	403	692	1906	593
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.2	45.1	39.5	66.6	57.1	57.3	64.0	51.2	41.1	55.7	42.6	43.3
Incr Delay (d2), s/veh	37.6	10.8	2.4	32.0	27.5	168.2	40.7	17.3	0.1	37.5	15.0	188.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.4	21.7	11.8	2.7	13.4	23.3	6.7	18.0	3.2	17.0	26.2	53.9
LnGrp Delay(d),s/veh	93.9	55.8	41.9	98.7	84.6	225.4	104.7	68.6	41.2	93.1	57.6	232.0
LnGrp LOS	F	E	D	F	F	F	F	E	D	F	E	F
Approach Vol, veh/h		2622			1337			1615			3388	
Approach Delay, s/veh		63.8			123.7			72.8			107.6	
Approach LOS		E			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	59.0	33.0	31.0	34.2	41.8	11.3	52.7
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	11.5	53.5	27.5	25.5	28.7	36.3	5.8	47.2
Max Q Clear Time (g_c+I1), s	12.9	55.5	29.5	27.5	30.7	36.6	6.8	45.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	90.9
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	759	1164	161	178	787	163	130	885	308	239	1459	455
Future Volume (veh/h)	759	1164	161	178	787	163	130	885	308	239	1459	455
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1845
Adj Flow Rate, veh/h	759	1164	161	178	787	163	130	885	308	239	1459	455
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	4	4	4	4	3
Cap, veh/h	1068	1098	491	710	730	327	142	1150	358	293	1413	444
Arrive On Green	0.31	0.31	0.31	0.21	0.21	0.21	0.04	0.23	0.23	0.09	0.28	0.28
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	4988	1553	3375	4988	1568
Grp Volume(v), veh/h	759	1164	161	178	787	163	130	885	308	239	1459	455
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1663	1553	1688	1663	1568
Q Serve(g_s), s	23.6	37.6	9.4	5.2	25.0	11.0	4.6	19.9	22.8	8.3	34.0	34.0
Cycle Q Clear(g_c), s	23.6	37.6	9.4	5.2	25.0	11.0	4.6	19.9	22.8	8.3	34.0	34.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1068	1098	491	710	730	327	142	1150	358	293	1413	444
V/C Ratio(X)	0.71	1.06	0.33	0.25	1.08	0.50	0.92	0.77	0.86	0.81	1.03	1.02
Avail Cap(c_a), veh/h	1068	1098	491	710	730	327	142	1150	358	318	1413	444
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	41.2	31.5	39.7	47.5	42.0	57.3	43.2	44.3	53.8	43.0	43.0
Incr Delay (d2), s/veh	2.2	44.5	0.4	0.2	56.3	1.2	50.9	3.2	18.6	14.1	32.7	49.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.4	24.9	4.1	2.5	17.8	4.9	3.2	9.5	11.7	4.5	19.8	20.7
LnGrp Delay(d),s/veh	38.6	85.7	31.9	39.9	103.8	43.1	108.2	46.4	62.9	68.0	75.7	92.0
LnGrp LOS	D	F	C	D	F	D	F	D	E	E	F	F
Approach Vol, veh/h		2084			1128			1323			2153	
Approach Delay, s/veh		64.4			84.9			56.3			78.3	
Approach LOS		E			F			E			E	

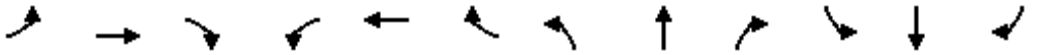
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.0	39.0		43.0	15.3	32.7		29.0
Change Period (Y+Rc), s	4.0	5.0		* 5.4	* 4.9	5.0		4.0
Max Green Setting (Gmax), s	5.0	34.0		* 38	* 11	26.8		25.0
Max Q Clear Time (g_c+I1), s	6.6	36.0		39.6	10.3	24.8		27.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.1	1.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	70.7
HCM 2010 LOS	E

Notes

HCM 2010 Signalized Intersection Summary
70: Jackson Road & Sunrise Boulevard

12/07/2018

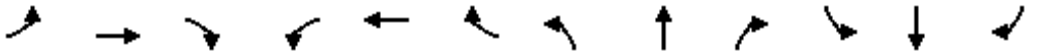


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	364	1698	102	333	951	262	66	704	336	307	1186	293
Future Volume (veh/h)	364	1698	102	333	951	262	66	704	336	307	1186	293
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1792	1845	1845	1845	1827	1845	1845
Adj Flow Rate, veh/h	364	1698	102	333	951	262	66	704	336	307	1186	293
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	6	3	3	3	4	3	3
Cap, veh/h	428	1643	512	323	1487	578	108	996	446	284	1181	725
Arrive On Green	0.13	0.33	0.33	0.09	0.30	0.30	0.03	0.28	0.28	0.08	0.34	0.34
Sat Flow, veh/h	3408	5036	1568	3408	5036	1524	3408	3505	1568	3375	3505	1568
Grp Volume(v), veh/h	364	1698	102	333	951	262	66	704	336	307	1186	293
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1524	1704	1752	1568	1688	1752	1568
Q Serve(g_s), s	9.9	31.0	4.5	9.0	15.6	12.2	1.8	17.1	18.5	8.0	32.0	11.7
Cycle Q Clear(g_c), s	9.9	31.0	4.5	9.0	15.6	12.2	1.8	17.1	18.5	8.0	32.0	11.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	428	1643	512	323	1487	578	108	996	446	284	1181	725
V/C Ratio(X)	0.85	1.03	0.20	1.03	0.64	0.45	0.61	0.71	0.75	1.08	1.00	0.40
Avail Cap(c_a), veh/h	431	1643	512	323	1487	578	108	996	446	284	1181	725
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	32.0	23.1	43.0	29.1	22.1	45.4	30.5	31.0	43.5	31.5	16.9
Incr Delay (d2), s/veh	14.8	31.3	0.2	58.4	0.9	0.6	9.9	2.3	7.1	76.3	27.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	19.1	2.0	6.8	7.3	5.3	1.0	8.5	8.9	6.7	19.9	5.1
LnGrp Delay(d),s/veh	55.4	63.3	23.2	101.4	30.0	22.6	55.3	32.8	38.1	119.8	58.8	17.2
LnGrp LOS	E	F	C	F	C	C	E	C	D	F	F	B
Approach Vol, veh/h		2164			1546			1106			1786	
Approach Delay, s/veh		60.1			44.1			35.7			62.5	
Approach LOS		E			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	37.0	7.0	38.0	15.9	34.1	12.0	33.0
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	9.0	31.0	3.0	32.0	12.0	28.0	8.0	27.0
Max Q Clear Time (g_c+I1), s	11.0	33.0	3.8	34.0	11.9	17.6	10.0	20.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	9.7	0.0	5.7

Intersection Summary	
HCM 2010 Ctrl Delay	52.9
HCM 2010 LOS	D

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	976	768	4	64	442	80	54	847	73	86	686	690
Future Volume (veh/h)	976	768	4	64	442	80	54	847	73	86	686	690
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1810	1810	1810	1810	1810	1810
Adj Flow Rate, veh/h	976	768	4	64	442	80	54	847	73	86	686	690
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	5	5	5	5	5	5
Cap, veh/h	989	1672	748	107	765	342	93	837	375	116	861	385
Arrive On Green	0.30	0.49	0.49	0.03	0.22	0.22	0.03	0.24	0.24	0.03	0.25	0.25
Sat Flow, veh/h	3312	3406	1524	3312	3406	1524	3343	3438	1538	3343	3438	1538
Grp Volume(v), veh/h	976	768	4	64	442	80	54	847	73	86	686	690
Grp Sat Flow(s),veh/h/ln	1656	1703	1524	1656	1703	1524	1672	1719	1538	1672	1719	1538
Q Serve(g_s), s	31.3	15.8	0.1	2.0	12.3	4.6	1.7	26.0	4.0	2.7	19.9	26.7
Cycle Q Clear(g_c), s	31.3	15.8	0.1	2.0	12.3	4.6	1.7	26.0	4.0	2.7	19.9	26.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	989	1672	748	107	765	342	93	837	375	116	861	385
V/C Ratio(X)	0.99	0.46	0.01	0.60	0.58	0.23	0.58	1.01	0.19	0.74	0.80	1.79
Avail Cap(c_a), veh/h	989	1706	763	174	868	388	94	837	375	116	861	385
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.2	17.9	13.9	51.0	36.9	33.9	51.3	40.4	32.1	51.1	37.5	40.0
Incr Delay (d2), s/veh	25.2	0.4	0.0	2.0	1.5	0.7	5.7	34.0	0.3	20.1	5.3	366.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.7	7.5	0.1	1.0	5.9	2.0	0.9	16.2	1.7	1.6	10.1	50.5
LnGrp Delay(d),s/veh	62.4	18.3	13.9	53.0	38.4	34.6	57.0	74.4	32.3	71.1	42.7	406.3
LnGrp LOS	E	B	B	D	D	C	E	F	C	E	D	F
Approach Vol, veh/h		1748			586			974			1462	
Approach Delay, s/veh		42.9			39.5			70.3			216.0	
Approach LOS		D			D			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	36.5	30.0	7.6	32.7	8.0	58.4	8.3	32.0
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	31.9	27.2	3.0	26.7	5.6	53.5	3.7	26.0
Max Q Clear Time (g_c+I1), s	33.3	14.3	3.7	28.7	4.0	17.8	4.7	28.0
Green Ext Time (p_c), s	0.0	9.6	0.0	0.0	0.0	20.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	101.1
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	1214	465	44	1647	192	186	747	77	53	1388	148
Future Volume (veh/h)	185	1214	465	44	1647	192	186	747	77	53	1388	148
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	185	1214	465	44	1647	192	186	747	77	53	1388	148
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	188	1736	541	100	1607	500	188	1429	639	110	1350	604
Arrive On Green	0.06	0.35	0.35	0.03	0.32	0.32	0.06	0.41	0.41	0.03	0.39	0.39
Sat Flow, veh/h	3375	4988	1553	3375	4988	1553	3375	3471	1553	3375	3471	1553
Grp Volume(v), veh/h	185	1214	465	44	1647	192	186	747	77	53	1388	148
Grp Sat Flow(s),veh/h/ln	1688	1663	1553	1688	1663	1553	1688	1736	1553	1688	1736	1553
Q Serve(g_s), s	4.9	18.9	25.1	1.2	29.0	8.6	5.0	14.5	2.8	1.4	35.0	5.8
Cycle Q Clear(g_c), s	4.9	18.9	25.1	1.2	29.0	8.6	5.0	14.5	2.8	1.4	35.0	5.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	188	1736	541	100	1607	500	188	1429	639	110	1350	604
V/C Ratio(X)	0.99	0.70	0.86	0.44	1.02	0.38	0.99	0.52	0.12	0.48	1.03	0.25
Avail Cap(c_a), veh/h	188	1736	541	150	1607	500	188	1429	639	150	1350	604
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	25.3	27.3	42.9	30.5	23.6	42.5	19.8	16.4	42.8	27.5	18.6
Incr Delay (d2), s/veh	61.6	1.3	13.2	3.0	29.0	0.5	63.2	0.3	0.1	3.2	32.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	8.9	12.7	0.6	17.6	3.7	3.9	7.0	1.2	0.7	22.7	2.5
LnGrp Delay(d),s/veh	104.1	26.5	40.5	45.9	59.5	24.1	105.7	20.2	16.5	46.0	59.5	18.8
LnGrp LOS	F	C	D	D	F	C	F	C	B	D	F	B
Approach Vol, veh/h		1864			1883			1010			1589	
Approach Delay, s/veh		37.7			55.6			35.7			55.2	
Approach LOS		D			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.9	41.1	6.7	35.3	9.0	39.0	9.0	33.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	36.0	4.0	30.0	5.0	35.0	5.0	29.0
Max Q Clear Time (g_c+I1), s	3.4	16.5	3.2	27.1	7.0	37.0	6.9	31.0
Green Ext Time (p_c), s	0.0	15.3	0.0	2.9	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	47.1
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	6	262	50	9	1	194	1515	55	1	1895	0
Future Volume (veh/h)	1	6	262	50	9	1	194	1515	55	1	1895	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1759	1845	1845	1845	1792	1792	1900	1792	1792	1900
Adj Flow Rate, veh/h	1	6	262	50	9	1	194	1515	55	1	1895	0
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	8	8	8	3	3	3	6	6	6	6	6	6
Cap, veh/h	208	219	372	78	81	69	212	1777	64	302	1986	0
Arrive On Green	0.12	0.12	0.12	0.04	0.04	0.04	0.12	0.53	0.53	0.18	0.58	0.00
Sat Flow, veh/h	1675	1759	1495	1757	1845	1568	1707	3352	121	1707	3495	0
Grp Volume(v), veh/h	1	6	262	50	9	1	194	768	802	1	1895	0
Grp Sat Flow(s),veh/h/ln	1675	1759	1495	1757	1845	1568	1707	1703	1771	1707	1703	0
Q Serve(g_s), s	0.1	0.4	16.0	3.6	0.6	0.1	14.5	49.7	50.1	0.1	67.3	0.0
Cycle Q Clear(g_c), s	0.1	0.4	16.0	3.6	0.6	0.1	14.5	49.7	50.1	0.1	67.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.07	1.00		0.00
Lane Grp Cap(c), veh/h	208	219	372	78	81	69	212	903	939	302	1986	0
V/C Ratio(X)	0.00	0.03	0.71	0.64	0.11	0.01	0.91	0.85	0.85	0.00	0.95	0.00
Avail Cap(c_a), veh/h	208	219	372	218	229	195	212	1164	1210	302	2010	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	49.4	49.5	44.1	60.5	59.1	58.9	55.7	25.9	26.0	43.6	25.2	0.0
Incr Delay (d2), s/veh	0.0	0.1	6.0	8.6	0.6	0.1	39.0	4.9	4.9	0.0	11.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	9.1	1.9	0.3	0.0	9.1	24.5	25.6	0.0	34.4	0.0
LnGrp Delay(d),s/veh	49.4	49.6	50.0	69.2	59.7	58.9	94.8	30.8	30.9	43.6	36.4	0.0
LnGrp LOS	D	D	D	E	E	E	F	C	C	D	D	
Approach Vol, veh/h		269			60			1764			1896	
Approach Delay, s/veh		50.0			67.6			37.9			36.4	
Approach LOS		D			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	26.8	72.3		20.0	20.0	79.1		9.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	88.0		16.0	16.0	76.0		16.0
Max Q Clear Time (g_c+I1), s	2.1	52.1		18.0	16.5	69.3		5.6
Green Ext Time (p_c), s	1.8	16.2		0.0	0.0	5.7		0.1

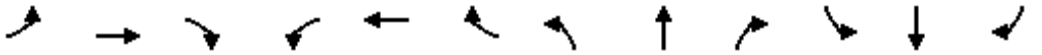
Intersection Summary	
HCM 2010 Ctrl Delay	38.4
HCM 2010 LOS	D

Notes

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	361	47	22	1333	1729	487
Future Volume (veh/h)	361	47	22	1333	1729	487
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	361	47	22	1333	1729	487
Adj No. of Lanes	2	1	2	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	526	242	71	2454	2125	951
Arrive On Green	0.15	0.15	0.02	0.70	0.61	0.61
Sat Flow, veh/h	3408	1568	3408	3597	3597	1568
Grp Volume(v), veh/h	361	47	22	1333	1729	487
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1752	1752	1568
Q Serve(g_s), s	5.5	1.4	0.3	10.1	21.0	9.7
Cycle Q Clear(g_c), s	5.5	1.4	0.3	10.1	21.0	9.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	526	242	71	2454	2125	951
V/C Ratio(X)	0.69	0.19	0.31	0.54	0.81	0.51
Avail Cap(c_a), veh/h	993	457	248	2618	2125	951
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.0	20.2	26.5	4.0	8.4	6.2
Incr Delay (d2), s/veh	1.6	0.4	2.5	0.2	2.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	1.3	0.2	4.9	10.6	4.3
LnGrp Delay(d),s/veh	23.6	20.6	28.9	4.2	10.9	6.6
LnGrp LOS	C	C	C	A	B	A
Approach Vol, veh/h	408			1355	2216	
Approach Delay, s/veh	23.2			4.6	10.0	
Approach LOS	C			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		42.4		12.5	5.1	37.3		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		41.0		16.0	4.0	33.0		
Max Q Clear Time (g_c+I1), s		12.1		7.5	2.3	23.0		
Green Ext Time (p_c), s		26.3		1.0	0.0	9.7		

Intersection Summary	
HCM 2010 Ctrl Delay	9.5
HCM 2010 LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	360	1103	319	76	721	6	585	1248	78	36	1015	366
Future Volume (veh/h)	360	1103	319	76	721	6	585	1248	78	36	1015	366
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	360	1103	319	76	721	6	585	1248	78	36	1015	366
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	381	1101	493	129	842	377	571	1552	694	90	1057	473
Arrive On Green	0.11	0.31	0.31	0.04	0.24	0.24	0.17	0.44	0.44	0.03	0.30	0.30
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	360	1103	319	76	721	6	585	1248	78	36	1015	366
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	9.4	28.1	15.7	2.0	17.6	0.3	15.0	27.6	2.6	0.9	25.5	19.0
Cycle Q Clear(g_c), s	9.4	28.1	15.7	2.0	17.6	0.3	15.0	27.6	2.6	0.9	25.5	19.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	381	1101	493	129	842	377	571	1552	694	90	1057	473
V/C Ratio(X)	0.95	1.00	0.65	0.59	0.86	0.02	1.02	0.80	0.11	0.40	0.96	0.77
Avail Cap(c_a), veh/h	381	1101	493	152	861	385	571	1552	694	152	1057	473
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.5	30.7	26.4	42.4	32.5	25.9	37.3	21.6	14.6	42.9	30.7	28.5
Incr Delay (d2), s/veh	32.4	27.6	3.0	4.2	8.4	0.0	44.0	3.2	0.1	2.8	18.8	7.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	17.7	7.2	1.0	9.5	0.1	10.5	13.9	1.1	0.5	15.0	9.2
LnGrp Delay(d),s/veh	71.8	58.3	29.4	46.6	40.9	25.9	81.2	24.8	14.7	45.7	49.5	36.3
LnGrp LOS	E	F	C	D	D	C	F	C	B	D	D	D
Approach Vol, veh/h		1782			803			1911			1417	
Approach Delay, s/veh		55.8			41.3			41.6			46.0	
Approach LOS		E			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	43.6	7.4	32.1	19.0	31.0	14.0	25.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	38.0	4.0	28.0	15.0	27.0	10.0	22.0
Max Q Clear Time (g_c+I1), s	2.9	29.6	4.0	30.1	17.0	27.5	11.4	19.6
Green Ext Time (p_c), s	0.0	7.6	0.0	0.0	0.0	0.0	0.0	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	46.9
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	986	643	205	657	673	338	490	391	785	976	0
Future Volume (veh/h)	0	986	643	205	657	673	338	490	391	785	976	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	0	986	643	205	657	673	338	490	391	785	976	0
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	5	1276	397	227	1880	585	409	794	355	818	1215	544
Arrive On Green	0.00	0.25	0.25	0.07	0.37	0.37	0.12	0.23	0.23	0.24	0.35	0.00
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	0	986	643	205	657	673	338	490	391	785	976	0
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	0.0	13.6	19.0	4.5	7.1	28.0	7.3	9.4	17.0	17.1	18.9	0.0
Cycle Q Clear(g_c), s	0.0	13.6	19.0	4.5	7.1	28.0	7.3	9.4	17.0	17.1	18.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	5	1276	397	227	1880	585	409	794	355	818	1215	544
V/C Ratio(X)	0.00	0.77	1.62	0.90	0.35	1.15	0.83	0.62	1.10	0.96	0.80	0.00
Avail Cap(c_a), veh/h	182	1276	397	227	1880	585	409	794	355	818	1215	544
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	26.0	28.0	34.8	16.9	23.5	32.2	26.1	29.0	28.1	22.2	0.0
Incr Delay (d2), s/veh	0.0	3.0	289.8	34.6	0.1	85.9	13.1	1.4	77.4	22.1	4.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.7	40.1	3.2	3.2	26.0	4.2	4.7	15.0	10.5	9.8	0.0
LnGrp Delay(d),s/veh	0.0	29.0	317.8	69.4	17.0	109.4	45.3	27.5	106.4	50.3	26.2	0.0
LnGrp LOS		C	F	E	B	F	D	C	F	D	C	
Approach Vol, veh/h		1629			1535			1219			1761	
Approach Delay, s/veh		143.0			64.5			57.8			36.9	
Approach LOS		F			E			E			D	

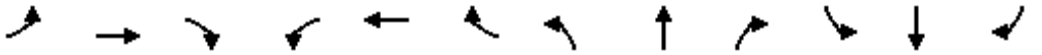
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	21.0	9.0	23.0	13.0	30.0	0.0	32.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	18.0	17.0	5.0	19.0	9.0	26.0	4.0	20.0
Max Q Clear Time (g_c+I1), s	19.1	19.0	6.5	21.0	9.3	20.9	0.0	30.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	76.1
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	314	1972	703	216	1299	0	621	518	228	86	613	276
Future Volume (veh/h)	314	1972	703	216	1299	0	621	518	228	86	613	276
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	314	1972	703	216	1299	0	621	518	228	86	613	276
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	387	1958	610	227	1723	536	606	1139	510	142	662	296
Arrive On Green	0.11	0.39	0.39	0.07	0.34	0.00	0.18	0.32	0.32	0.04	0.19	0.19
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	314	1972	703	216	1299	0	621	518	228	86	613	276
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	8.1	35.0	35.0	5.7	20.6	0.0	16.0	10.5	10.3	2.2	15.5	15.6
Cycle Q Clear(g_c), s	8.1	35.0	35.0	5.7	20.6	0.0	16.0	10.5	10.3	2.2	15.5	15.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	387	1958	610	227	1723	536	606	1139	510	142	662	296
V/C Ratio(X)	0.81	1.01	1.15	0.95	0.75	0.00	1.02	0.45	0.45	0.61	0.93	0.93
Avail Cap(c_a), veh/h	417	1958	610	227	1723	536	606	1139	510	189	662	296
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.0	27.5	27.5	41.9	26.2	0.0	37.0	24.1	24.0	42.4	35.9	35.9
Incr Delay (d2), s/veh	11.0	22.0	86.5	45.9	1.9	0.0	43.0	0.3	0.6	4.1	19.1	34.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	20.1	29.7	4.1	9.8	0.0	11.1	5.2	4.6	1.1	9.2	9.6
LnGrp Delay(d),s/veh	49.9	49.5	114.0	87.8	28.2	0.0	80.0	24.3	24.6	46.5	55.0	70.7
LnGrp LOS	D	F	F	F	C		F	C	C	D	D	E
Approach Vol, veh/h		2989			1515			1367			975	
Approach Delay, s/veh		64.7			36.7			49.7			58.7	
Approach LOS		E			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	33.2	10.0	39.0	20.0	21.0	14.2	34.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	28.0	6.0	35.0	16.0	17.0	11.0	30.0
Max Q Clear Time (g_c+I1), s	4.2	12.5	7.7	37.0	18.0	17.6	10.1	22.6
Green Ext Time (p_c), s	0.0	8.5	0.0	0.0	0.0	0.0	0.1	7.3

Intersection Summary	
HCM 2010 Ctrl Delay	54.7
HCM 2010 LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	851	822	72	1075	768	0	154	819	843	40	2036	759
Future Volume (veh/h)	851	822	72	1075	768	0	154	819	843	40	2036	759
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	851	822	72	1075	768	0	154	819	843	40	2036	759
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	880	755	235	994	923	287	142	2035	634	71	1930	601
Arrive On Green	0.26	0.15	0.15	0.29	0.18	0.00	0.04	0.40	0.40	0.02	0.38	0.38
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	851	822	72	1075	768	0	154	819	843	40	2036	759
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	29.6	18.0	4.9	35.0	17.6	0.0	5.0	13.9	48.5	1.4	46.0	46.0
Cycle Q Clear(g_c), s	29.6	18.0	4.9	35.0	17.6	0.0	5.0	13.9	48.5	1.4	46.0	46.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	880	755	235	994	923	287	142	2035	634	71	1930	601
V/C Ratio(X)	0.97	1.09	0.31	1.08	0.83	0.00	1.08	0.40	1.33	0.56	1.05	1.26
Avail Cap(c_a), veh/h	880	755	235	994	923	287	142	2035	634	85	1930	601
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.0	51.0	45.4	42.5	47.2	0.0	57.5	25.4	35.8	58.2	37.0	37.0
Incr Delay (d2), s/veh	22.5	59.3	0.7	53.2	6.5	0.0	99.9	0.1	159.3	6.8	36.7	131.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.7	12.5	2.2	23.8	8.7	0.0	4.3	6.5	48.9	0.7	27.8	41.8
LnGrp Delay(d),s/veh	66.4	110.3	46.2	95.7	53.8	0.0	157.4	25.6	195.0	65.0	73.7	168.2
LnGrp LOS	E	F	D	F	D		F	C	F	E	F	F
Approach Vol, veh/h		1745			1843			1816			2835	
Approach Delay, s/veh		86.3			78.2			115.4			98.9	
Approach LOS		F			E			F			F	

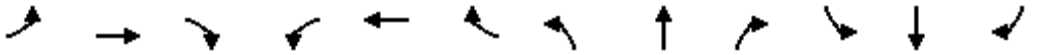
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	52.5	39.0	22.0	9.0	50.0	35.0	26.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	48.0	35.0	18.0	5.0	46.0	31.0	22.0
Max Q Clear Time (g_c+I1), s	3.4	50.5	37.0	20.0	7.0	48.0	31.6	19.6
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	95.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	553	1543	1044	34	1123	23	851	743	59	86	732	392
Future Volume (veh/h)	553	1543	1044	34	1123	23	851	743	59	86	732	392
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	553	1543	1044	34	1123	23	851	743	59	86	732	392
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	611	2015	627	63	1204	375	786	1333	596	139	668	299
Arrive On Green	0.18	0.40	0.40	0.02	0.24	0.24	0.23	0.38	0.38	0.04	0.19	0.19
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	553	1543	1044	34	1123	23	851	743	59	86	732	392
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	15.9	26.4	39.9	1.0	21.8	1.1	23.0	16.6	2.4	2.5	19.0	19.0
Cycle Q Clear(g_c), s	15.9	26.4	39.9	1.0	21.8	1.1	23.0	16.6	2.4	2.5	19.0	19.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	611	2015	627	63	1204	375	786	1333	596	139	668	299
V/C Ratio(X)	0.90	0.77	1.66	0.54	0.93	0.06	1.08	0.56	0.10	0.62	1.10	1.31
Avail Cap(c_a), veh/h	615	2015	627	103	1212	377	786	1333	596	171	668	299
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.1	25.9	29.9	48.5	37.2	29.3	38.4	24.3	19.9	47.1	40.4	40.4
Incr Delay (d2), s/veh	16.8	1.8	305.9	7.2	12.9	0.1	56.8	0.5	0.1	4.5	64.1	162.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	12.5	70.5	0.5	11.5	0.5	16.9	8.1	1.1	1.3	15.0	21.7
LnGrp Delay(d),s/veh	56.9	27.7	335.8	55.7	50.0	29.4	95.2	24.8	20.0	51.6	104.5	202.8
LnGrp LOS	E	C	F	E	D	C	F	C	B	D	F	F
Approach Vol, veh/h		3140			1180			1653			1210	
Approach Delay, s/veh		135.3			49.8			60.9			132.6	
Approach LOS		F			D			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	41.9	5.8	43.9	27.0	23.0	21.9	27.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	37.0	3.0	39.0	23.0	19.0	18.0	24.0
Max Q Clear Time (g_c+I1), s	4.5	18.6	3.0	41.9	25.0	21.0	17.9	23.8
Green Ext Time (p_c), s	0.0	11.6	0.0	0.0	0.0	0.0	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	103.7
HCM 2010 LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	2168	47	170	1793	6	32	1488	251	14	1604	99
Future Volume (veh/h)	91	2168	47	170	1793	6	32	1488	251	14	1604	99
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	91	2168	47	170	1793	6	32	1488	251	14	1604	99
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	133	1995	621	160	2036	634	67	1534	686	40	1506	674
Arrive On Green	0.04	0.40	0.40	0.05	0.40	0.40	0.02	0.44	0.44	0.01	0.43	0.43
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	91	2168	47	170	1793	6	32	1488	251	14	1604	99
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	3.9	59.0	2.8	7.0	49.1	0.3	1.4	61.8	16.0	0.6	64.0	5.7
Cycle Q Clear(g_c), s	3.9	59.0	2.8	7.0	49.1	0.3	1.4	61.8	16.0	0.6	64.0	5.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	133	1995	621	160	2036	634	67	1534	686	40	1506	674
V/C Ratio(X)	0.69	1.09	0.08	1.06	0.88	0.01	0.48	0.97	0.37	0.35	1.07	0.15
Avail Cap(c_a), veh/h	137	1995	621	160	2036	634	92	1534	686	92	1506	674
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.7	45.0	28.0	71.0	41.0	26.5	72.2	40.9	28.0	73.0	42.5	25.9
Incr Delay (d2), s/veh	12.9	48.2	0.1	88.3	4.9	0.0	5.2	16.4	0.3	5.1	42.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	36.2	1.2	5.3	23.7	0.1	0.7	33.2	6.9	0.3	39.9	2.5
LnGrp Delay(d),s/veh	83.5	93.2	28.0	159.3	45.9	26.5	77.4	57.3	28.4	78.1	85.1	26.0
LnGrp LOS	F	F	C	F	D	C	E	E	C	E	F	C
Approach Vol, veh/h		2306			1969			1771			1717	
Approach Delay, s/veh		91.5			55.6			53.6			81.7	
Approach LOS		F			E			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.8	69.2	11.0	63.0	6.9	68.0	9.8	64.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	64.0	7.0	59.0	4.0	64.0	6.0	60.0
Max Q Clear Time (g_c+I1), s	2.6	63.8	9.0	61.0	3.4	66.0	5.9	51.1
Green Ext Time (p_c), s	0.0	0.2	0.0	0.0	0.0	0.0	0.0	8.8

Intersection Summary	
HCM 2010 Ctrl Delay	71.6
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	301	672	0	1044	749	123	3	799	947	98	732	304
Future Volume (veh/h)	301	672	0	1044	749	123	3	799	947	98	732	304
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	301	672	0	1044	749	123	3	799	947	98	732	304
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	384	815	254	1042	1788	557	11	1072	480	154	1219	546
Arrive On Green	0.11	0.16	0.00	0.31	0.36	0.36	0.00	0.31	0.31	0.05	0.35	0.35
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	301	672	0	1044	749	123	3	799	947	98	732	304
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	7.6	11.4	0.0	27.0	9.9	4.8	0.1	18.1	27.0	2.5	15.2	13.8
Cycle Q Clear(g_c), s	7.6	11.4	0.0	27.0	9.9	4.8	0.1	18.1	27.0	2.5	15.2	13.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	384	815	254	1042	1788	557	11	1072	480	154	1219	546
V/C Ratio(X)	0.78	0.82	0.00	1.00	0.42	0.22	0.27	0.75	1.97	0.63	0.60	0.56
Avail Cap(c_a), veh/h	502	913	284	1042	1788	557	154	1072	480	154	1219	546
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.1	35.8	0.0	30.6	21.6	19.9	43.9	27.6	30.6	41.4	23.7	23.3
Incr Delay (d2), s/veh	6.0	5.7	0.0	28.3	0.2	0.2	12.9	2.9	446.2	8.2	0.8	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	5.7	0.0	16.7	4.6	2.1	0.1	9.2	71.1	1.3	7.5	6.2
LnGrp Delay(d),s/veh	44.1	41.5	0.0	58.9	21.7	20.1	56.8	30.4	476.8	49.7	24.5	24.5
LnGrp LOS	D	D		F	C	C	E	C	F	D	C	C
Approach Vol, veh/h		973			1916			1749			1134	
Approach Delay, s/veh		42.3			41.9			272.2			26.7	
Approach LOS		D			D			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	31.0	31.0	18.3	4.3	34.7	13.9	35.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	27.0	27.0	16.0	4.0	27.0	13.0	30.0
Max Q Clear Time (g_c+I1), s	4.5	29.0	29.0	13.4	2.1	17.2	9.6	11.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.9	0.0	8.6	0.4	9.9

Intersection Summary	
HCM 2010 Ctrl Delay	108.8
HCM 2010 LOS	F

Intersection	
Intersection Delay, s/veh	10.4
Intersection LOS	B

Approach	EB	NB	SB
Entry Lanes	1	2	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	110	965	1279
Demand Flow Rate, veh/h	113	994	1317
Vehicles Circulating, veh/h	1166	76	46
Vehicles Exiting, veh/h	197	1203	1024
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	10.7	8.8	11.5
Approach LOS	B	A	B

Lane	Left	Left	Right	Left	Right
Designated Moves	LR	LT	TR	LT	TR
Assumed Moves	LR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Critical Headway, s	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	113	467	527	619	698
Cap Entry Lane, veh/h	500	1067	1071	1092	1094
Entry HV Adj Factor	0.973	0.972	0.971	0.971	0.971
Flow Entry, veh/h	110	454	512	601	678
Cap Entry, veh/h	486	1037	1040	1060	1063
V/C Ratio	0.226	0.438	0.492	0.567	0.638
Control Delay, s/veh	10.7	8.3	9.2	10.6	12.3
LOS	B	A	A	B	B
95th %tile Queue, veh	1	2	3	4	5

Intersection	
Intersection Delay, s/veh	10.2
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	0	2	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	0	414	76	520
Demand Flow Rate, veh/h	0	427	78	536
Vehicles Circulating, veh/h	429	78	0	289
Vehicles Exiting, veh/h	396	0	429	216
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	5.6	3.9	14.8
Approach LOS	-	A	A	B

Lane	Left	Right	Left	Left
Designated Moves	LT	R	LT	TR
Assumed Moves	LT	R	LT	TR
RT Channelized				
Lane Util	0.590	0.410	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	252	175	78	536
Cap Entry Lane, veh/h	1045	1045	1130	846
Entry HV Adj Factor	0.970	0.971	0.972	0.971
Flow Entry, veh/h	244	170	76	520
Cap Entry, veh/h	1013	1015	1098	821
V/C Ratio	0.241	0.167	0.069	0.633
Control Delay, s/veh	5.9	5.1	3.9	14.8
LOS	A	A	A	B
95th %tile Queue, veh	1	1	0	5

Intersection	
Intersection Delay, s/veh	106.4
Intersection LOS	F

Approach	EB	WB	NB	SB
Entry Lanes	0	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	0	246	2192	2059
Demand Flow Rate, veh/h	0	254	2258	2121
Vehicles Circulating, veh/h	1978	2258	0	450
Vehicles Exiting, veh/h	593	0	1978	2062
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	132.6	49.5	163.8
Approach LOS	-	F	E	F

Lane	Left	Left	Right	Left	Right
Designated Moves	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Critical Headway, s	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	254	1061	1197	997	1124
Cap Entry Lane, veh/h	233	1130	1130	806	825
Entry HV Adj Factor	0.969	0.971	0.971	0.971	0.971
Flow Entry, veh/h	246	1030	1162	968	1091
Cap Entry, veh/h	225	1097	1097	783	801
V/C Ratio	1.092	0.939	1.059	1.237	1.363
Control Delay, s/veh	132.6	33.9	63.4	136.3	188.3
LOS	F	D	F	F	F
95th %tile Queue, veh	11	16	25	34	45

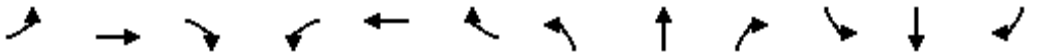
Intersection	
Intersection Delay, s/veh	215.2
Intersection LOS	F

Approach	EB	WB	NB	SB
Entry Lanes	1	0	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	749	0	2094	1920
Demand Flow Rate, veh/h	771	0	2157	1978
Vehicles Circulating, veh/h	1978	2257	452	0
Vehicles Exiting, veh/h	0	352	2297	2257
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	814.4	0.0	173.9	26.6
Approach LOS	F	-	F	D

Lane	Left	Left	Right	Left	Right
Designated Moves	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Critical Headway, s	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	771	1014	1143	930	1048
Cap Entry Lane, veh/h	283	805	823	1130	1130
Entry HV Adj Factor	0.971	0.971	0.971	0.971	0.971
Flow Entry, veh/h	749	984	1110	903	1018
Cap Entry, veh/h	275	781	800	1097	1097
V/C Ratio	2.725	1.260	1.388	0.823	0.927
Control Delay, s/veh	814.4	145.6	199.0	20.5	32.0
LOS	F	F	F	C	D
95th %tile Queue, veh	64	36	48	10	15

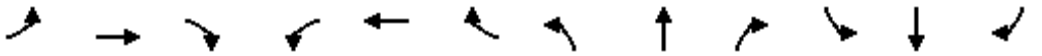
Cumulative Plus All Projects

Ultimate Mitigation AM



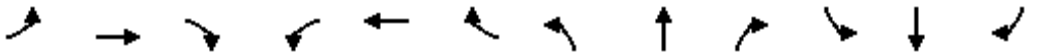
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	149	527	162	90	1149	805	577	1716	87	1265	1678	95
Future Volume (vph)	149	527	162	90	1149	805	577	1716	87	1265	1678	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		0.97	0.95	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	3349		3367	3471	2733	3367	4988	1553	3367	4988	1553
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	3349		3367	3471	2733	3367	4988	1553	3367	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	149	527	162	90	1149	805	577	1716	87	1265	1678	95
RTOR Reduction (vph)	0	22	0	0	0	479	0	0	60	0	0	56
Lane Group Flow (vph)	149	667	0	90	1149	326	577	1716	27	1265	1678	39
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	4.0	32.4		8.6	37.0	37.0	25.7	43.0	43.0	40.0	57.3	57.3
Effective Green, g (s)	4.0	32.4		8.6	37.0	37.0	25.7	43.0	43.0	40.0	57.3	57.3
Actuated g/C Ratio	0.03	0.23		0.06	0.26	0.26	0.18	0.31	0.31	0.29	0.41	0.41
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	96	775		206	917	722	618	1532	476	962	2041	635
v/s Ratio Prot	c0.04	0.20		0.03	c0.33		0.17	c0.34		c0.38	0.34	
v/s Ratio Perm						0.12			0.02			0.03
v/c Ratio	1.55	0.86		0.44	1.25	0.45	0.93	1.12	0.06	1.31	0.82	0.06
Uniform Delay, d1	68.0	51.6		63.4	51.5	43.0	56.3	48.5	34.2	50.0	36.8	25.1
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	293.1	9.7		1.5	122.9	0.5	21.3	63.4	0.0	149.2	2.8	0.0
Delay (s)	361.1	61.3		64.8	174.4	43.5	77.6	111.9	34.2	199.2	39.6	25.1
Level of Service	F	E		E	F	D	E	F	C	F	D	C
Approach Delay (s)		114.6			118.0			100.7			105.6	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	108.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	118.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



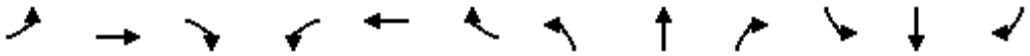
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	659	221	182	829	840	199	1837	190	505	814	71
Future Volume (vph)	39	659	221	182	829	840	199	1837	190	505	814	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.91	0.91	1.00	0.91		1.00	0.91	1.00
Frt	1.00	0.96		1.00	0.96	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	3373		1736	3184	1413	1736	4917		1736	4988	1553
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	3373		1736	3184	1413	1736	4917		1736	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	39	659	221	182	829	840	199	1837	190	505	814	71
RTOR Reduction (vph)	0	22	0	0	24	335	0	8	0	0	0	42
Lane Group Flow (vph)	39	858	0	182	1133	177	199	2019	0	505	814	29
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	7.6	39.8		16.0	48.2	48.2	21.8	48.0		31.0	57.2	57.2
Effective Green, g (s)	7.6	39.8		16.0	48.2	48.2	21.8	48.0		31.0	57.2	57.2
Actuated g/C Ratio	0.05	0.26		0.11	0.32	0.32	0.14	0.32		0.21	0.38	0.38
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	88	890		184	1017	451	250	1565		356	1892	589
v/s Ratio Prot	0.02	0.25		c0.10	c0.36		0.11	c0.41		c0.29	0.16	
v/s Ratio Perm						0.13						0.02
v/c Ratio	0.44	0.96		0.99	1.11	0.39	0.80	1.29		1.42	0.43	0.05
Uniform Delay, d1	69.5	54.8		67.3	51.3	39.9	62.4	51.4		59.9	34.7	29.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.5	21.7		62.5	65.1	0.6	15.9	135.4		204.2	0.2	0.0
Delay (s)	73.1	76.5		129.8	116.4	40.5	78.3	186.8		264.1	34.9	29.6
Level of Service	E	E		F	F	D	E	F		F	C	C
Approach Delay (s)		76.3			96.7			177.1			117.9	
Approach LOS		E			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	126.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	150.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	116.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	330	489	131	236	492	716	64	0	456	591	0	532
Future Volume (vph)	330	489	131	236	492	716	64	0	456	591	0	532
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	4.6	4.6	5.5	4.3	5.5		4.6	4.6	5.5	4.8	4.8
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00		0.95	0.95	0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.89	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99	1.00	0.95	0.95	1.00
Satd. Flow (prot)	3400	3505	1568	3400	3505	1568		1520	1475	1649	1649	1553
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.85	1.00	0.95	0.40	1.00
Satd. Flow (perm)	3400	3505	1568	3400	3505	1568		1306	1475	1649	688	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	330	489	131	236	492	716	64	0	456	591	0	532
RTOR Reduction (vph)	0	0	108	0	0	457	0	104	167	0	0	131
Lane Group Flow (vph)	330	489	23	236	492	259	0	161	88	295	296	401
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4	5	1	6		5	2	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	9.5	17.6	17.6	9.1	17.5	36.0		34.2	34.2	18.5	58.0	58.0
Effective Green, g (s)	9.5	17.6	17.6	9.1	17.5	36.0		34.2	34.2	18.5	58.0	58.0
Actuated g/C Ratio	0.10	0.18	0.18	0.09	0.18	0.36		0.34	0.34	0.19	0.58	0.58
Clearance Time (s)	5.5	4.6	4.6	5.5	4.3	5.5		4.6	4.6	5.5	4.8	4.8
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	2.0		1.0	1.0	2.0	1.0	1.0
Lane Grp Cap (vph)	324	619	277	310	615	566		448	506	306	579	904
v/s Ratio Prot	c0.10	0.14		0.07	c0.14	0.08				c0.18	0.09	
v/s Ratio Perm			0.01			0.08		0.12	0.06		c0.20	0.26
v/c Ratio	1.02	0.79	0.08	0.76	0.80	0.46		0.36	0.17	0.96	0.51	0.44
Uniform Delay, d1	45.0	39.2	34.3	44.2	39.4	24.3		24.5	22.8	40.2	12.4	11.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	54.8	6.2	0.0	9.5	7.0	0.2		0.2	0.1	41.2	0.3	0.1
Delay (s)	99.8	45.4	34.3	53.7	46.3	24.5		24.7	22.9	81.5	12.7	11.8
Level of Service	F	D	C	D	D	C		C	C	F	B	B
Approach Delay (s)		62.8			36.7			23.8			30.4	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	39.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	99.6	Sum of lost time (s)	20.4
Intersection Capacity Utilization	79.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

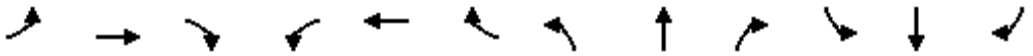


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	331	412	1	0	648	7	5	302	0	0	168	188
Future Volume (vph)	331	412	1	0	648	7	5	302	0	0	168	188
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00			1.00	
Frt	1.00	1.00			1.00		1.00	1.00			0.92	
Flt Protected	0.95	1.00			1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1671	1759			1725		1671	1759			1620	
Flt Permitted	0.95	1.00			1.00		0.95	1.00			1.00	
Satd. Flow (perm)	1671	1759			1725		1671	1759			1620	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	331	412	1	0	648	7	5	302	0	0	168	188
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	0	0	44	0
Lane Group Flow (vph)	331	413	0	0	654	0	5	302	0	0	312	0
Heavy Vehicles (%)	8%	8%	8%	10%	10%	10%	8%	8%	8%	8%	8%	8%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	18.0	56.1			34.1		0.7	22.7			18.0	
Effective Green, g (s)	18.0	56.1			34.1		0.7	22.7			18.0	
Actuated g/C Ratio	0.21	0.65			0.39		0.01	0.26			0.21	
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	346	1136			677		13	460			335	
v/s Ratio Prot	c0.20	0.23			c0.38		0.00	c0.17			c0.19	
v/s Ratio Perm												
v/c Ratio	0.96	0.36			0.97		0.38	0.66			0.93	
Uniform Delay, d1	34.0	7.1			25.8		42.8	28.6			33.8	
Progression Factor	1.00	1.00			1.00		1.00	1.00			1.00	
Incremental Delay, d2	36.7	0.2			26.2		17.9	3.4			31.7	
Delay (s)	70.7	7.3			52.0		60.7	31.9			65.4	
Level of Service	E	A			D		E	C			E	
Approach Delay (s)		35.5			52.0			32.4			65.4	
Approach LOS		D			D			C			E	

Intersection Summary			
HCM 2000 Control Delay	45.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	86.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1183	701	7	0	1122	15	8	30	5	7	6	541
Future Volume (vph)	1183	701	7	0	1122	15	8	30	5	7	6	541
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.9	6.9		6.0			6.1			6.2	5.5
Lane Util. Factor	0.97	0.95	1.00		0.95			1.00			1.00	0.88
Frt	1.00	1.00	0.85		1.00			0.98			1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00			0.99			0.97	1.00
Satd. Flow (prot)	3303	3406	1524		3431			1799			1779	2733
Flt Permitted	0.95	1.00	1.00		1.00			0.99			0.97	1.00
Satd. Flow (perm)	3303	3406	1524		3431			1799			1779	2733
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1183	701	7	0	1122	15	8	30	5	7	6	541
RTOR Reduction (vph)	0	0	1	0	1	0	0	3	0	0	0	74
Lane Group Flow (vph)	1183	701	6	0	1136	0	0	40	0	0	13	467
Heavy Vehicles (%)	6%	6%	6%	5%	5%	5%	3%	3%	3%	4%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	pm+ov
Protected Phases	1	6		5	2		8	8		4	4	1
Permitted Phases			6									4
Actuated Green, G (s)	51.6	103.5	103.5		47.3			3.3			2.1	53.7
Effective Green, g (s)	51.6	103.5	103.5		47.3			3.3			2.1	53.7
Actuated g/C Ratio	0.40	0.81	0.81		0.37			0.03			0.02	0.42
Clearance Time (s)	5.5	6.9	6.9		6.0			6.1			6.2	5.5
Vehicle Extension (s)	1.0	1.0	1.0		1.0			1.0			1.0	1.0
Lane Grp Cap (vph)	1330	2751	1231		1266			46			29	1145
v/s Ratio Prot	c0.36	0.21			c0.33			c0.02			c0.01	0.16
v/s Ratio Perm			0.00									0.01
v/c Ratio	0.89	0.25	0.00		0.90			0.87			0.45	0.41
Uniform Delay, d1	35.6	3.0	2.4		38.1			62.2			62.4	26.1
Progression Factor	1.00	1.00	1.00		1.00			1.00			1.00	1.00
Incremental Delay, d2	7.4	0.0	0.0		8.4			83.2			4.0	0.1
Delay (s)	43.0	3.0	2.4		46.6			145.4			66.4	26.2
Level of Service	D	A	A		D			F			E	C
Approach Delay (s)		28.0			46.6			145.4			27.1	
Approach LOS		C			D			F			C	

Intersection Summary			
HCM 2000 Control Delay	35.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	128.1	Sum of lost time (s)	24.7
Intersection Capacity Utilization	88.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1	19	205	4	610	19	1807	107	224	1589	0
Future Volume (vph)	0	1	19	205	4	610	19	1807	107	224	1589	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		0.86		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1582		1752	1845	1568	1752	3505	1568	1752	3505	
Flt Permitted		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1582		1752	1845	1568	1752	3505	1568	1752	3505	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1	19	205	4	610	19	1807	107	224	1589	0
RTOR Reduction (vph)	0	18	0	0	0	167	0	0	51	0	0	0
Lane Group Flow (vph)	0	2	0	205	4	443	19	1807	56	224	1589	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)		5.8		28.8	38.6	38.6	3.0	75.6	75.6	19.0	91.6	
Effective Green, g (s)		5.8		28.8	38.6	38.6	3.0	75.6	75.6	19.0	91.6	
Actuated g/C Ratio		0.04		0.20	0.27	0.27	0.02	0.52	0.52	0.13	0.63	
Clearance Time (s)		4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		63		347	490	416	36	1824	816	229	2211	
v/s Ratio Prot		0.00		0.12	0.00		0.01	c0.52		c0.13	0.45	
v/s Ratio Perm						c0.28			0.04			
v/c Ratio		0.03		0.59	0.01	1.06	0.53	0.99	0.07	0.98	0.72	
Uniform Delay, d1		67.0		52.8	39.2	53.3	70.4	34.5	17.3	62.9	18.1	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.2		2.7	0.0	62.1	13.3	18.8	0.0	52.7	1.1	
Delay (s)		67.2		55.5	39.2	115.4	83.7	53.3	17.3	115.6	19.2	
Level of Service		E		E	D	F	F	D	B	F	B	
Approach Delay (s)		67.2			100.1			51.6			31.1	
Approach LOS		E			F			D			C	

Intersection Summary			
HCM 2000 Control Delay	52.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	145.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	94.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	365	408	2767	435	710	734
Future Volume (vph)	365	408	2767	435	710	734
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.91
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3400	1568	5036	1568	3400	5036
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3400	1568	5036	1568	3400	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	365	408	2767	435	710	734
RTOR Reduction (vph)	0	258	0	189	0	0
Lane Group Flow (vph)	365	150	2767	246	710	734
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		3		2		
Actuated Green, G (s)	11.0	11.0	49.0	49.0	18.0	71.0
Effective Green, g (s)	11.0	11.0	49.0	49.0	18.0	71.0
Actuated g/C Ratio	0.12	0.12	0.54	0.54	0.20	0.79
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	415	191	2741	853	680	3972
v/s Ratio Prot	c0.11		c0.55		c0.21	0.15
v/s Ratio Perm		0.10		0.16		
v/c Ratio	0.88	0.78	1.01	0.29	1.04	0.18
Uniform Delay, d1	38.8	38.4	20.5	11.1	36.0	2.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	18.7	18.8	19.5	0.2	46.6	0.0
Delay (s)	57.5	57.1	40.0	11.3	82.6	2.4
Level of Service	E	E	D	B	F	A
Approach Delay (s)	57.3		36.1			41.8
Approach LOS	E		D			D

Intersection Summary			
HCM 2000 Control Delay	40.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	329	23	149	410	832	34	2829	206	422	2387	0
Future Volume (veh/h)	0	329	23	149	410	832	34	2829	206	422	2387	0
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1845	1845	1845	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	0	329	23	149	410	832	34	2829	206	422	2387	0
Adj No. of Lanes	2	2	1	2	2	1	2	3	0	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	2	512	229	136	796	573	60	2448	174	468	3171	0
Arrive On Green	0.00	0.15	0.15	0.04	0.23	0.23	0.02	0.51	0.51	0.14	0.64	0.00
Sat Flow, veh/h	3375	3471	1553	3408	3505	1568	3375	4754	338	3375	5152	0
Grp Volume(v), veh/h	0	329	23	149	410	832	34	1959	1076	422	2387	0
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1704	1752	1568	1688	1663	1767	1688	1663	0
Q Serve(g_s), s	0.0	12.3	1.8	5.5	14.2	31.4	1.4	71.2	71.2	17.0	46.2	0.0
Cycle Q Clear(g_c), s	0.0	12.3	1.8	5.5	14.2	31.4	1.4	71.2	71.2	17.0	46.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		0.00
Lane Grp Cap(c), veh/h	2	512	229	136	796	573	60	1712	910	468	3171	0
V/C Ratio(X)	0.00	0.64	0.10	1.10	0.52	1.45	0.56	1.14	1.18	0.90	0.75	0.00
Avail Cap(c_a), veh/h	73	728	326	136	796	573	103	1712	910	549	3225	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	55.5	51.0	66.4	46.8	43.9	67.4	33.5	33.5	58.6	17.6	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.1	106.3	0.3	212.5	3.1	72.3	93.5	15.1	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.0	0.8	4.6	6.9	55.6	0.7	49.8	58.3	9.0	21.3	0.0
LnGrp Delay(d),s/veh	0.0	56.0	51.1	172.7	47.0	256.3	70.4	105.8	127.0	73.7	18.5	0.0
LnGrp LOS		E	D	F	D	F	E	F	F	E	B	
Approach Vol, veh/h		352			1391			3069			2809	
Approach Delay, s/veh		55.7			185.7			112.9			26.8	
Approach LOS		E			F			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	93.2	0.0	37.1	24.7	76.5	11.0	26.1
Change Period (Y+Rc), s	5.5	5.3	5.5	* 5.7	5.5	* 5.3	5.5	* 5.7
Max Green Setting (Gmax), s	4.2	89.4	3.0	* 31	22.5	* 71	5.5	* 29
Max Q Clear Time (g_c+I1), s	3.4	48.2	0.0	33.4	19.0	73.2	7.5	14.3
Green Ext Time (p_c), s	0.0	35.2	0.0	0.0	0.2	0.0	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	91.8
HCM 2010 LOS	F

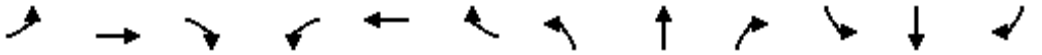
Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	1488	677	98	1960	977	763	1984	74	1096	1563	188
Future Volume (veh/h)	85	1488	677	98	1960	977	763	1984	74	1096	1563	188
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	85	1488	677	98	1960	0	763	1984	74	1096	1563	188
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	3	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	4	4	4	4	4	4
Cap, veh/h	66	1664	518	117	1755	546	591	1633	508	816	1566	488
Arrive On Green	0.02	0.34	0.34	0.04	0.36	0.00	0.17	0.33	0.33	0.17	0.31	0.31
Sat Flow, veh/h	3312	4893	1524	3312	4893	1524	3375	4988	1553	4907	4988	1553
Grp Volume(v), veh/h	85	1488	677	98	1960	0	763	1984	74	1096	1563	188
Grp Sat Flow(s),veh/h/ln	1656	1631	1524	1656	1631	1524	1688	1663	1553	1636	1663	1553
Q Serve(g_s), s	3.0	43.3	51.1	4.4	53.9	0.0	26.3	49.2	5.1	25.0	47.1	14.2
Cycle Q Clear(g_c), s	3.0	43.3	51.1	4.4	53.9	0.0	26.3	49.2	5.1	25.0	47.1	14.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	66	1664	518	117	1755	546	591	1633	508	816	1566	488
V/C Ratio(X)	1.29	0.89	1.31	0.84	1.12	0.00	1.29	1.22	0.15	1.34	1.00	0.39
Avail Cap(c_a), veh/h	66	1664	518	117	1755	546	591	1633	508	816	1566	488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.7	47.0	49.6	72.1	48.2	0.0	62.0	50.5	35.7	62.7	51.5	40.2
Incr Delay (d2), s/veh	205.4	6.5	151.6	37.3	61.1	0.0	143.6	102.7	0.0	162.5	22.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	20.6	43.3	2.6	34.1	0.0	24.0	38.1	2.2	23.5	24.8	6.1
LnGrp Delay(d),s/veh	279.0	53.5	201.2	109.4	109.3	0.0	205.6	153.3	35.8	225.2	73.7	40.4
LnGrp LOS	F	D	F	F	F		F	F	D	F	E	D
Approach Vol, veh/h		2250			2058			2821			2847	
Approach Delay, s/veh		106.5			109.3			164.3			129.8	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	59.3	31.0	52.0	10.8	56.5	29.0	54.0
Change Period (Y+Rc), s	5.0	* 5.4	* 4.7	4.8	5.5	* 5.4	4.0	4.8
Max Green Setting (Gmax), s	3.0	* 54	* 26	47.2	5.3	* 51	25.0	49.2
Max Q Clear Time (g_c+I1), s	5.0	55.9	28.3	49.1	6.4	53.1	27.0	51.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	130.1
HCM 2010 LOS	F

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1342	414	134	13	510	7	933	2195	129	9	816	800
Future Volume (veh/h)	1342	414	134	13	510	7	933	2195	129	9	816	800
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1827	1900	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	1342	414	134	13	510	7	933	2195	129	9	816	800
Adj No. of Lanes	3	2	1	2	2	0	2	3	1	2	3	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	1303	1388	621	29	498	7	903	2176	677	21	894	490
Arrive On Green	0.27	0.40	0.40	0.01	0.14	0.14	0.27	0.44	0.44	0.01	0.18	0.18
Sat Flow, veh/h	4907	3471	1553	3375	3506	48	3375	4988	1553	3375	4988	2733
Grp Volume(v), veh/h	1342	414	134	13	252	265	933	2195	129	9	816	800
Grp Sat Flow(s),veh/h/ln	1636	1736	1553	1688	1736	1818	1688	1663	1553	1688	1663	1367
Q Serve(g_s), s	37.2	11.4	7.9	0.5	19.9	19.9	37.5	61.1	7.2	0.4	22.5	25.1
Cycle Q Clear(g_c), s	37.2	11.4	7.9	0.5	19.9	19.9	37.5	61.1	7.2	0.4	22.5	25.1
Prop In Lane	1.00		1.00	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1303	1388	621	29	247	258	903	2176	677	21	894	490
V/C Ratio(X)	1.03	0.30	0.22	0.45	1.02	1.02	1.03	1.01	0.19	0.42	0.91	1.63
Avail Cap(c_a), veh/h	1303	1388	621	72	247	258	903	2176	677	72	894	490
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.4	28.7	27.6	69.1	60.1	60.1	51.3	39.5	24.3	69.4	56.4	57.5
Incr Delay (d2), s/veh	33.0	0.6	0.8	4.1	63.5	62.5	38.6	21.5	0.6	4.8	15.2	294.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.7	5.6	3.5	0.3	13.9	14.5	22.3	32.3	3.2	0.2	11.6	29.5
LnGrp Delay(d),s/veh	84.4	29.2	28.4	73.2	123.8	122.7	89.9	61.0	24.9	74.2	71.7	351.9
LnGrp LOS	F	C	C	E	F	F	F	F	C	E	E	F
Approach Vol, veh/h		1890			530			3257			1625	
Approach Delay, s/veh		68.3			122.0			67.9			209.6	
Approach LOS		E			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	42.4	30.3	42.3	25.1	6.4	66.3	6.2	61.2
Change Period (Y+Rc), s	* 4.9	* 5.2	* 5.1	* 5.2	5.5	* 5.2	5.0	* 5.2
Max Green Setting (Gmax), s	* 38	* 25	* 37	* 20	3.0	* 59	3.0	* 54
Max Q Clear Time (g_c+I1), s	39.5	27.1	39.2	21.9	2.4	63.1	2.5	13.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.4

Intersection Summary	
HCM 2010 Ctrl Delay	103.5
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	1326	686	5	1390	461	608	422	107	253	235	76
Future Volume (veh/h)	69	1326	686	5	1390	461	608	422	107	253	235	76
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	69	1326	686	5	1390	461	608	422	107	253	235	76
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	76	1358	634	7	1370	451	591	589	501	277	259	220
Arrive On Green	0.04	0.40	0.40	0.00	0.37	0.37	0.34	0.32	0.32	0.16	0.14	0.14
Sat Flow, veh/h	1757	3357	1568	1757	3750	1234	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	69	1326	686	5	1243	608	608	422	107	253	235	76
Grp Sat Flow(s),veh/h/ln	1757	1679	1568	1757	1679	1627	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	5.5	54.3	56.5	0.4	51.0	51.0	47.0	28.2	7.0	19.8	17.5	6.1
Cycle Q Clear(g_c), s	5.5	54.3	56.5	0.4	51.0	51.0	47.0	28.2	7.0	19.8	17.5	6.1
Prop In Lane	1.00		1.00	1.00		0.76	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	76	1358	634	7	1226	594	591	589	501	277	259	220
V/C Ratio(X)	0.91	0.98	1.08	0.75	1.01	1.02	1.03	0.72	0.21	0.91	0.91	0.35
Avail Cap(c_a), veh/h	76	1358	634	38	1226	594	591	589	501	315	264	225
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.5	40.9	41.6	69.5	44.3	44.3	46.3	41.9	34.7	57.9	59.1	54.2
Incr Delay (d2), s/veh	74.7	19.0	59.8	95.4	29.2	42.7	44.3	4.1	0.2	27.7	31.8	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	28.6	34.9	0.4	28.5	29.8	30.0	15.1	3.0	11.8	11.2	2.7
LnGrp Delay(d),s/veh	141.3	59.9	101.4	164.8	73.5	87.0	90.7	46.1	34.9	85.6	90.9	55.1
LnGrp LOS	F	E	F	F	F	F	F	D	C	F	F	E
Approach Vol, veh/h		2081			1856			1137			564	
Approach Delay, s/veh		76.3			78.2			68.9			83.7	
Approach LOS		E			E			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	48.6	4.5	60.5	51.0	23.6	10.0	55.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	25.0	42.0	3.0	54.0	47.0	20.0	6.0	51.0
Max Q Clear Time (g_c+I1), s	21.8	30.2	2.4	58.5	49.0	19.5	7.5	53.0
Green Ext Time (p_c), s	0.2	3.7	0.0	0.0	0.0	0.1	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	76.1
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	40	32	307	30	388	57	2863	368	680	1890	59
Future Volume (veh/h)	76	40	32	307	30	388	57	2863	368	680	1890	59
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	76	40	32	307	30	388	57	2863	368	680	1890	59
Adj No. of Lanes	1	1	0	2	1	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	64	35	28	545	295	251	72	2470	769	551	3080	96
Arrive On Green	0.04	0.04	0.04	0.16	0.16	0.16	0.04	0.50	0.50	0.16	0.62	0.62
Sat Flow, veh/h	1757	950	760	3408	1845	1568	1740	4988	1553	3375	4970	155
Grp Volume(v), veh/h	76	0	72	307	30	388	57	2863	368	680	1264	685
Grp Sat Flow(s),veh/h/ln	1757	0	1711	1704	1845	1568	1740	1663	1553	1688	1663	1800
Q Serve(g_s), s	5.5	0.0	5.5	12.5	2.1	24.0	4.9	74.3	23.5	24.5	35.0	35.1
Cycle Q Clear(g_c), s	5.5	0.0	5.5	12.5	2.1	24.0	4.9	74.3	23.5	24.5	35.0	35.1
Prop In Lane	1.00		0.44	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	64	0	63	545	295	251	72	2470	769	551	2061	1115
V/C Ratio(X)	1.18	0.00	1.15	0.56	0.10	1.55	0.79	1.16	0.48	1.23	0.61	0.61
Avail Cap(c_a), veh/h	64	0	63	545	295	251	123	2470	769	551	2061	1115
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.3	0.0	72.3	58.2	53.8	63.0	71.2	37.8	25.0	62.8	17.5	17.5
Incr Delay (d2), s/veh	168.8	0.0	159.5	0.8	0.1	264.8	6.9	76.5	0.2	120.1	0.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.0	5.4	5.9	1.1	28.8	2.5	51.6	10.1	20.6	16.1	17.5
LnGrp Delay(d),s/veh	241.1	0.0	231.9	59.0	53.9	327.8	78.1	114.3	25.2	182.9	17.9	18.3
LnGrp LOS	F		F	E	D	F	E	F	C	F	B	B
Approach Vol, veh/h		148			725			3288			2629	
Approach Delay, s/veh		236.6			202.6			103.7			60.7	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.3	98.2		11.0	30.0	79.5		29.5
Change Period (Y+Rc), s	* 5.1	* 5.2		5.5	5.5	* 5.2		5.5
Max Green Setting (Gmax), s	* 11	* 89		5.5	24.5	* 74		24.0
Max Q Clear Time (g_c+I1), s	6.9	37.1		7.5	26.5	76.3		26.0
Green Ext Time (p_c), s	0.0	38.5		0.0	0.0	0.0		0.0

Intersection Summary			
HCM 2010 Ctrl Delay		100.5	
HCM 2010 LOS		F	

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	224	1179	429	252	1471	826	359	2029	361	577	839	158
Future Volume (veh/h)	224	1179	429	252	1471	826	359	2029	361	577	839	158
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	224	1179	429	252	1471	826	359	2029	361	577	839	158
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	193	1413	440	294	1564	487	403	1771	551	438	1823	567
Arrive On Green	0.06	0.28	0.28	0.09	0.31	0.31	0.12	0.36	0.36	0.13	0.37	0.37
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	224	1179	429	252	1471	826	359	2029	361	577	839	158
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	8.5	33.1	40.8	11.0	42.8	46.7	15.8	53.4	29.4	19.5	19.3	10.8
Cycle Q Clear(g_c), s	8.5	33.1	40.8	11.0	42.8	46.7	15.8	53.4	29.4	19.5	19.3	10.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	193	1413	440	294	1564	487	403	1771	551	438	1823	567
V/C Ratio(X)	1.16	0.83	0.97	0.86	0.94	1.70	0.89	1.15	0.65	1.32	0.46	0.28
Avail Cap(c_a), veh/h	193	1413	440	315	1564	487	532	1771	551	438	1823	567
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.9	50.8	53.6	67.8	50.5	51.9	65.3	48.5	40.8	65.4	36.4	33.7
Incr Delay (d2), s/veh	115.6	4.2	36.1	18.0	11.4	322.2	11.9	72.8	2.2	158.7	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	15.8	22.1	5.9	21.5	63.8	8.0	36.4	13.0	18.7	8.9	4.6
LnGrp Delay(d),s/veh	186.6	55.0	89.7	85.7	61.9	374.1	77.2	121.3	43.0	224.1	36.5	33.8
LnGrp LOS	F	E	F	F	E	F	E	F	D	F	D	C
Approach Vol, veh/h		1832			2549			2749			1574	
Approach Delay, s/veh		79.2			165.4			105.3			105.0	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.4	60.6	14.0	52.4	25.0	59.0	18.5	47.9
Change Period (Y+Rc), s	5.5	* 5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	23.7	* 49	8.5	* 47	19.5	* 53	13.9	* 41
Max Q Clear Time (g_c+I1), s	17.8	21.3	10.5	48.7	21.5	55.4	13.0	42.8
Green Ext Time (p_c), s	0.2	13.5	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	117.3
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	350	1491	494	163	2278	530	71	2559	158	521	865	90
Future Volume (veh/h)	350	1491	494	163	2278	530	71	2559	158	521	865	90
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1845	1845	1792	1792	1845	1845	1845	1827	1845	1827
Adj Flow Rate, veh/h	350	1491	494	163	2278	530	71	2559	158	521	865	0
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	3	3	6	6	3	3	3	4	3	4
Cap, veh/h	258	1679	538	207	1612	502	110	1810	563	338	2137	659
Arrive On Green	0.08	0.34	0.34	0.06	0.33	0.33	0.03	0.36	0.36	0.10	0.42	0.00
Sat Flow, veh/h	3312	4893	1568	3408	4893	1524	3408	5036	1568	3375	5036	1553
Grp Volume(v), veh/h	350	1491	494	163	2278	530	71	2559	158	521	865	0
Grp Sat Flow(s),veh/h/ln	1656	1631	1568	1704	1631	1524	1704	1679	1568	1688	1679	1553
Q Serve(g_s), s	11.7	43.2	45.3	7.1	49.4	49.4	3.1	53.9	10.8	15.0	17.9	0.0
Cycle Q Clear(g_c), s	11.7	43.2	45.3	7.1	49.4	49.4	3.1	53.9	10.8	15.0	17.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	1679	538	207	1612	502	110	1810	563	338	2137	659
V/C Ratio(X)	1.35	0.89	0.92	0.79	1.41	1.06	0.65	1.41	0.28	1.54	0.40	0.00
Avail Cap(c_a), veh/h	258	1679	538	232	1612	502	204	1810	563	338	2137	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	69.1	46.5	47.2	69.5	50.3	50.3	71.7	48.1	34.2	67.5	30.0	0.0
Incr Delay (d2), s/veh	182.9	6.0	20.5	14.8	189.8	55.9	2.4	189.7	0.3	258.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.9	20.4	22.6	3.8	50.6	28.5	1.5	56.8	4.7	19.1	8.3	0.0
LnGrp Delay(d),s/veh	252.1	52.5	67.7	84.3	240.1	106.2	74.1	237.8	34.5	326.4	30.0	0.0
LnGrp LOS	F	D	E	F	F	F	E	F	C	F	C	
Approach Vol, veh/h		2335			2971			2788			1386	
Approach Delay, s/veh		85.7			207.7			222.1			141.4	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.2	68.8	16.0	55.0	20.0	59.0	13.9	57.1
Change Period (Y+Rc), s	* 5.4	5.1	* 4.3	5.6	5.0	5.1	* 4.8	* 5.6
Max Green Setting (Gmax), s	* 9	59.5	* 12	49.4	15.0	53.9	* 10	* 51
Max Q Clear Time (g_c+I1), s	5.1	19.9	13.7	51.4	17.0	55.9	9.1	47.3
Green Ext Time (p_c), s	0.0	35.1	0.0	0.0	0.0	0.0	0.1	3.3

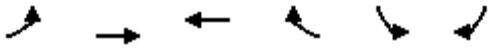
Intersection Summary	
HCM 2010 Ctrl Delay	172.2
HCM 2010 LOS	F

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	725	266	506	730	144	751
Future Volume (veh/h)	725	266	506	730	144	751
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1900	1845	1845	1845	1845
Adj Flow Rate, veh/h	725	266	506	730	144	751
Adj No. of Lanes	2	0	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	738	271	545	2296	426	867
Arrive On Green	0.29	0.29	0.31	0.66	0.24	0.24
Sat Flow, veh/h	2605	922	1757	3597	1757	1568
Grp Volume(v), veh/h	506	485	506	730	144	751
Grp Sat Flow(s),veh/h/ln	1752	1682	1757	1752	1757	1568
Q Serve(g_s), s	22.4	22.4	21.8	7.1	5.3	19.0
Cycle Q Clear(g_c), s	22.4	22.4	21.8	7.1	5.3	19.0
Prop In Lane		0.55	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	515	494	545	2296	426	867
V/C Ratio(X)	0.98	0.98	0.93	0.32	0.34	0.87
Avail Cap(c_a), veh/h	515	494	584	2373	426	867
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.4	27.4	26.2	5.9	24.4	15.0
Incr Delay (d2), s/veh	34.9	35.7	20.7	0.1	0.5	9.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.8	15.3	13.7	3.4	2.6	16.0
LnGrp Delay(d),s/veh	62.4	63.2	46.9	6.0	24.9	24.2
LnGrp LOS	E	E	D	A	C	C
Approach Vol, veh/h	991			1236	895	
Approach Delay, s/veh	62.7			22.7	24.3	
Approach LOS	E			C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		23.0	28.3	27.0				55.3
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		19.0	26.0	23.0				53.0
Max Q Clear Time (g_c+I1), s		21.0	23.8	24.4				9.1
Green Ext Time (p_c), s		0.0	0.4	0.0				17.8

Intersection Summary	
HCM 2010 Ctrl Delay	35.9
HCM 2010 LOS	D



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	309	1368	2592	849	562	193
Future Volume (veh/h)	309	1368	2592	849	562	193
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845
Adj Flow Rate, veh/h	309	1368	2592	849	562	193
Adj No. of Lanes	1	3	3	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	234	3458	2031	602	457	408
Arrive On Green	0.13	0.69	0.53	0.53	0.26	0.26
Sat Flow, veh/h	1757	5202	4023	1143	1757	1568
Grp Volume(v), veh/h	309	1368	2221	1220	562	193
Grp Sat Flow(s),veh/h/ln	1757	1679	1679	1643	1757	1568
Q Serve(g_s), s	20.0	17.5	79.0	79.0	39.0	15.6
Cycle Q Clear(g_c), s	20.0	17.5	79.0	79.0	39.0	15.6
Prop In Lane	1.00			0.70	1.00	1.00
Lane Grp Cap(c), veh/h	234	3458	1768	865	457	408
V/C Ratio(X)	1.32	0.40	1.26	1.41	1.23	0.47
Avail Cap(c_a), veh/h	234	3458	1768	865	457	408
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.0	10.1	35.5	35.5	55.5	46.8
Incr Delay (d2), s/veh	170.4	0.1	120.0	191.5	121.6	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.8	8.1	65.8	81.6	34.3	14.0
LnGrp Delay(d),s/veh	235.4	10.2	155.5	227.0	177.1	47.7
LnGrp LOS	F	B	F	F	F	D
Approach Vol, veh/h		1677	3441		755	
Approach Delay, s/veh		51.7	180.8		144.0	
Approach LOS		D	F		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				107.0		43.0	24.0	83.0
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				103.0		39.0	20.0	79.0
Max Q Clear Time (g_c+I1), s				19.5		41.0	22.0	81.0
Green Ext Time (p_c), s				82.1		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	139.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	171	981	84	886	1977	331	160	953	869	352	534	132
Future Volume (veh/h)	171	981	84	886	1977	331	160	953	869	352	534	132
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1792	1845	1845	1792	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	171	981	84	886	1977	331	160	953	869	352	534	132
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	6	3	3	6	3	3	3	3	3	3	3
Cap, veh/h	186	1050	336	868	2029	650	220	924	812	341	1048	469
Arrive On Green	0.05	0.21	0.21	0.25	0.41	0.41	0.06	0.26	0.26	0.10	0.30	0.30
Sat Flow, veh/h	3408	4893	1568	3408	4893	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	171	981	84	886	1977	331	160	953	869	352	534	132
Grp Sat Flow(s),veh/h/ln	1704	1631	1568	1704	1631	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	5.5	21.7	4.9	28.0	43.7	17.2	5.1	29.0	29.0	11.0	13.9	7.1
Cycle Q Clear(g_c), s	5.5	21.7	4.9	28.0	43.7	17.2	5.1	29.0	29.0	11.0	13.9	7.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	186	1050	336	868	2029	650	220	924	812	341	1048	469
V/C Ratio(X)	0.92	0.93	0.25	1.02	0.97	0.51	0.73	1.03	1.07	1.03	0.51	0.28
Avail Cap(c_a), veh/h	186	1050	336	868	2029	650	279	924	812	341	1048	469
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.8	42.4	35.9	41.0	31.6	23.9	50.5	40.5	26.5	49.5	31.9	29.5
Incr Delay (d2), s/veh	43.8	14.8	0.5	36.0	14.5	0.9	6.8	37.9	51.9	57.5	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	11.2	2.2	17.5	22.3	7.6	2.6	18.9	36.1	7.9	6.7	3.1
LnGrp Delay(d),s/veh	95.6	57.2	36.4	77.0	46.1	24.8	57.3	78.4	78.4	107.0	32.3	29.8
LnGrp LOS	F	E	D	F	D	C	E	F	F	F	C	C
Approach Vol, veh/h		1236			3194			1982			1018	
Approach Delay, s/veh		61.1			52.5			76.7			57.8	
Approach LOS		E			D			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	32.0	30.0	11.1	36.9	10.0	52.0	15.0	33.0
Change Period (Y+Rc), s	4.0	6.4	4.0	4.0	4.0	6.4	4.0	4.0
Max Green Setting (Gmax), s	28.0	23.6	9.0	31.0	6.0	45.6	11.0	29.0
Max Q Clear Time (g_c+I1), s	30.0	23.7	7.1	15.9	7.5	45.7	13.0	31.0
Green Ext Time (p_c), s	0.0	0.0	0.1	11.9	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	61.1
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	538	47	971	25	63	161	999	1153	13	105	1699	1114
Future Volume (veh/h)	538	47	971	25	63	161	999	1153	13	105	1699	1114
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1900	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	572	0	971	25	63	161	999	1153	13	105	1699	0
Adj No. of Lanes	2	0	1	0	1	1	1	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	712	0	318	19	48	57	549	2813	32	126	1536	478
Arrive On Green	0.20	0.00	0.20	0.04	0.04	0.04	0.32	0.55	0.55	0.07	0.31	0.00
Sat Flow, veh/h	3480	0	1553	517	1302	1568	1740	5084	57	1740	4988	1553
Grp Volume(v), veh/h	572	0	971	88	0	161	999	754	412	105	1699	0
Grp Sat Flow(s),veh/h/ln	1740	0	1553	1819	0	1568	1740	1663	1817	1740	1663	1553
Q Serve(g_s), s	23.5	0.0	30.7	5.5	0.0	5.5	47.3	19.7	19.7	8.9	46.2	0.0
Cycle Q Clear(g_c), s	23.5	0.0	30.7	5.5	0.0	5.5	47.3	19.7	19.7	8.9	46.2	0.0
Prop In Lane	1.00		1.00	0.28		1.00	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	712	0	318	67	0	57	549	1839	1005	126	1536	478
V/C Ratio(X)	0.80	0.00	3.06	1.32	0.00	2.80	1.82	0.41	0.41	0.84	1.11	0.00
Avail Cap(c_a), veh/h	712	0	318	67	0	57	549	1839	1005	194	1536	478
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.8	0.0	59.6	72.3	0.0	72.3	51.3	19.4	19.4	68.7	51.9	0.0
Incr Delay (d2), s/veh	6.1	0.0	933.2	217.5	0.0	856.3	376.5	0.1	0.1	10.2	57.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.9	0.0	95.6	6.8	0.0	16.1	80.1	9.0	9.9	4.7	29.4	0.0
LnGrp Delay(d),s/veh	62.9	0.0	992.8	289.7	0.0	928.5	427.9	19.4	19.5	78.9	109.7	0.0
LnGrp LOS	E		F	F		F	F	B	B	E	F	
Approach Vol, veh/h		1543			249			2165			1804	
Approach Delay, s/veh		648.1			702.8			207.9			107.9	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	52.0	51.0		11.0	15.2	87.8		36.0
Change Period (Y+Rc), s	* 4.7	4.8		5.5	* 4.4	* 4.8		5.3
Max Green Setting (Gmax), s	* 47	46.2		5.5	* 17	* 77		30.7
Max Q Clear Time (g_c+I1), s	49.3	48.2		7.5	10.9	21.7		32.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	13.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	315.9
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	341	560	175	40	1828	848	389	2034	20	78	834	632
Future Volume (veh/h)	341	560	175	40	1828	848	389	2034	20	78	834	632
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	341	560	175	40	1828	848	389	2034	20	78	834	632
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	278	2142	667	70	1834	571	299	1824	568	84	1506	469
Arrive On Green	0.08	0.43	0.43	0.02	0.36	0.36	0.09	0.37	0.37	0.02	0.30	0.30
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	341	560	175	40	1828	848	389	2034	20	78	834	632
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	11.5	10.1	10.2	1.6	51.1	51.4	12.5	51.6	1.2	3.3	19.8	42.6
Cycle Q Clear(g_c), s	11.5	10.1	10.2	1.6	51.1	51.4	12.5	51.6	1.2	3.3	19.8	42.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	278	2142	667	70	1834	571	299	1824	568	84	1506	469
V/C Ratio(X)	1.23	0.26	0.26	0.57	1.00	1.48	1.30	1.12	0.04	0.93	0.55	1.35
Avail Cap(c_a), veh/h	278	2142	667	121	1834	571	299	1824	568	84	1506	469
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.8	26.2	26.2	68.5	44.8	44.8	64.3	44.8	28.8	68.7	41.3	49.3
Incr Delay (d2), s/veh	130.0	0.0	0.1	2.7	20.1	227.4	157.7	60.1	0.0	74.7	0.3	170.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.4	4.7	4.4	0.8	27.1	58.2	12.4	33.8	0.5	2.4	9.1	40.5
LnGrp Delay(d),s/veh	194.8	26.2	26.3	71.2	64.9	272.2	222.0	104.8	28.8	143.4	41.5	219.5
LnGrp LOS	F	C	C	E	E	F	F	F	C	F	D	F
Approach Vol, veh/h		1076			2716			2443			1544	
Approach Delay, s/veh		79.7			129.7			122.9			119.5	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	48.6	17.0	57.5	9.0	57.6	8.4	66.1
Change Period (Y+Rc), s	5.5	6.0	5.5	* 6.1	5.5	* 6	5.5	* 6.1
Max Green Setting (Gmax), s	12.5	42.0	11.5	* 51	3.5	* 52	5.0	* 57
Max Q Clear Time (g_c+I1), s	14.5	44.6	13.5	53.4	5.3	53.6	3.6	12.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.6

Intersection Summary	
HCM 2010 Ctrl Delay	118.6
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	582	806	165	87	1809	926	786	2137	187	177	984	721
Future Volume (veh/h)	582	806	165	87	1809	926	786	2137	187	177	984	721
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1759	1759	1759	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	582	806	165	87	1809	926	786	2137	187	177	984	721
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	8	8	8	4	4	4	4	4	4
Cap, veh/h	352	2020	629	126	1617	503	484	1879	585	124	1347	419
Arrive On Green	0.10	0.40	0.40	0.04	0.34	0.34	0.14	0.38	0.38	0.04	0.27	0.27
Sat Flow, veh/h	3408	5036	1568	3250	4803	1495	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	582	806	165	87	1809	926	786	2137	187	177	984	721
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1625	1601	1495	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	15.5	17.1	10.6	4.0	50.5	50.5	21.5	56.5	12.8	5.5	26.9	40.5
Cycle Q Clear(g_c), s	15.5	17.1	10.6	4.0	50.5	50.5	21.5	56.5	12.8	5.5	26.9	40.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	352	2020	629	126	1617	503	484	1879	585	124	1347	419
V/C Ratio(X)	1.65	0.40	0.26	0.69	1.12	1.84	1.62	1.14	0.32	1.43	0.73	1.72
Avail Cap(c_a), veh/h	352	2020	629	186	1617	503	484	1879	585	124	1347	419
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.3	32.0	30.1	71.2	49.8	49.7	64.3	46.7	33.1	72.3	49.8	54.8
Incr Delay (d2), s/veh	306.1	0.0	0.1	2.5	62.4	385.4	290.4	69.0	0.1	233.6	1.8	333.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.3	7.9	4.6	1.8	31.7	74.7	29.5	37.9	5.5	6.6	12.6	56.3
LnGrp Delay(d),s/veh	373.3	32.1	30.1	73.7	112.2	435.1	354.7	115.7	33.2	305.9	51.6	388.5
LnGrp LOS	F	C	C	E	F	F	F	F	C	F	D	F
Approach Vol, veh/h		1553			2822			3110			1882	
Approach Delay, s/veh		159.7			217.0			171.2			204.6	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.0	46.0	21.0	56.0	11.0	62.0	11.3	65.7
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	21.5	40.5	15.5	50.5	5.5	56.5	8.6	57.4
Max Q Clear Time (g_c+I1), s	23.5	42.5	17.5	52.5	7.5	58.5	6.0	19.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.4

Intersection Summary	
HCM 2010 Ctrl Delay	189.8
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	609	393	58	58	770	103	2	646	40	94	1017	1130
Future Volume (veh/h)	609	393	58	58	770	103	2	646	40	94	1017	1130
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1810	1810	1810	1810	1810	1810
Adj Flow Rate, veh/h	609	393	58	58	770	103	2	646	40	94	1017	1130
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	5	5	5	5	5	5
Cap, veh/h	477	1396	625	101	1009	451	5	941	421	132	1072	844
Arrive On Green	0.14	0.41	0.41	0.03	0.30	0.30	0.00	0.27	0.27	0.04	0.31	0.31
Sat Flow, veh/h	3312	3406	1524	3312	3406	1524	3343	3438	1538	3343	3438	2707
Grp Volume(v), veh/h	609	393	58	58	770	103	2	646	40	94	1017	1130
Grp Sat Flow(s),veh/h/ln	1656	1703	1524	1656	1703	1524	1672	1719	1538	1672	1719	1354
Q Serve(g_s), s	12.4	6.6	2.0	1.5	17.7	4.4	0.1	14.5	1.7	2.4	24.9	26.8
Cycle Q Clear(g_c), s	12.4	6.6	2.0	1.5	17.7	4.4	0.1	14.5	1.7	2.4	24.9	26.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	477	1396	625	101	1009	451	5	941	421	132	1072	844
V/C Ratio(X)	1.28	0.28	0.09	0.58	0.76	0.23	0.37	0.69	0.09	0.71	0.95	1.34
Avail Cap(c_a), veh/h	477	1396	625	165	1068	478	117	1039	465	132	1072	844
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.8	16.9	15.6	41.2	27.5	22.9	42.9	27.9	23.3	40.9	29.0	29.6
Incr Delay (d2), s/veh	139.9	0.2	0.1	1.9	3.9	0.5	14.7	1.7	0.1	14.2	16.7	160.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.9	3.2	0.9	0.7	8.9	1.9	0.0	7.0	0.7	1.4	14.2	28.8
LnGrp Delay(d),s/veh	176.7	17.2	15.7	43.1	31.4	23.4	57.6	29.6	23.4	55.1	45.6	190.3
LnGrp LOS	F	B	B	D	C	C	E	C	C	E	D	F
Approach Vol, veh/h		1060			931			688			2241	
Approach Delay, s/veh		108.7			31.3			29.3			119.0	
Approach LOS		F			C			C			F	

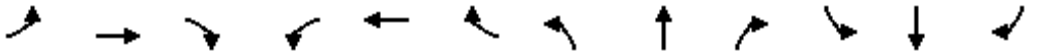
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	31.5	4.7	32.8	7.2	41.3	8.0	29.6
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	12.4	27.0	3.0	26.4	4.3	35.1	3.4	26.0
Max Q Clear Time (g_c+I1), s	14.4	19.7	2.1	28.8	3.5	8.6	4.4	16.5
Green Ext Time (p_c), s	0.0	5.8	0.0	0.0	0.0	16.7	0.0	7.1

Intersection Summary	
HCM 2010 Ctrl Delay	87.6
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	278	518	588	90	1297	6	242	1029	64	2	1412	336
Future Volume (veh/h)	278	518	588	90	1297	6	242	1029	64	2	1412	336
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	278	518	588	90	1297	6	242	1029	64	2	1412	336
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	262	1348	603	131	1213	543	236	1583	708	7	1348	603
Arrive On Green	0.08	0.38	0.38	0.04	0.35	0.35	0.07	0.45	0.45	0.00	0.38	0.38
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	278	518	588	90	1297	6	242	1029	64	2	1412	336
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	10.0	13.9	48.0	3.4	45.0	0.3	9.0	29.6	3.0	0.1	50.0	21.8
Cycle Q Clear(g_c), s	10.0	13.9	48.0	3.4	45.0	0.3	9.0	29.6	3.0	0.1	50.0	21.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	262	1348	603	131	1213	543	236	1583	708	7	1348	603
V/C Ratio(X)	1.06	0.38	0.98	0.69	1.07	0.01	1.03	0.65	0.09	0.27	1.05	0.56
Avail Cap(c_a), veh/h	262	1348	603	131	1213	543	236	1583	708	105	1348	603
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.0	28.9	39.4	61.7	42.5	27.9	60.5	27.7	20.4	64.8	40.0	31.3
Incr Delay (d2), s/veh	72.4	0.2	30.3	13.9	46.4	0.0	65.4	0.9	0.1	19.0	37.9	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	6.7	25.8	1.9	29.6	0.1	6.4	14.5	1.3	0.1	31.3	9.6
LnGrp Delay(d),s/veh	132.4	29.1	69.7	75.6	88.9	27.9	126.0	28.6	20.4	83.7	77.9	32.5
LnGrp LOS	F	C	E	E	F	C	F	C	C	F	F	C
Approach Vol, veh/h		1384			1393			1335			1750	
Approach Delay, s/veh		67.1			87.8			45.9			69.2	
Approach LOS		E			F			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.3	62.7	9.0	54.0	13.0	54.0	14.0	49.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	55.0	5.0	50.0	9.0	50.0	10.0	45.0
Max Q Clear Time (g_c+I1), s	2.1	31.6	5.4	50.0	11.0	52.0	12.0	47.0
Green Ext Time (p_c), s	0.0	19.8	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	67.8
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	605	301	402	1256	856	661	1097	239	357	329	0
Future Volume (veh/h)	0	605	301	402	1256	856	661	1097	239	357	329	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	0	605	301	402	1256	856	661	1097	239	357	329	0
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	5	1071	333	408	1941	818	787	1118	500	463	786	351
Arrive On Green	0.00	0.21	0.21	0.12	0.39	0.39	0.23	0.32	0.32	0.14	0.22	0.00
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	0	605	301	402	1256	856	661	1097	239	357	329	0
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	0.0	8.1	14.1	8.9	15.4	29.0	13.9	23.3	9.2	7.6	6.0	0.0
Cycle Q Clear(g_c), s	0.0	8.1	14.1	8.9	15.4	29.0	13.9	23.3	9.2	7.6	6.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	5	1071	333	408	1941	818	787	1118	500	463	786	351
V/C Ratio(X)	0.00	0.56	0.90	0.99	0.65	1.05	0.84	0.98	0.48	0.77	0.42	0.00
Avail Cap(c_a), veh/h	181	1071	333	408	1941	818	997	1118	500	680	792	354
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	26.5	28.9	33.1	18.9	18.0	27.6	25.4	20.6	31.4	25.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	26.4	40.7	0.8	44.5	5.3	22.3	0.7	3.2	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.8	8.5	6.4	7.2	26.9	7.1	14.7	4.1	3.8	3.0	0.0
LnGrp Delay(d),s/veh	0.0	27.2	55.3	73.8	19.7	62.5	32.9	47.7	21.3	34.6	25.3	0.0
LnGrp LOS		C	E	E	B	F	C	D	C	C	C	
Approach Vol, veh/h		906			2514			1997			686	
Approach Delay, s/veh		36.5			42.9			39.7			30.2	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.2	28.0	13.0	20.0	21.4	20.9	0.0	33.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	15.0	24.0	9.0	16.0	22.0	17.0	4.0	21.0
Max Q Clear Time (g_c+I1), s	9.6	25.3	10.9	16.1	15.9	8.0	0.0	31.0
Green Ext Time (p_c), s	0.6	0.0	0.0	0.0	1.4	6.3	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	39.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	984	950	35	791	895	0	133	2154	1044	54	691	791
Future Volume (veh/h)	984	950	35	791	895	0	133	2154	1044	54	691	791
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	984	950	35	791	895	0	133	2154	1044	54	691	791
Adj No. of Lanes	3	3	1	2	3	1	2	3	1	2	3	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	1032	923	287	767	1007	314	188	2182	679	85	2031	1113
Arrive On Green	0.21	0.18	0.18	0.22	0.20	0.00	0.06	0.43	0.43	0.03	0.40	0.40
Sat Flow, veh/h	4954	5036	1568	3408	5036	1568	3408	5036	1568	3408	5036	2760
Grp Volume(v), veh/h	984	950	35	791	895	0	133	2154	1044	54	691	791
Grp Sat Flow(s),veh/h/ln	1651	1679	1568	1704	1679	1568	1704	1679	1568	1704	1679	1380
Q Serve(g_s), s	23.5	22.0	2.2	27.0	20.7	0.0	4.6	50.8	52.0	1.9	11.4	28.8
Cycle Q Clear(g_c), s	23.5	22.0	2.2	27.0	20.7	0.0	4.6	50.8	52.0	1.9	11.4	28.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1032	923	287	767	1007	314	188	2182	679	85	2031	1113
V/C Ratio(X)	0.95	1.03	0.12	1.03	0.89	0.00	0.71	0.99	1.54	0.63	0.34	0.71
Avail Cap(c_a), veh/h	1032	923	287	767	1007	314	256	2182	679	85	2031	1113
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.9	49.0	40.9	46.5	46.7	0.0	55.8	33.7	34.0	58.0	24.8	29.9
Incr Delay (d2), s/veh	17.9	37.3	0.2	40.8	9.8	0.0	5.6	16.3	248.8	14.3	0.1	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.5	13.4	1.0	17.0	10.5	0.0	2.3	26.8	69.4	1.1	5.3	11.3
LnGrp Delay(d),s/veh	64.8	86.3	41.1	87.3	56.5	0.0	61.3	49.9	282.8	72.3	24.9	32.1
LnGrp LOS	E	F	D	F	E		E	D	F	E	C	C
Approach Vol, veh/h		1969			1686			3331			1536	
Approach Delay, s/veh		74.7			71.0			123.4			30.2	
Approach LOS		E			E			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	56.0	31.0	26.0	10.6	52.4	29.0	28.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	52.0	27.0	22.0	9.0	46.0	25.0	24.0
Max Q Clear Time (g_c+I1), s	3.9	54.0	29.0	24.0	6.6	30.8	25.5	22.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	15.0	0.0	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	85.0
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	347	996	631	20	1649	37	1225	741	22	50	782	585
Future Volume (veh/h)	347	996	631	20	1649	37	1225	741	22	50	782	585
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	347	996	631	20	1649	37	1225	741	22	50	782	585
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	288	1722	536	40	1356	422	944	1746	781	85	863	386
Arrive On Green	0.08	0.34	0.34	0.01	0.27	0.27	0.28	0.50	0.50	0.03	0.25	0.25
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	347	996	631	20	1649	37	1225	741	22	50	782	585
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	11.0	21.1	44.5	0.8	35.0	2.3	36.0	17.5	0.9	1.9	28.1	32.0
Cycle Q Clear(g_c), s	11.0	21.1	44.5	0.8	35.0	2.3	36.0	17.5	0.9	1.9	28.1	32.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	288	1722	536	40	1356	422	944	1746	781	85	863	386
V/C Ratio(X)	1.20	0.58	1.18	0.49	1.22	0.09	1.30	0.42	0.03	0.59	0.91	1.52
Avail Cap(c_a), veh/h	288	1722	536	79	1356	422	944	1746	781	131	863	386
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.5	35.1	42.8	63.8	47.5	35.6	47.0	20.8	16.6	62.7	47.5	49.0
Incr Delay (d2), s/veh	119.7	0.5	97.7	9.0	104.3	0.1	141.9	0.2	0.0	6.2	13.1	245.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	9.9	33.7	0.4	29.3	1.0	35.5	8.5	0.4	1.0	15.2	40.1
LnGrp Delay(d),s/veh	179.2	35.6	140.5	72.9	151.8	35.6	188.9	20.9	16.6	68.9	60.7	294.0
LnGrp LOS	F	D	F	E	F	D	F	C	B	E	E	F
Approach Vol, veh/h		1974			1706			1988			1417	
Approach Delay, s/veh		94.4			148.3			124.4			157.3	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	68.7	5.5	48.5	40.0	36.0	15.0	39.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	63.0	3.0	43.0	36.0	32.0	11.0	35.0
Max Q Clear Time (g_c+I1), s	3.9	19.5	2.8	46.5	38.0	34.0	13.0	37.0
Green Ext Time (p_c), s	0.0	20.7	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	128.4
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	1582	114	356	2405	9	9	1722	114	15	1410	85
Future Volume (veh/h)	102	1582	114	356	2405	9	9	1722	114	15	1410	85
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	102	1582	114	356	2405	9	9	1722	114	15	1410	85
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	107	1963	611	407	2407	749	29	1775	553	44	1797	559
Arrive On Green	0.03	0.39	0.39	0.12	0.48	0.48	0.01	0.35	0.35	0.01	0.36	0.36
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	102	1582	114	356	2405	9	9	1722	114	15	1410	85
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	3.8	35.7	6.1	13.1	60.9	0.4	0.3	42.9	6.5	0.6	31.9	4.7
Cycle Q Clear(g_c), s	3.8	35.7	6.1	13.1	60.9	0.4	0.3	42.9	6.5	0.6	31.9	4.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	107	1963	611	407	2407	749	29	1775	553	44	1797	559
V/C Ratio(X)	0.95	0.81	0.19	0.87	1.00	0.01	0.31	0.97	0.21	0.34	0.78	0.15
Avail Cap(c_a), veh/h	107	1963	611	427	2407	749	107	1776	553	107	1797	559
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.7	34.6	25.6	55.3	33.3	17.5	62.9	40.7	28.9	62.4	36.7	27.9
Incr Delay (d2), s/veh	72.5	2.6	0.1	17.4	18.1	0.0	5.8	14.9	0.2	4.5	2.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	17.0	2.7	7.2	32.1	0.2	0.2	22.4	2.8	0.3	15.1	2.1
LnGrp Delay(d),s/veh	134.2	37.2	25.8	72.7	51.4	17.5	68.7	55.6	29.0	66.9	39.0	28.0
LnGrp LOS	F	D	C	E	D	B	E	E	C	E	D	C
Approach Vol, veh/h		1798			2770			1845			1510	
Approach Delay, s/veh		42.0			54.0			54.0			38.7	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.6	49.0	19.2	53.8	5.1	49.5	8.0	65.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	45.0	16.0	49.0	4.0	45.0	4.0	61.0
Max Q Clear Time (g_c+I1), s	2.6	44.9	15.1	37.7	2.3	33.9	5.8	62.9
Green Ext Time (p_c), s	0.0	0.0	0.1	11.2	0.0	10.6	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	48.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	238	672	0	1035	708	68	0	699	1197	118	797	238
Future Volume (veh/h)	238	672	0	1035	708	68	0	699	1197	118	797	238
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	238	672	0	1035	708	68	0	699	1197	118	797	238
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	315	830	258	1190	2123	661	4	963	978	144	1259	563
Arrive On Green	0.09	0.16	0.00	0.35	0.42	0.42	0.00	0.27	0.27	0.04	0.36	0.36
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	238	672	0	1035	708	68	0	699	1197	118	797	238
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	6.4	12.2	0.0	26.9	9.0	2.5	0.0	17.1	26.0	3.3	17.9	10.9
Cycle Q Clear(g_c), s	6.4	12.2	0.0	26.9	9.0	2.5	0.0	17.1	26.0	3.3	17.9	10.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	315	830	258	1190	2123	661	4	963	978	144	1259	563
V/C Ratio(X)	0.75	0.81	0.00	0.87	0.33	0.10	0.00	0.73	1.22	0.82	0.63	0.42
Avail Cap(c_a), veh/h	468	851	265	1728	2713	845	144	963	978	144	1259	563
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.9	38.1	0.0	28.8	18.4	16.6	0.0	31.1	17.8	45.0	25.2	22.9
Incr Delay (d2), s/veh	3.9	5.8	0.0	3.5	0.1	0.1	0.0	2.8	109.8	29.7	1.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	6.1	0.0	13.2	4.1	1.1	0.0	8.6	55.0	2.1	8.8	4.8
LnGrp Delay(d),s/veh	45.8	43.9	0.0	32.3	18.5	16.6	0.0	33.9	127.6	74.7	26.2	23.4
LnGrp LOS	D	D		C	B	B		C	F	E	C	C
Approach Vol, veh/h		910			1811			1896			1153	
Approach Delay, s/veh		44.4			26.3			93.1			30.6	
Approach LOS		D			C			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	30.0	37.1	19.6	0.0	38.0	12.8	43.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	26.0	48.0	16.0	4.0	26.0	13.0	51.0
Max Q Clear Time (g_c+I1), s	5.3	28.0	28.9	14.2	0.0	19.9	8.4	11.0
Green Ext Time (p_c), s	0.0	0.0	4.2	1.4	0.0	5.7	0.3	13.5

Intersection Summary	
HCM 2010 Ctrl Delay	52.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	242	80	213	0	213	101	267	2043	95	10	1948	149
Future Volume (veh/h)	242	80	213	0	213	101	267	2043	95	10	1948	149
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	242	80	213	0	213	101	267	2043	95	10	1948	149
Adj No. of Lanes	1	1	1	1	1	1	1	3	0	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	250	614	521	2	264	224	83	2542	118	17	2282	174
Arrive On Green	0.14	0.33	0.33	0.00	0.14	0.14	0.05	0.52	0.52	0.01	0.48	0.48
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	4933	229	1757	4774	363
Grp Volume(v), veh/h	242	80	213	0	213	101	267	1388	750	10	1367	730
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1679	1804	1757	1679	1781
Q Serve(g_s), s	11.6	2.6	8.9	0.0	9.4	5.0	4.0	28.9	29.1	0.5	30.3	30.6
Cycle Q Clear(g_c), s	11.6	2.6	8.9	0.0	9.4	5.0	4.0	28.9	29.1	0.5	30.3	30.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		0.20
Lane Grp Cap(c), veh/h	250	614	521	2	264	224	83	1730	930	17	1604	851
V/C Ratio(X)	0.97	0.13	0.41	0.00	0.81	0.45	3.21	0.80	0.81	0.57	0.85	0.86
Avail Cap(c_a), veh/h	250	614	521	83	350	297	83	1730	930	83	1670	886
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	19.7	21.8	0.0	35.0	33.1	40.2	16.9	17.0	41.6	19.4	19.5
Incr Delay (d2), s/veh	48.2	0.1	0.5	0.0	9.9	1.4	1024.1	2.8	5.3	26.5	4.3	8.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	1.3	3.9	0.0	5.5	2.2	25.6	14.0	15.7	0.4	14.8	16.9
LnGrp Delay(d),s/veh	84.2	19.8	22.3	0.0	45.0	34.5	1064.3	19.7	22.2	68.1	23.8	27.7
LnGrp LOS	F	B	C		D	C	F	B	C	E	C	C
Approach Vol, veh/h		535			314			2405			2107	
Approach Delay, s/veh		49.9			41.6			136.5			25.3	
Approach LOS		D			D			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.8	47.5	0.0	32.1	8.0	44.4	16.0	16.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	42.0	4.0	24.0	4.0	42.0	12.0	16.0
Max Q Clear Time (g_c+I1), s	2.5	31.1	0.0	10.9	6.0	32.6	13.6	11.4
Green Ext Time (p_c), s	0.0	10.8	0.0	2.3	0.0	7.7	0.0	0.6

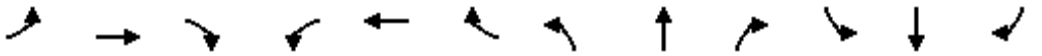
Intersection Summary	
HCM 2010 Ctrl Delay	78.6
HCM 2010 LOS	E

Cumulative Plus All Projects

Ultimate Mitigation PM

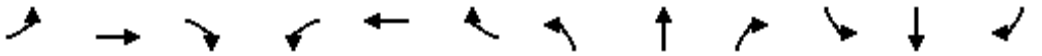
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	271	571	338	152	934	981	475	1225	49	1391	1798	150
Future Volume (vph)	271	571	338	152	934	981	475	1225	49	1391	1798	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		0.97	0.95	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	3278		3367	3471	2733	3367	4988	1553	3367	4988	1553
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	3278		3367	3471	2733	3367	4988	1553	3367	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	271	571	338	152	934	981	475	1225	49	1391	1798	150
RTOR Reduction (vph)	0	67	0	0	0	755	0	0	37	0	0	63
Lane Group Flow (vph)	271	842	0	152	934	226	475	1225	12	1391	1798	87
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	8.0	32.0		6.0	30.0	30.0	20.6	31.0	31.0	45.0	55.4	55.4
Effective Green, g (s)	8.0	32.0		6.0	30.0	30.0	20.6	31.0	31.0	45.0	55.4	55.4
Actuated g/C Ratio	0.06	0.25		0.05	0.23	0.23	0.16	0.24	0.24	0.35	0.43	0.43
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	207	806		155	801	630	533	1189	370	1165	2125	661
v/s Ratio Prot	c0.08	0.26		0.05	c0.27		0.14	c0.25		c0.41	0.36	
v/s Ratio Perm						0.08			0.01			0.06
v/c Ratio	1.31	1.04		0.98	1.17	0.36	0.89	1.03	0.03	1.19	0.85	0.13
Uniform Delay, d1	61.0	49.0		61.9	50.0	41.9	53.6	49.5	38.0	42.5	33.5	22.7
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	169.4	43.9		66.2	88.1	0.4	16.9	34.2	0.0	95.9	3.3	0.1
Delay (s)	230.4	92.9		128.2	138.1	42.3	70.5	83.7	38.0	138.4	36.8	22.8
Level of Service	F	F		F	F	D	E	F	D	F	D	C
Approach Delay (s)		124.5			91.9			78.8			78.5	
Approach LOS		F			F			E			E	

Intersection Summary			
HCM 2000 Control Delay	88.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	110.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



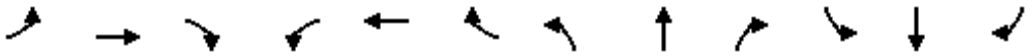
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	656	259	244	735	531	241	904	190	786	1656	91
Future Volume (vph)	74	656	259	244	735	531	241	904	190	786	1656	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.91	0.91	1.00	0.91		1.00	0.91	1.00
Frt	1.00	0.96		1.00	0.98	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	3356		1736	3244	1413	1736	4858		1736	4988	1553
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	3356		1736	3244	1413	1736	4858		1736	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	74	656	259	244	735	531	241	904	190	786	1656	91
RTOR Reduction (vph)	0	28	0	0	10	291	0	21	0	0	0	38
Lane Group Flow (vph)	74	887	0	244	868	97	241	1073	0	786	1656	53
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	11.6	31.0		18.0	37.4	37.4	23.5	31.0		54.0	61.5	61.5
Effective Green, g (s)	11.6	31.0		18.0	37.4	37.4	23.5	31.0		54.0	61.5	61.5
Actuated g/C Ratio	0.08	0.21		0.12	0.25	0.25	0.16	0.21		0.36	0.41	0.41
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	135	693		208	808	352	271	1003		624	2045	636
v/s Ratio Prot	0.04	c0.26		c0.14	0.27		0.14	c0.22		c0.45	0.33	
v/s Ratio Perm						0.07						0.03
v/c Ratio	0.55	1.28		1.17	1.07	0.28	0.89	1.07		1.26	0.81	0.08
Uniform Delay, d1	66.7	59.5		66.0	56.3	45.4	62.0	59.5		48.0	39.1	27.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.5	137.0		116.9	53.6	0.4	27.7	48.9		129.5	2.5	0.1
Delay (s)	71.2	196.5		182.9	109.9	45.8	89.7	108.4		177.5	41.6	27.1
Level of Service	E	F		F	F	D	F	F		F	D	C
Approach Delay (s)		187.2			105.3			105.0			83.2	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	109.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	118.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	265	500	145	479	516	787	128	0	288	670	0	403
Future Volume (vph)	265	500	145	479	516	787	128	0	288	670	0	403
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	4.6	4.6	5.5	4.3	5.5		4.6	4.6	4.8	4.8	4.8
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00		0.95	0.95	0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.94	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.97	1.00	0.95	0.95	1.00
Satd. Flow (prot)	3400	3505	1568	3400	3505	1568		1584	1475	1649	1649	1553
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.97	1.00	0.95	0.95	1.00
Satd. Flow (perm)	3400	3505	1568	3400	3505	1568		1584	1475	1649	1649	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	265	500	145	479	516	787	128	0	288	670	0	403
RTOR Reduction (vph)	0	0	116	0	0	556	0	115	183	0	0	289
Lane Group Flow (vph)	265	500	29	479	516	231	0	99	19	335	335	114
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA	custom	Split	NA	Perm	Split	NA	Perm
Protected Phases	3	8		7	4	5	6	6		2	2	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	12.0	19.3	19.3	18.9	26.5	31.9		10.2	10.2	29.9	29.9	29.9
Effective Green, g (s)	12.0	19.3	19.3	18.9	26.5	31.9		10.2	10.2	29.9	29.9	29.9
Actuated g/C Ratio	0.11	0.18	0.18	0.17	0.24	0.29		0.09	0.09	0.28	0.28	0.28
Clearance Time (s)	5.5	4.6	4.6	5.5	4.3	5.5		4.6	4.6	4.8	4.8	4.8
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	2.0		1.0	1.0	1.0	1.0	1.0
Lane Grp Cap (vph)	375	622	278	591	854	460		148	138	453	453	427
v/s Ratio Prot	0.08	c0.14		c0.14	0.15	c0.02		c0.06		c0.20	0.20	
v/s Ratio Perm			0.02			0.12			0.01			0.07
v/c Ratio	0.71	0.80	0.10	0.81	0.60	0.50		0.67	0.14	0.74	0.74	0.27
Uniform Delay, d1	46.7	42.9	37.5	43.2	36.4	31.8		47.6	45.2	35.9	35.9	30.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.9	7.0	0.1	7.8	0.8	0.3		8.5	0.2	5.4	5.4	0.1
Delay (s)	51.6	49.9	37.5	51.0	37.3	32.1		56.1	45.4	41.2	41.2	31.0
Level of Service	D	D	D	D	D	C		E	D	D	D	C
Approach Delay (s)		48.4			38.7			50.9			37.4	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	41.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	108.7	Sum of lost time (s)	25.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

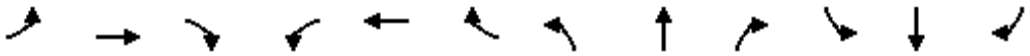


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	196	553	8	2	501	1	9	188	0	1	280	323
Future Volume (vph)	196	553	8	2	501	1	9	188	0	1	280	323
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1671	1755		1641	1727		1671	1759		1671	1618	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1671	1755		1641	1727		1671	1759		1671	1618	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	196	553	8	2	501	1	9	188	0	1	280	323
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	0	47	0
Lane Group Flow (vph)	196	560	0	2	502	0	9	188	0	1	556	0
Heavy Vehicles (%)	8%	8%	8%	10%	10%	10%	8%	8%	8%	8%	8%	8%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	11.0	40.4		0.7	30.1		0.7	31.4		0.7	31.4	
Effective Green, g (s)	11.0	40.4		0.7	30.1		0.7	31.4		0.7	31.4	
Actuated g/C Ratio	0.12	0.45		0.01	0.34		0.01	0.35		0.01	0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	206	794		12	582		13	619		13	569	
v/s Ratio Prot	c0.12	0.32		0.00	c0.29		c0.01	0.11		0.00	c0.34	
v/s Ratio Perm												
v/c Ratio	0.95	0.71		0.17	0.86		0.69	0.30		0.08	0.98	
Uniform Delay, d1	38.8	19.6		44.0	27.6		44.1	21.0		43.9	28.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	48.8	2.9		6.5	12.5		96.3	0.3		2.5	31.7	
Delay (s)	87.6	22.5		50.4	40.1		140.4	21.2		46.5	60.3	
Level of Service	F	C		D	D		F	C		D	E	
Approach Delay (s)		39.4			40.2			26.7			60.3	
Approach LOS		D			D			C			E	

Intersection Summary			
HCM 2000 Control Delay	44.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	89.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	549	1024	9	2	750	6	7	15	2	5	21	1108
Future Volume (vph)	549	1024	9	2	750	6	7	15	2	5	21	1108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.9	6.9	5.5	6.0			6.1			6.2	6.2
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95			1.00			1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00			0.99			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (prot)	3303	3406	1524	1719	3434			1798			1810	2733
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (perm)	3303	3406	1524	1719	3434			1798			1810	2733
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	549	1024	9	2	750	6	7	15	2	5	21	1108
RTOR Reduction (vph)	0	0	4	0	0	0	0	2	0	0	0	997
Lane Group Flow (vph)	549	1024	5	2	756	0	0	22	0	0	26	111
Heavy Vehicles (%)	6%	6%	6%	5%	5%	5%	3%	3%	3%	4%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		8	8		4	4	
Permitted Phases			6									4
Actuated Green, G (s)	17.6	49.5	49.5	0.5	33.3			1.6			8.5	8.5
Effective Green, g (s)	17.6	49.5	49.5	0.5	33.3			1.6			8.5	8.5
Actuated g/C Ratio	0.21	0.58	0.58	0.01	0.39			0.02			0.10	0.10
Clearance Time (s)	5.5	6.9	6.9	5.5	6.0			6.1			6.2	6.2
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0			1.0			1.0	1.0
Lane Grp Cap (vph)	685	1988	889	10	1348			33			181	273
v/s Ratio Prot	c0.17	0.30		0.00	c0.22			c0.01			0.01	
v/s Ratio Perm			0.00									c0.04
v/c Ratio	0.80	0.52	0.01	0.20	0.56			0.67			0.14	0.41
Uniform Delay, d1	31.9	10.5	7.4	42.0	20.1			41.3			34.8	35.8
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	6.3	0.1	0.0	3.6	0.3			33.0			0.1	0.4
Delay (s)	38.3	10.6	7.4	45.5	20.4			74.4			35.0	36.1
Level of Service	D	B	A	D	C			E			C	D
Approach Delay (s)		20.2			20.4			74.4			36.1	
Approach LOS		C			C			E			D	

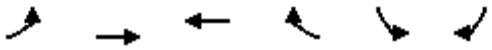
Intersection Summary			
HCM 2000 Control Delay	25.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	84.8	Sum of lost time (s)	24.7
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	13	43	148	6	202	38	1451	183	714	1482	1
Future Volume (vph)	12	13	43	148	6	202	38	1451	183	714	1482	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.88		1.00	0.85		1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1752	1632		1752	1576		1752	3505	1568	1752	3504	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1752	1632		1752	1576		1752	3505	1568	1752	3504	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	12	13	43	148	6	202	38	1451	183	714	1482	1
RTOR Reduction (vph)	0	41	0	0	180	0	0	0	75	0	0	0
Lane Group Flow (vph)	12	15	0	148	28	0	38	1451	108	714	1483	0
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	1.9	7.7		10.0	15.8		6.1	56.9	56.9	52.1	102.9	
Effective Green, g (s)	1.9	7.7		10.0	15.8		6.1	56.9	56.9	52.1	102.9	
Actuated g/C Ratio	0.01	0.05		0.07	0.11		0.04	0.40	0.40	0.37	0.72	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	23	88		122	174		74	1397	625	639	2526	
v/s Ratio Prot	0.01	0.01		c0.08	c0.02		0.02	c0.41		c0.41	0.42	
v/s Ratio Perm									0.07			
v/c Ratio	0.52	0.17		1.21	0.16		0.51	1.04	0.17	1.12	0.59	
Uniform Delay, d1	69.9	64.5		66.3	57.5		66.8	42.9	27.7	45.3	9.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	19.7	0.9		149.7	0.4		5.9	34.7	0.1	72.4	0.4	
Delay (s)	89.7	65.4		216.1	57.9		72.7	77.6	27.8	117.7	10.0	
Level of Service	F	E		F	E		E	E	C	F	A	
Approach Delay (s)		69.7			123.7			72.1			45.0	
Approach LOS		E			F			E			D	

Intersection Summary			
HCM 2000 Control Delay	62.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	142.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	104.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	1215	804	1686	1898	0
Future Volume (vph)	2	1215	804	1686	1898	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	
Frt	1.00	1.00	1.00	0.85	1.00	
Flt Protected	0.95	1.00	1.00	1.00	0.95	
Satd. Flow (prot)	3400	3505	3505	1568	3400	
Flt Permitted	0.95	1.00	1.00	1.00	0.95	
Satd. Flow (perm)	3400	3505	3505	1568	3400	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2	1215	804	1686	1898	0
RTOR Reduction (vph)	0	0	0	717	0	0
Lane Group Flow (vph)	2	1215	804	969	1898	0
Turn Type	Prot	NA	NA	Perm	Prot	
Protected Phases	4	5	5		6	
Permitted Phases				5		
Actuated Green, G (s)	1.1	46.0	46.0	46.0	76.1	
Effective Green, g (s)	1.1	46.0	46.0	46.0	76.1	
Actuated g/C Ratio	0.01	0.34	0.34	0.34	0.56	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	27	1192	1192	533	1913	
v/s Ratio Prot	c0.00	0.35	0.23		c0.56	
v/s Ratio Perm				c0.62		
v/c Ratio	0.07	1.02	0.67	1.82	0.99	
Uniform Delay, d1	66.5	44.6	38.2	44.6	29.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.2	31.0	1.5	375.9	18.6	
Delay (s)	67.7	75.6	39.7	420.5	47.9	
Level of Service	E	E	D	F	D	
Approach Delay (s)		75.6	297.5		47.9	
Approach LOS		E	F		D	

Intersection Summary			
HCM 2000 Control Delay	164.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.29		
Actuated Cycle Length (s)	135.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	114.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	390	690	1158	312	475	2678
Future Volume (vph)	390	690	1158	312	475	2678
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.91
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3400	1568	5036	1568	3400	5036
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3400	1568	5036	1568	3400	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	390	690	1158	312	475	2678
RTOR Reduction (vph)	0	408	0	194	0	0
Lane Group Flow (vph)	390	282	1158	118	475	2678
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		3		2		
Actuated Green, G (s)	13.8	13.8	24.1	24.1	14.0	42.1
Effective Green, g (s)	13.8	13.8	24.1	24.1	14.0	42.1
Actuated g/C Ratio	0.22	0.22	0.38	0.38	0.22	0.66
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	734	338	1899	591	744	3317
v/s Ratio Prot	0.11		0.23		0.14	c0.53
v/s Ratio Perm		c0.18		0.08		
v/c Ratio	0.53	0.84	0.61	0.20	0.64	0.81
Uniform Delay, d1	22.2	24.0	16.1	13.4	22.7	7.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	16.1	0.6	0.2	1.8	1.5
Delay (s)	22.9	40.1	16.7	13.6	24.5	9.5
Level of Service	C	D	B	B	C	A
Approach Delay (s)	33.9		16.0			11.7
Approach LOS	C		B			B

Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	63.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	580	23	194	198	704	9	2256	129	749	2558	1
Future Volume (veh/h)	0	580	23	194	198	704	9	2256	129	749	2558	1
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1845	1845	1845	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	0	580	23	194	198	704	9	2256	129	749	2558	1
Adj No. of Lanes	2	2	1	2	2	1	2	3	0	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	2	627	280	173	941	712	21	2096	119	628	3160	1
Arrive On Green	0.00	0.18	0.18	0.05	0.27	0.27	0.01	0.43	0.43	0.19	0.61	0.61
Sat Flow, veh/h	3375	3471	1553	3408	3505	1568	3375	4829	274	3375	5150	2
Grp Volume(v), veh/h	0	580	23	194	198	704	9	1548	837	749	1652	907
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1704	1752	1568	1688	1663	1779	1688	1663	1827
Q Serve(g_s), s	0.0	24.3	1.8	7.5	6.5	39.7	0.4	64.2	64.2	27.5	56.4	56.4
Cycle Q Clear(g_c), s	0.0	24.3	1.8	7.5	6.5	39.7	0.4	64.2	64.2	27.5	56.4	56.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.15	1.00		0.00
Lane Grp Cap(c), veh/h	2	627	280	173	941	712	21	1443	772	628	2041	1121
V/C Ratio(X)	0.00	0.93	0.08	1.12	0.21	0.99	0.43	1.07	1.08	1.19	0.81	0.81
Avail Cap(c_a), veh/h	68	681	304	173	941	712	68	1443	772	628	2041	1121
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	59.6	50.4	70.2	41.9	40.0	73.2	41.9	41.9	60.2	21.9	21.9
Incr Delay (d2), s/veh	0.0	17.2	0.0	105.2	0.0	30.6	4.9	45.8	57.6	102.1	2.4	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	13.2	0.8	6.0	3.1	34.4	0.2	38.4	43.7	21.6	26.4	29.5
LnGrp Delay(d),s/veh	0.0	76.8	50.5	175.4	42.0	70.6	78.2	87.7	99.5	162.3	24.3	26.1
LnGrp LOS		E	D	F	D	E	E	F	F	F	C	C
Approach Vol, veh/h		603			1096			2394			3308	
Approach Delay, s/veh		75.8			83.9			91.7			56.1	
Approach LOS		E			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	96.1	0.0	45.4	33.0	69.5	13.0	32.4
Change Period (Y+Rc), s	5.5	5.3	5.5	* 5.7	5.5	* 5.3	5.5	* 5.7
Max Green Setting (Gmax), s	3.0	88.6	3.0	* 33	27.5	* 64	7.5	* 29
Max Q Clear Time (g_c+I1), s	2.4	58.4	0.0	41.7	29.5	66.2	9.5	26.3
Green Ext Time (p_c), s	0.0	24.1	0.0	0.0	0.0	0.0	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	73.3
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	153	1828	773	61	1518	875	613	1675	106	935	1669	126
Future Volume (veh/h)	153	1828	773	61	1518	875	613	1675	106	935	1669	126
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	153	1828	773	61	1518	0	613	1675	106	935	1669	126
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	3	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	4	4	4	4	4	4
Cap, veh/h	154	1745	543	77	1647	513	575	1576	491	849	1566	488
Arrive On Green	0.05	0.36	0.36	0.02	0.34	0.00	0.17	0.32	0.32	0.17	0.31	0.31
Sat Flow, veh/h	3312	4893	1524	3312	4893	1524	3375	4988	1553	4907	4988	1553
Grp Volume(v), veh/h	153	1828	773	61	1518	0	613	1675	106	935	1669	126
Grp Sat Flow(s),veh/h/ln	1656	1631	1524	1656	1631	1524	1688	1663	1553	1636	1663	1553
Q Serve(g_s), s	6.9	53.6	53.6	2.8	44.8	0.0	25.6	47.5	7.5	26.0	47.2	9.1
Cycle Q Clear(g_c), s	6.9	53.6	53.6	2.8	44.8	0.0	25.6	47.5	7.5	26.0	47.2	9.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	154	1745	543	77	1647	513	575	1576	491	849	1566	488
V/C Ratio(X)	0.99	1.05	1.42	0.79	0.92	0.00	1.07	1.06	0.22	1.10	1.07	0.26
Avail Cap(c_a), veh/h	154	1745	543	77	1647	513	575	1576	491	849	1566	488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.6	48.4	48.4	73.0	47.9	0.0	62.3	51.4	37.7	62.2	51.6	38.5
Incr Delay (d2), s/veh	69.9	35.2	200.8	38.6	8.8	0.0	56.4	41.4	0.1	62.5	42.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	29.8	52.9	1.7	21.6	0.0	16.4	27.8	3.2	16.6	27.8	3.9
LnGrp Delay(d),s/veh	141.5	83.5	249.1	111.6	56.7	0.0	118.8	92.8	37.8	124.7	94.0	38.6
LnGrp LOS	F	F	F	F	E		F	F	D	F	F	D
Approach Vol, veh/h		2754			1579			2394			2730	
Approach Delay, s/veh		133.2			58.8			97.0			102.0	
Approach LOS		F			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	56.0	30.3	52.0	9.0	59.0	30.0	52.3
Change Period (Y+Rc), s	5.0	* 5.4	* 4.7	4.8	5.5	* 5.4	4.0	4.8
Max Green Setting (Gmax), s	7.0	* 50	* 26	47.2	3.5	* 54	26.0	47.5
Max Q Clear Time (g_c+I1), s	8.9	46.8	27.6	49.2	4.8	55.6	28.0	49.5
Green Ext Time (p_c), s	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	102.6
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	821	455	804	91	557	9	188	1038	11	22	1978	1340
Future Volume (veh/h)	821	455	804	91	557	9	188	1038	11	22	1978	1340
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1827	1900	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	821	455	804	91	557	9	188	1038	11	22	1978	1340
Adj No. of Lanes	3	2	1	2	2	0	2	3	1	2	3	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	903	1287	576	92	745	12	156	1987	619	45	1850	1014
Arrive On Green	0.18	0.37	0.37	0.03	0.21	0.21	0.05	0.40	0.40	0.01	0.37	0.37
Sat Flow, veh/h	4907	3471	1553	3375	3496	56	3375	4988	1553	3375	4988	2733
Grp Volume(v), veh/h	821	455	804	91	276	290	188	1038	11	22	1978	1340
Grp Sat Flow(s),veh/h/ln	1636	1736	1553	1688	1736	1817	1688	1663	1553	1688	1663	1367
Q Serve(g_s), s	18.0	10.4	40.8	3.0	16.4	16.4	5.1	17.4	0.5	0.7	40.8	40.8
Cycle Q Clear(g_c), s	18.0	10.4	40.8	3.0	16.4	16.4	5.1	17.4	0.5	0.7	40.8	40.8
Prop In Lane	1.00		1.00	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	903	1287	576	92	370	387	156	1987	619	45	1850	1014
V/C Ratio(X)	0.91	0.35	1.40	0.99	0.75	0.75	1.20	0.52	0.02	0.49	1.07	1.32
Avail Cap(c_a), veh/h	959	1287	576	92	370	387	156	1987	619	104	1850	1014
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.0	25.1	34.6	53.5	40.5	40.5	52.5	25.1	20.0	53.9	34.6	34.6
Incr Delay (d2), s/veh	11.4	0.8	188.6	89.7	12.9	12.4	136.2	1.0	0.1	3.0	42.2	151.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	5.1	47.6	2.5	9.2	9.5	5.3	8.2	0.2	0.4	25.9	36.7
LnGrp Delay(d),s/veh	55.4	25.8	223.2	143.2	53.4	52.9	188.7	26.1	20.1	56.9	76.8	186.4
LnGrp LOS	E	C	F	F	D	D	F	C	C	E	F	F
Approach Vol, veh/h		2080			657			1237			3340	
Approach Delay, s/veh		113.8			65.6			50.8			120.7	
Approach LOS		F			E			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	46.0	25.4	28.6	7.0	49.0	8.0	46.0
Change Period (Y+Rc), s	* 4.9	* 5.2	* 5.1	* 5.2	5.5	* 5.2	5.0	* 5.2
Max Green Setting (Gmax), s	* 5.1	* 41	* 22	* 22	3.4	* 42	3.0	* 41
Max Q Clear Time (g_c+I1), s	7.1	42.8	20.0	18.4	2.7	19.4	5.0	42.8
Green Ext Time (p_c), s	0.0	0.0	0.2	3.8	0.0	22.7	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	101.9
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	1249	518	91	1235	265	575	191	8	318	374	87
Future Volume (veh/h)	77	1249	518	91	1235	265	575	191	8	318	374	87
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	77	1249	518	91	1235	265	575	191	8	318	374	87
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	94	1157	477	94	1372	294	518	231	196	612	329	280
Arrive On Green	0.05	0.33	0.33	0.05	0.33	0.33	0.29	0.12	0.12	0.35	0.18	0.18
Sat Flow, veh/h	1757	3503	1444	1757	4153	891	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	77	1197	570	91	998	502	575	191	8	318	374	87
Grp Sat Flow(s),veh/h/ln	1757	1679	1590	1757	1679	1687	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	4.9	37.0	37.0	5.8	31.7	31.7	33.0	11.3	0.4	16.1	20.0	5.4
Cycle Q Clear(g_c), s	4.9	37.0	37.0	5.8	31.7	31.7	33.0	11.3	0.4	16.1	20.0	5.4
Prop In Lane	1.00		0.91	1.00		0.53	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	94	1109	525	94	1109	557	518	231	196	612	329	280
V/C Ratio(X)	0.82	1.08	1.09	0.97	0.90	0.90	1.11	0.83	0.04	0.52	1.14	0.31
Avail Cap(c_a), veh/h	94	1109	525	94	1109	557	518	379	322	612	329	280
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	37.5	37.5	52.9	35.7	35.7	39.5	47.8	31.7	29.0	46.0	40.0
Incr Delay (d2), s/veh	41.0	51.0	64.5	81.7	10.1	17.6	73.5	7.6	0.1	0.8	91.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	25.0	25.6	4.9	16.2	17.5	26.5	6.3	0.2	7.9	18.5	2.4
LnGrp Delay(d),s/veh	93.4	88.5	102.0	134.6	45.8	53.4	113.0	55.5	31.7	29.8	137.5	40.6
LnGrp LOS	F	F	F	F	D	D	F	E	C	C	F	D
Approach Vol, veh/h		1844			1591			774			779	
Approach Delay, s/veh		92.9			53.3			98.0			82.7	
Approach LOS		F			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	43.0	18.0	10.0	41.0	37.0	24.0	10.0	41.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	30.0	23.0	6.0	37.0	33.0	20.0	6.0	37.0
Max Q Clear Time (g_c+I1), s	18.1	13.3	7.8	39.0	35.0	22.0	6.9	33.7
Green Ext Time (p_c), s	2.9	0.7	0.0	0.0	0.0	0.0	0.0	3.2

Intersection Summary	
HCM 2010 Ctrl Delay	79.5
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	31	17	472	44	537	48	2143	294	530	2550	59
Future Volume (veh/h)	73	31	17	472	44	537	48	2143	294	530	2550	59
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	73	31	17	472	44	537	48	2143	294	530	2550	59
Adj No. of Lanes	1	1	0	2	1	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	66	42	23	560	303	258	61	2396	746	570	3095	71
Arrive On Green	0.04	0.04	0.04	0.16	0.16	0.16	0.04	0.48	0.48	0.17	0.62	0.62
Sat Flow, veh/h	1757	1121	615	3408	1845	1568	1740	4988	1553	3375	5016	116
Grp Volume(v), veh/h	73	0	48	472	44	537	48	2143	294	530	1686	923
Grp Sat Flow(s),veh/h/ln	1757	0	1736	1704	1845	1568	1740	1663	1553	1688	1663	1807
Q Serve(g_s), s	5.5	0.0	4.0	19.6	3.0	24.0	4.0	57.2	17.7	22.6	57.6	58.4
Cycle Q Clear(g_c), s	5.5	0.0	4.0	19.6	3.0	24.0	4.0	57.2	17.7	22.6	57.6	58.4
Prop In Lane	1.00		0.35	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	66	0	65	560	303	258	61	2396	746	570	2051	1115
V/C Ratio(X)	1.10	0.00	0.73	0.84	0.15	2.08	0.78	0.89	0.39	0.93	0.82	0.83
Avail Cap(c_a), veh/h	66	0	65	560	303	258	126	2503	779	589	2051	1115
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.3	0.0	69.6	59.2	52.2	61.0	69.9	34.6	24.3	59.8	21.7	21.9
Incr Delay (d2), s/veh	141.8	0.0	30.9	10.6	0.1	501.0	7.8	4.3	0.1	20.5	2.6	5.0
Initial Q Delay(d3),s/veh	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.0	2.5	10.1	1.5	46.2	2.1	27.1	7.6	12.2	27.0	30.5
LnGrp Delay(d),s/veh	213.0	0.0	100.4	69.8	52.3	562.0	77.7	38.8	24.4	80.4	24.4	26.9
LnGrp LOS	F		F	E	D	F	E	D	C	F	C	C
Approach Vol, veh/h		121			1053			2485			3139	
Approach Delay, s/veh		168.4			320.1			37.9			34.6	
Approach LOS		F			F			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.2	95.3		11.0	30.2	75.4		29.5
Change Period (Y+Rc), s	* 5.1	* 5.2		5.5	5.5	* 5.2		5.5
Max Green Setting (Gmax), s	* 11	* 89		5.5	25.5	* 73		24.0
Max Q Clear Time (g_c+I1), s	6.0	60.4		7.5	24.6	59.2		26.0
Green Ext Time (p_c), s	0.0	23.1		0.0	0.1	11.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	82.4
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	1261	464	577	1079	740	495	1079	154	825	1824	181
Future Volume (veh/h)	184	1261	464	577	1079	740	495	1079	154	825	1824	181
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	184	1261	464	577	1079	740	495	1079	154	825	1824	181
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	208	1160	361	509	1605	500	437	1166	363	805	1709	532
Arrive On Green	0.06	0.23	0.23	0.15	0.32	0.32	0.13	0.23	0.23	0.24	0.34	0.34
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	184	1261	464	577	1079	740	495	1079	154	825	1824	181
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	8.1	34.7	34.7	22.5	28.0	48.0	19.5	31.9	12.7	35.9	51.6	13.1
Cycle Q Clear(g_c), s	8.1	34.7	34.7	22.5	28.0	48.0	19.5	31.9	12.7	35.9	51.6	13.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	208	1160	361	509	1605	500	437	1166	363	805	1709	532
V/C Ratio(X)	0.88	1.09	1.28	1.13	0.67	1.48	1.13	0.93	0.42	1.03	1.07	0.34
Avail Cap(c_a), veh/h	208	1160	361	509	1605	500	437	1166	363	805	1709	532
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.2	58.0	58.0	64.1	44.5	51.3	65.6	56.4	49.1	57.4	49.5	36.8
Incr Delay (d2), s/veh	32.0	53.3	147.5	81.9	0.9	226.9	84.5	12.2	0.3	38.3	42.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	21.7	29.8	16.3	13.1	52.3	14.2	16.0	5.5	20.9	30.3	5.6
LnGrp Delay(d),s/veh	102.2	111.2	205.4	146.0	45.4	278.2	150.0	68.6	49.4	95.7	91.8	37.0
LnGrp LOS	F	F	F	F	D	F	F	E	D	F	F	D
Approach Vol, veh/h		1909			2396			1728			2830	
Approach Delay, s/veh		133.3			141.5			90.2			89.4	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	57.2	14.7	53.7	41.4	40.8	28.0	40.4
Change Period (Y+Rc), s	5.5	* 5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	19.5	* 52	9.2	* 48	35.9	* 35	22.5	* 34
Max Q Clear Time (g_c+I1), s	21.5	53.6	10.1	50.0	37.9	33.9	24.5	36.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	113.1
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	2208	58	290	1548	492	476	1059	118	521	2559	161
Future Volume (veh/h)	260	2208	58	290	1548	492	476	1059	118	521	2559	161
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1845	1845	1792	1792	1845	1845	1845	1827	1845	1827
Adj Flow Rate, veh/h	260	2208	58	290	1548	492	476	1059	118	521	2559	0
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	3	3	6	6	3	3	3	4	3	4
Cap, veh/h	297	1655	530	231	1564	487	331	1466	456	563	1804	556
Arrive On Green	0.09	0.34	0.34	0.07	0.32	0.32	0.10	0.29	0.29	0.17	0.36	0.00
Sat Flow, veh/h	3312	4893	1568	3408	4893	1524	3408	5036	1568	3375	5036	1553
Grp Volume(v), veh/h	260	2208	58	290	1548	492	476	1059	118	521	2559	0
Grp Sat Flow(s),veh/h/ln	1656	1631	1568	1704	1631	1524	1704	1679	1568	1688	1679	1553
Q Serve(g_s), s	11.7	50.9	3.8	10.2	47.4	48.1	14.6	28.4	8.7	22.9	53.9	0.0
Cycle Q Clear(g_c), s	11.7	50.9	3.8	10.2	47.4	48.1	14.6	28.4	8.7	22.9	53.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	297	1655	530	231	1564	487	331	1466	456	563	1804	556
V/C Ratio(X)	0.88	1.33	0.11	1.26	0.99	1.01	1.44	0.72	0.26	0.93	1.42	0.00
Avail Cap(c_a), veh/h	297	1655	530	231	1564	487	331	1466	456	628	1804	556
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	67.7	49.8	34.2	70.2	51.0	51.2	67.9	47.9	40.9	61.8	48.3	0.0
Incr Delay (d2), s/veh	23.2	154.6	0.0	145.3	20.3	43.4	214.3	1.8	0.3	17.9	191.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	46.5	1.7	9.4	24.3	26.1	16.7	13.4	3.8	12.1	56.9	0.0
LnGrp Delay(d),s/veh	90.8	204.4	34.3	215.4	71.2	94.6	282.3	49.7	41.2	79.7	240.1	0.0
LnGrp LOS	F	F	C	F	E	F	F	D	D	E	F	
Approach Vol, veh/h		2526			2330			1653			3080	
Approach Delay, s/veh		188.8			94.1			116.0			213.0	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	59.0	17.8	53.7	30.1	48.9	15.0	56.5
Change Period (Y+Rc), s	* 5.4	5.1	* 4.3	5.6	5.0	5.1	* 4.8	* 5.6
Max Green Setting (Gmax), s	* 15	53.9	* 14	47.6	28.0	40.9	* 10	* 51
Max Q Clear Time (g_c+I1), s	16.6	55.9	13.7	50.1	24.9	30.4	12.2	52.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.2	9.5	0.0	0.0

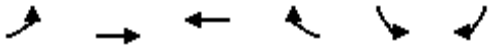
Intersection Summary	
HCM 2010 Ctrl Delay	161.0
HCM 2010 LOS	F

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	689	182	755	773	232	570
Future Volume (veh/h)	689	182	755	773	232	570
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1900	1845	1845	1845	1845
Adj Flow Rate, veh/h	689	182	755	773	232	570
Adj No. of Lanes	2	0	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	671	177	761	2531	332	976
Arrive On Green	0.24	0.24	0.43	0.72	0.19	0.19
Sat Flow, veh/h	2837	725	1757	3597	1757	1568
Grp Volume(v), veh/h	440	431	755	773	232	570
Grp Sat Flow(s),veh/h/ln	1752	1717	1757	1752	1757	1568
Q Serve(g_s), s	22.0	22.0	38.4	7.1	11.1	17.0
Cycle Q Clear(g_c), s	22.0	22.0	38.4	7.1	11.1	17.0
Prop In Lane		0.42	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	428	420	761	2531	332	976
V/C Ratio(X)	1.03	1.03	0.99	0.31	0.70	0.58
Avail Cap(c_a), veh/h	428	420	761	2531	332	976
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.0	34.0	25.3	4.5	34.1	10.1
Incr Delay (d2), s/veh	50.5	51.1	30.5	0.1	6.4	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.6	16.3	24.9	3.4	5.9	8.5
LnGrp Delay(d),s/veh	84.5	85.1	55.8	4.5	40.5	11.0
LnGrp LOS	F	F	E	A	D	B
Approach Vol, veh/h	871			1528	802	
Approach Delay, s/veh	84.8			29.9	19.5	
Approach LOS	F			C	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		21.0	43.0	26.0				69.0
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		17.0	39.0	22.0				65.0
Max Q Clear Time (g_c+I1), s		19.0	40.4	24.0				9.1
Green Ext Time (p_c), s		0.0	0.0	0.0				17.6

Intersection Summary	
HCM 2010 Ctrl Delay	42.2
HCM 2010 LOS	D



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	141	2274	1641	657	777	316
Future Volume (veh/h)	141	2274	1641	657	777	316
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845
Adj Flow Rate, veh/h	141	2274	1641	657	777	316
Adj No. of Lanes	1	3	3	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	132	2644	1493	573	717	640
Arrive On Green	0.08	0.52	0.42	0.42	0.41	0.41
Sat Flow, veh/h	1757	5202	3749	1376	1757	1568
Grp Volume(v), veh/h	141	2274	1533	765	777	316
Grp Sat Flow(s),veh/h/ln	1757	1679	1679	1602	1757	1568
Q Serve(g_s), s	9.0	46.9	50.0	50.0	49.0	17.9
Cycle Q Clear(g_c), s	9.0	46.9	50.0	50.0	49.0	17.9
Prop In Lane	1.00			0.86	1.00	1.00
Lane Grp Cap(c), veh/h	132	2644	1399	667	717	640
V/C Ratio(X)	1.07	0.86	1.10	1.15	1.08	0.49
Avail Cap(c_a), veh/h	132	2644	1399	667	717	640
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.5	24.7	35.0	35.0	35.5	26.3
Incr Delay (d2), s/veh	98.4	3.1	54.8	82.5	58.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	22.4	33.8	37.4	35.3	16.8
LnGrp Delay(d),s/veh	153.9	27.8	89.8	117.5	93.9	26.9
LnGrp LOS	F	C	F	F	F	C
Approach Vol, veh/h		2415	2298		1093	
Approach Delay, s/veh		35.2	99.0		74.5	
Approach LOS		D	F		E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				67.0		53.0	13.0	54.0
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				63.0		49.0	9.0	50.0
Max Q Clear Time (g_c+I1), s				48.9		51.0	11.0	52.0
Green Ext Time (p_c), s				14.0		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	67.8
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	283	1805	98	956	1148	361	89	625	769	411	838	82
Future Volume (veh/h)	283	1805	98	956	1148	361	89	625	769	411	838	82
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1792	1845	1845	1792	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	283	1805	98	956	1148	361	89	625	769	411	838	82
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	6	3	3	6	3	3	3	3	3	3	3
Cap, veh/h	341	1754	562	839	2470	791	131	539	627	341	755	338
Arrive On Green	0.10	0.36	0.36	0.25	0.50	0.50	0.04	0.15	0.15	0.10	0.22	0.22
Sat Flow, veh/h	3408	4893	1568	3408	4893	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	283	1805	98	956	1148	361	89	625	769	411	838	82
Grp Sat Flow(s),veh/h/ln	1704	1631	1568	1704	1631	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	10.6	46.6	5.6	32.0	19.7	19.3	3.4	20.0	20.0	13.0	28.0	5.6
Cycle Q Clear(g_c), s	10.6	46.6	5.6	32.0	19.7	19.3	3.4	20.0	20.0	13.0	28.0	5.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	341	1754	562	839	2470	791	131	539	627	341	755	338
V/C Ratio(X)	0.83	1.03	0.17	1.14	0.46	0.46	0.68	1.16	1.23	1.21	1.11	0.24
Avail Cap(c_a), veh/h	446	1754	562	839	2470	791	131	539	627	341	755	338
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.4	41.7	28.5	49.0	20.8	20.7	61.7	55.0	39.0	58.5	51.0	42.2
Incr Delay (d2), s/veh	9.8	29.3	0.2	77.1	0.2	0.6	13.2	90.8	115.5	117.1	67.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	25.7	2.4	24.0	8.9	8.4	1.8	16.5	42.6	11.7	20.6	2.5
LnGrp Delay(d),s/veh	67.2	71.0	28.7	126.1	21.0	21.3	74.9	145.8	154.5	175.6	118.3	42.6
LnGrp LOS	E	F	C	F	C	C	E	F	F	F	F	D
Approach Vol, veh/h		2186			2465			1483			1331	
Approach Delay, s/veh		68.6			61.8			146.0			131.3	
Approach LOS		E			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	36.0	53.0	9.0	32.0	17.0	72.0	17.0	24.0
Change Period (Y+Rc), s	4.0	6.4	4.0	4.0	4.0	6.4	4.0	4.0
Max Green Setting (Gmax), s	32.0	46.6	5.0	28.0	17.0	61.6	13.0	20.0
Max Q Clear Time (g_c+I1), s	34.0	48.6	5.4	30.0	12.6	21.7	15.0	22.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.4	37.9	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	92.9
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1059	44	925	27	77	110	645	2110	17	146	1045	974
Future Volume (veh/h)	1059	44	925	27	77	110	645	2110	17	146	1045	974
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1900	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	1090	0	925	27	77	110	645	2110	17	146	1045	0
Adj No. of Lanes	2	0	1	0	1	1	1	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	982	0	438	22	62	72	427	2249	18	111	1279	398
Arrive On Green	0.28	0.00	0.28	0.05	0.05	0.05	0.25	0.44	0.44	0.06	0.26	0.00
Sat Flow, veh/h	3480	0	1553	473	1348	1568	1740	5104	41	1740	4988	1553
Grp Volume(v), veh/h	1090	0	925	104	0	110	645	1374	753	146	1045	0
Grp Sat Flow(s),veh/h/ln	1740	0	1553	1821	0	1568	1740	1663	1820	1740	1663	1553
Q Serve(g_s), s	33.7	0.0	33.7	5.5	0.0	5.5	29.3	47.1	47.1	7.6	23.5	0.0
Cycle Q Clear(g_c), s	33.7	0.0	33.7	5.5	0.0	5.5	29.3	47.1	47.1	7.6	23.5	0.0
Prop In Lane	1.00		1.00	0.26		1.00	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	982	0	438	84	0	72	427	1465	802	111	1279	398
V/C Ratio(X)	1.11	0.00	2.11	1.24	0.00	1.52	1.51	0.94	0.94	1.32	0.82	0.00
Avail Cap(c_a), veh/h	982	0	438	84	0	72	427	1487	814	111	1303	406
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	42.9	0.0	42.9	57.0	0.0	57.0	45.1	31.8	31.9	55.9	41.8	0.0
Incr Delay (d2), s/veh	63.9	0.0	507.6	176.1	0.0	293.7	241.8	11.4	18.0	193.3	3.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.8	0.0	76.2	6.9	0.0	8.3	42.7	23.9	27.6	9.6	11.3	0.0
LnGrp Delay(d),s/veh	106.7	0.0	550.5	233.0	0.0	350.7	286.9	43.2	49.8	249.2	45.6	0.0
LnGrp LOS	F		F	F		F	F	D	D	F	D	
Approach Vol, veh/h		2015			214			2772			1191	
Approach Delay, s/veh		310.4			293.5			101.7			70.5	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	34.0	35.4		11.0	12.0	57.4		39.0
Change Period (Y+Rc), s	* 4.7	4.8		5.5	* 4.4	* 4.8		5.3
Max Green Setting (Gmax), s	* 29	31.2		5.5	* 7.6	* 53		33.7
Max Q Clear Time (g_c+I1), s	31.3	25.5		7.5	9.6	49.1		35.7
Green Ext Time (p_c), s	0.0	4.5		0.0	0.0	3.5		0.0

Intersection Summary			
HCM 2010 Ctrl Delay		170.3	
HCM 2010 LOS		F	

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	706	1569	392	42	860	300	283	1290	46	729	1761	372
Future Volume (veh/h)	706	1569	392	42	860	300	283	1290	46	729	1761	372
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	706	1569	392	42	860	300	283	1290	46	729	1761	372
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	625	1923	599	72	1106	344	277	1230	383	664	1801	561
Arrive On Green	0.18	0.38	0.38	0.02	0.22	0.22	0.08	0.25	0.25	0.20	0.36	0.36
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	706	1569	392	42	860	300	283	1290	46	729	1761	372
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	27.5	42.0	30.9	1.8	24.1	27.7	12.3	37.0	3.5	29.5	52.3	30.2
Cycle Q Clear(g_c), s	27.5	42.0	30.9	1.8	24.1	27.7	12.3	37.0	3.5	29.5	52.3	30.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	625	1923	599	72	1106	344	277	1230	383	664	1801	561
V/C Ratio(X)	1.13	0.82	0.65	0.58	0.78	0.87	1.02	1.05	0.12	1.10	0.98	0.66
Avail Cap(c_a), veh/h	625	1923	599	84	1141	355	277	1230	383	664	1801	561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.3	41.7	38.2	72.8	55.1	56.5	68.9	56.5	43.9	60.3	47.3	40.3
Incr Delay (d2), s/veh	77.5	2.7	2.1	2.8	3.0	19.0	60.1	39.5	0.1	65.0	16.1	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.7	19.9	13.7	0.9	11.5	13.8	8.0	21.5	1.5	19.7	26.7	13.3
LnGrp Delay(d),s/veh	138.8	44.3	40.3	75.6	58.1	75.5	129.0	96.0	43.9	125.3	63.4	42.6
LnGrp LOS	F	D	D	E	E	E	F	F	D	F	E	D
Approach Vol, veh/h		2667			1202			1619			2862	
Approach Delay, s/veh		68.7			63.1			100.3			76.5	
Approach LOS		E			E			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.8	60.2	33.0	39.1	35.0	43.0	8.7	63.4
Change Period (Y+Rc), s	5.5	6.0	5.5	* 6.1	5.5	* 6	5.5	* 6.1
Max Green Setting (Gmax), s	12.3	53.6	27.5	* 34	29.5	* 37	3.7	* 57
Max Q Clear Time (g_c+I1), s	14.3	54.3	29.5	29.7	31.5	39.0	3.8	44.0
Green Ext Time (p_c), s	0.0	0.0	0.0	3.2	0.0	0.0	0.0	7.5

Intersection Summary	
HCM 2010 Ctrl Delay	76.7
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	677	1598	347	112	865	360	264	1249	102	701	1858	829
Future Volume (veh/h)	677	1598	347	112	865	360	264	1249	102	701	1858	829
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1759	1759	1759	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	677	1598	347	112	865	360	264	1249	102	701	1858	829
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	8	8	8	4	4	4	4	4	4
Cap, veh/h	669	1698	529	135	875	272	277	1293	403	692	1906	593
Arrive On Green	0.20	0.34	0.34	0.04	0.18	0.18	0.08	0.26	0.26	0.20	0.38	0.38
Sat Flow, veh/h	3408	5036	1568	3250	4803	1495	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	677	1598	347	112	865	360	264	1249	102	701	1858	829
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1625	1601	1495	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	27.5	43.1	26.4	4.8	25.2	25.5	10.9	34.6	7.3	28.7	51.4	53.5
Cycle Q Clear(g_c), s	27.5	43.1	26.4	4.8	25.2	25.5	10.9	34.6	7.3	28.7	51.4	53.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	669	1698	529	135	875	272	277	1293	403	692	1906	593
V/C Ratio(X)	1.01	0.94	0.66	0.83	0.99	1.32	0.95	0.97	0.25	1.01	0.97	1.40
Avail Cap(c_a), veh/h	669	1698	529	135	875	272	277	1293	403	692	1906	593
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.2	45.1	39.5	66.6	57.1	57.3	64.0	51.2	41.1	55.7	42.6	43.3
Incr Delay (d2), s/veh	37.6	10.8	2.4	32.0	27.5	168.2	40.7	17.3	0.1	37.5	15.0	188.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.4	21.7	11.8	2.7	13.4	23.3	6.7	18.0	3.2	17.0	26.2	53.9
LnGrp Delay(d),s/veh	93.9	55.8	41.9	98.7	84.6	225.4	104.7	68.6	41.2	93.1	57.6	232.0
LnGrp LOS	F	E	D	F	F	F	F	E	D	F	E	F
Approach Vol, veh/h		2622			1337			1615			3388	
Approach Delay, s/veh		63.8			123.7			72.8			107.6	
Approach LOS		E			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	59.0	33.0	31.0	34.2	41.8	11.3	52.7
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	11.5	53.5	27.5	25.5	28.7	36.3	5.8	47.2
Max Q Clear Time (g_c+I1), s	12.9	55.5	29.5	27.5	30.7	36.6	6.8	45.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	90.9
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	976	768	4	64	442	80	54	847	73	86	686	690
Future Volume (veh/h)	976	768	4	64	442	80	54	847	73	86	686	690
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1810	1810	1810	1810	1810	1810
Adj Flow Rate, veh/h	976	768	4	64	442	80	54	847	73	86	686	690
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	3	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	5	5	5	5	5	5
Cap, veh/h	989	1672	748	107	765	342	93	837	375	116	1237	678
Arrive On Green	0.30	0.49	0.49	0.03	0.22	0.22	0.03	0.24	0.24	0.03	0.25	0.25
Sat Flow, veh/h	3312	3406	1524	3312	3406	1524	3343	3438	1538	3343	4940	2707
Grp Volume(v), veh/h	976	768	4	64	442	80	54	847	73	86	686	690
Grp Sat Flow(s),veh/h/ln	1656	1703	1524	1656	1703	1524	1672	1719	1538	1672	1647	1354
Q Serve(g_s), s	31.3	15.8	0.1	2.0	12.3	4.6	1.7	26.0	4.0	2.7	12.9	26.7
Cycle Q Clear(g_c), s	31.3	15.8	0.1	2.0	12.3	4.6	1.7	26.0	4.0	2.7	12.9	26.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	989	1672	748	107	765	342	93	837	375	116	1237	678
V/C Ratio(X)	0.99	0.46	0.01	0.60	0.58	0.23	0.58	1.01	0.19	0.74	0.55	1.02
Avail Cap(c_a), veh/h	989	1706	763	174	868	388	94	837	375	116	1237	678
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.2	17.9	13.9	51.0	36.9	33.9	51.3	40.4	32.1	51.1	34.8	40.0
Incr Delay (d2), s/veh	25.2	0.4	0.0	2.0	1.5	0.7	5.7	34.0	0.3	20.1	0.5	39.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.7	7.5	0.1	1.0	5.9	2.0	0.9	16.2	1.7	1.6	5.9	13.7
LnGrp Delay(d),s/veh	62.4	18.3	13.9	53.0	38.4	34.6	57.0	74.4	32.3	71.1	35.4	79.1
LnGrp LOS	E	B	B	D	D	C	E	F	C	E	D	F
Approach Vol, veh/h		1748			586			974			1462	
Approach Delay, s/veh		42.9			39.5			70.3			58.1	
Approach LOS		D			D			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	36.5	30.0	7.6	32.7	8.0	58.4	8.3	32.0
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	31.9	27.2	3.0	26.7	5.6	53.5	3.7	26.0
Max Q Clear Time (g_c+I1), s	33.3	14.3	3.7	28.7	4.0	17.8	4.7	28.0
Green Ext Time (p_c), s	0.0	9.6	0.0	0.0	0.0	20.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	52.7
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	360	1103	319	76	721	6	585	1248	78	36	1015	366
Future Volume (veh/h)	360	1103	319	76	721	6	585	1248	78	36	1015	366
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	360	1103	319	76	721	6	585	1248	78	36	1015	366
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	381	1101	493	129	842	377	571	1552	694	90	1057	473
Arrive On Green	0.11	0.31	0.31	0.04	0.24	0.24	0.17	0.44	0.44	0.03	0.30	0.30
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	360	1103	319	76	721	6	585	1248	78	36	1015	366
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	9.4	28.1	15.7	2.0	17.6	0.3	15.0	27.6	2.6	0.9	25.5	19.0
Cycle Q Clear(g_c), s	9.4	28.1	15.7	2.0	17.6	0.3	15.0	27.6	2.6	0.9	25.5	19.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	381	1101	493	129	842	377	571	1552	694	90	1057	473
V/C Ratio(X)	0.95	1.00	0.65	0.59	0.86	0.02	1.02	0.80	0.11	0.40	0.96	0.77
Avail Cap(c_a), veh/h	381	1101	493	152	861	385	571	1552	694	152	1057	473
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.5	30.7	26.4	42.4	32.5	25.9	37.3	21.6	14.6	42.9	30.7	28.5
Incr Delay (d2), s/veh	32.4	27.6	3.0	4.2	8.4	0.0	44.0	3.2	0.1	2.8	18.8	7.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	17.7	7.2	1.0	9.5	0.1	10.5	13.9	1.1	0.5	15.0	9.2
LnGrp Delay(d),s/veh	71.8	58.3	29.4	46.6	40.9	25.9	81.2	24.8	14.7	45.7	49.5	36.3
LnGrp LOS	E	F	C	D	D	C	F	C	B	D	D	D
Approach Vol, veh/h		1782			803			1911			1417	
Approach Delay, s/veh		55.8			41.3			41.6			46.0	
Approach LOS		E			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	43.6	7.4	32.1	19.0	31.0	14.0	25.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	38.0	4.0	28.0	15.0	27.0	10.0	22.0
Max Q Clear Time (g_c+I1), s	2.9	29.6	4.0	30.1	17.0	27.5	11.4	19.6
Green Ext Time (p_c), s	0.0	7.6	0.0	0.0	0.0	0.0	0.0	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	46.9
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	986	643	205	657	673	338	490	391	785	976	0
Future Volume (veh/h)	0	986	643	205	657	673	338	490	391	785	976	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	0	986	643	205	657	673	338	490	391	785	976	0
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	5	1223	381	243	1870	941	427	801	358	779	1163	520
Arrive On Green	0.00	0.24	0.24	0.07	0.37	0.37	0.13	0.23	0.23	0.23	0.33	0.00
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	0	986	643	205	657	673	338	490	391	785	976	0
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	0.0	12.9	17.0	4.2	6.6	21.1	6.7	8.8	16.0	16.0	18.0	0.0
Cycle Q Clear(g_c), s	0.0	12.9	17.0	4.2	6.6	21.1	6.7	8.8	16.0	16.0	18.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	5	1223	381	243	1870	941	427	801	358	779	1163	520
V/C Ratio(X)	0.00	0.81	1.69	0.84	0.35	0.72	0.79	0.61	1.09	1.01	0.84	0.00
Avail Cap(c_a), veh/h	195	1223	381	243	1870	941	438	801	358	779	1163	520
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	24.9	26.5	32.1	15.9	9.8	29.7	24.2	27.0	27.0	21.7	0.0
Incr Delay (d2), s/veh	0.0	4.1	321.1	22.5	0.1	2.6	9.4	1.4	74.2	34.1	5.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.4	41.3	2.7	3.1	9.7	3.7	4.4	14.3	11.2	9.6	0.0
LnGrp Delay(d),s/veh	0.0	29.0	347.6	54.6	16.0	12.4	39.1	25.6	101.2	61.2	27.2	0.0
LnGrp LOS		C	F	D	B	B	D	C	F	F	C	
Approach Vol, veh/h		1629			1535			1219			1761	
Approach Delay, s/veh		154.8			19.6			53.6			42.4	
Approach LOS		F			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	20.0	9.0	21.0	12.8	27.2	0.0	30.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	16.0	5.0	17.0	9.0	23.0	4.0	18.0
Max Q Clear Time (g_c+I1), s	18.0	18.0	6.2	19.0	8.7	20.0	0.0	23.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	68.7
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	851	822	72	1075	768	0	154	819	843	40	2036	759
Future Volume (veh/h)	851	822	72	1075	768	0	154	819	843	40	2036	759
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	851	822	72	1075	768	0	154	819	843	40	2036	759
Adj No. of Lanes	3	3	1	2	3	1	2	3	1	2	3	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	977	755	235	994	1231	383	142	2035	634	71	1930	1058
Arrive On Green	0.20	0.15	0.15	0.29	0.24	0.00	0.04	0.40	0.40	0.02	0.38	0.38
Sat Flow, veh/h	4954	5036	1568	3408	5036	1568	3408	5036	1568	3408	5036	2760
Grp Volume(v), veh/h	851	822	72	1075	768	0	154	819	843	40	2036	759
Grp Sat Flow(s),veh/h/ln	1651	1679	1568	1704	1679	1568	1704	1679	1568	1704	1679	1380
Q Serve(g_s), s	20.0	18.0	4.9	35.0	16.3	0.0	5.0	13.9	48.5	1.4	46.0	28.1
Cycle Q Clear(g_c), s	20.0	18.0	4.9	35.0	16.3	0.0	5.0	13.9	48.5	1.4	46.0	28.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	977	755	235	994	1231	383	142	2035	634	71	1930	1058
V/C Ratio(X)	0.87	1.09	0.31	1.08	0.62	0.00	1.08	0.40	1.33	0.56	1.05	0.72
Avail Cap(c_a), veh/h	1115	755	235	994	1231	383	142	2035	634	85	1930	1058
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.7	51.0	45.4	42.5	40.4	0.0	57.5	25.4	35.8	58.2	37.0	31.5
Incr Delay (d2), s/veh	7.0	59.3	0.7	53.2	1.0	0.0	99.9	0.1	159.3	6.8	36.7	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.8	12.5	2.2	23.8	7.7	0.0	4.3	6.5	48.9	0.7	27.8	11.0
LnGrp Delay(d),s/veh	53.6	110.3	46.2	95.7	41.4	0.0	157.4	25.6	195.0	65.0	73.7	33.8
LnGrp LOS	D	F	D	F	D		F	C	F	E	F	C
Approach Vol, veh/h		1745			1843			1816			2835	
Approach Delay, s/veh		80.0			73.1			115.4			62.9	
Approach LOS		F			E			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	52.5	39.0	22.0	9.0	50.0	27.7	33.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	48.0	35.0	18.0	5.0	46.0	27.0	26.0
Max Q Clear Time (g_c+I1), s	3.4	50.5	37.0	20.0	7.0	48.0	22.0	18.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	1.7	5.7

Intersection Summary	
HCM 2010 Ctrl Delay	80.4
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	553	1543	1044	34	1123	23	851	743	59	86	732	392
Future Volume (veh/h)	553	1543	1044	34	1123	23	851	743	59	86	732	392
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	553	1543	1044	34	1123	23	851	743	59	86	732	392
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	611	2015	627	63	1204	375	786	1333	596	139	668	299
Arrive On Green	0.18	0.40	0.40	0.02	0.24	0.24	0.23	0.38	0.38	0.04	0.19	0.19
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	553	1543	1044	34	1123	23	851	743	59	86	732	392
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	15.9	26.4	39.9	1.0	21.8	1.1	23.0	16.6	2.4	2.5	19.0	19.0
Cycle Q Clear(g_c), s	15.9	26.4	39.9	1.0	21.8	1.1	23.0	16.6	2.4	2.5	19.0	19.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	611	2015	627	63	1204	375	786	1333	596	139	668	299
V/C Ratio(X)	0.90	0.77	1.66	0.54	0.93	0.06	1.08	0.56	0.10	0.62	1.10	1.31
Avail Cap(c_a), veh/h	615	2015	627	103	1212	377	786	1333	596	171	668	299
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.1	25.9	29.9	48.5	37.2	29.3	38.4	24.3	19.9	47.1	40.4	40.4
Incr Delay (d2), s/veh	16.8	1.8	305.9	7.2	12.9	0.1	56.8	0.5	0.1	4.5	64.1	162.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	12.5	70.5	0.5	11.5	0.5	16.9	8.1	1.1	1.3	15.0	21.7
LnGrp Delay(d),s/veh	56.9	27.7	335.8	55.7	50.0	29.4	95.2	24.8	20.0	51.6	104.5	202.8
LnGrp LOS	E	C	F	E	D	C	F	C	B	D	F	F
Approach Vol, veh/h		3140			1180			1653			1210	
Approach Delay, s/veh		135.3			49.8			60.9			132.6	
Approach LOS		F			D			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	41.9	5.8	43.9	27.0	23.0	21.9	27.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	37.0	3.0	39.0	23.0	19.0	18.0	24.0
Max Q Clear Time (g_c+I1), s	4.5	18.6	3.0	41.9	25.0	21.0	17.9	23.8
Green Ext Time (p_c), s	0.0	11.6	0.0	0.0	0.0	0.0	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	103.7
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	268	47	170	1793	6	32	1488	251	14	1604	99
Future Volume (veh/h)	91	268	47	170	1793	6	32	1488	251	14	1604	99
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	91	268	47	170	1793	6	32	1488	251	14	1604	99
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	149	1805	562	244	1944	605	84	1879	585	45	1820	567
Arrive On Green	0.04	0.36	0.36	0.07	0.39	0.39	0.02	0.37	0.37	0.01	0.36	0.36
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	91	268	47	170	1793	6	32	1488	251	14	1604	99
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	2.3	3.1	1.7	4.2	29.5	0.2	0.8	22.9	10.4	0.4	26.0	3.7
Cycle Q Clear(g_c), s	2.3	3.1	1.7	4.2	29.5	0.2	0.8	22.9	10.4	0.4	26.0	3.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	149	1805	562	244	1944	605	84	1879	585	45	1820	567
V/C Ratio(X)	0.61	0.15	0.08	0.70	0.92	0.01	0.38	0.79	0.43	0.31	0.88	0.17
Avail Cap(c_a), veh/h	157	1805	562	313	1968	613	157	1879	585	157	1852	577
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.9	18.9	18.5	39.5	25.5	16.5	41.8	24.3	20.4	42.5	26.0	18.9
Incr Delay (d2), s/veh	6.2	0.0	0.1	4.6	7.7	0.0	2.8	2.4	0.5	3.9	5.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	1.4	0.8	2.1	15.0	0.1	0.4	11.0	4.6	0.2	12.9	1.6
LnGrp Delay(d),s/veh	47.1	19.0	18.5	44.1	33.2	16.5	44.6	26.7	20.9	46.4	31.3	19.1
LnGrp LOS	D	B	B	D	C	B	D	C	C	D	C	B
Approach Vol, veh/h		406			1969			1771			1717	
Approach Delay, s/veh		25.2			34.1			26.2			30.7	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.1	36.5	10.2	35.2	6.2	35.5	7.8	37.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	32.0	8.0	30.0	4.0	32.0	4.0	34.0
Max Q Clear Time (g_c+I1), s	2.4	24.9	6.2	5.1	2.8	28.0	4.3	31.5
Green Ext Time (p_c), s	0.0	6.9	0.1	17.6	0.0	3.5	0.0	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	30.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	301	672	0	1044	749	123	3	799	947	98	732	304
Future Volume (veh/h)	301	672	0	1044	749	123	3	799	947	98	732	304
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	301	672	0	1044	749	123	3	799	947	98	732	304
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	385	866	270	1140	1982	617	11	925	938	156	1075	481
Arrive On Green	0.11	0.17	0.00	0.33	0.39	0.39	0.00	0.26	0.26	0.05	0.31	0.31
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	301	672	0	1044	749	123	3	799	947	98	732	304
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	7.5	11.1	0.0	25.6	9.2	4.5	0.1	18.9	23.0	2.5	15.9	14.5
Cycle Q Clear(g_c), s	7.5	11.1	0.0	25.6	9.2	4.5	0.1	18.9	23.0	2.5	15.9	14.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	385	866	270	1140	1982	617	11	925	938	156	1075	481
V/C Ratio(X)	0.78	0.78	0.00	0.92	0.38	0.20	0.27	0.86	1.01	0.63	0.68	0.63
Avail Cap(c_a), veh/h	509	925	288	1213	1982	617	156	925	938	156	1075	481
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	34.5	0.0	27.8	18.8	17.4	43.3	30.6	17.5	40.8	26.5	26.0
Incr Delay (d2), s/veh	5.7	4.0	0.0	10.5	0.1	0.2	12.9	8.5	31.7	7.6	1.8	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	5.5	0.0	13.7	4.3	2.0	0.1	10.2	30.4	1.3	8.0	6.6
LnGrp Delay(d),s/veh	43.3	38.4	0.0	38.3	18.9	17.5	56.2	39.1	49.1	48.5	28.2	28.7
LnGrp LOS	D	D		D	B	B	E	D	F	D	C	C
Approach Vol, veh/h		973			1916			1749			1134	
Approach Delay, s/veh		39.9			29.4			44.6			30.1	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	27.0	33.1	19.0	4.3	30.7	13.8	38.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	23.0	31.0	16.0	4.0	23.0	13.0	34.0
Max Q Clear Time (g_c+I1), s	4.5	25.0	27.6	13.1	2.1	17.9	9.5	11.2
Green Ext Time (p_c), s	0.0	0.0	1.5	1.9	0.0	4.6	0.4	11.3

Intersection Summary	
HCM 2010 Ctrl Delay	35.9
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	249	310	120	126	10	190	1811	93	10	1800	259
Future Volume (veh/h)	190	249	310	120	126	10	190	1811	93	10	1800	259
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	190	249	310	120	126	10	190	1811	93	10	1800	259
Adj No. of Lanes	1	1	1	1	1	1	1	3	0	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	195	348	296	150	300	255	195	2472	127	78	1947	278
Arrive On Green	0.11	0.19	0.19	0.09	0.16	0.16	0.11	0.50	0.50	0.04	0.44	0.44
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	4906	252	1757	4454	636
Grp Volume(v), veh/h	190	249	310	120	126	10	190	1238	666	10	1353	706
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1679	1800	1757	1679	1732
Q Serve(g_s), s	9.7	11.4	17.0	6.0	5.5	0.5	9.7	26.1	26.2	0.5	34.2	34.8
Cycle Q Clear(g_c), s	9.7	11.4	17.0	6.0	5.5	0.5	9.7	26.1	26.2	0.5	34.2	34.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		0.37
Lane Grp Cap(c), veh/h	195	348	296	150	300	255	195	1691	907	78	1467	757
V/C Ratio(X)	0.97	0.71	1.05	0.80	0.42	0.04	0.97	0.73	0.73	0.13	0.92	0.93
Avail Cap(c_a), veh/h	195	348	296	176	328	279	195	1691	907	78	1467	757
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	34.2	36.5	40.4	33.8	31.7	39.9	17.6	17.6	41.3	23.9	24.1
Incr Delay (d2), s/veh	56.5	6.8	65.0	20.1	0.9	0.1	56.5	2.8	5.2	0.7	11.1	19.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	6.5	12.7	3.8	2.9	0.2	7.8	12.7	14.3	0.3	18.0	20.6
LnGrp Delay(d),s/veh	96.4	41.0	101.5	60.5	34.8	31.8	96.4	20.4	22.8	42.1	34.9	43.8
LnGrp LOS	F	D	F	E	C	C	F	C	C	D	C	D
Approach Vol, veh/h		749			256			2094			2069	
Approach Delay, s/veh		80.1			46.7			28.1			38.0	
Approach LOS		F			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	49.3	11.7	21.0	14.0	43.3	14.0	18.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	44.0	9.0	17.0	10.0	38.0	10.0	16.0
Max Q Clear Time (g_c+I1), s	2.5	28.2	8.0	19.0	11.7	36.8	11.7	7.5
Green Ext Time (p_c), s	0.0	15.4	0.0	0.0	0.0	1.2	0.0	2.3

Intersection Summary	
HCM 2010 Ctrl Delay	40.5
HCM 2010 LOS	D

Appendix D

Freeway Analysis

US-50 Freeway System

Mainline Analysis – Summary Tables

Table D-1
Existing Peak Hour Freeway Mainline Operations

		AM Peak Hour													
		Number of Lanes		Volume		Peak Hour Factor		Heavy Vehicles		Lowest 15-minute Average Speed		Density (pcplph)		LOS	
Direction	US 50 Segment	Mixed-Flow	HOV	Mixed-Flow	HOV	Mixed-Flow	HOV	Mixed-Flow	HOV	Mixed-Flow	HOV	Mixed-Flow	HOV	Mixed-Flow	HOV
Eastbound	SR 99 / SR 51 to Stockton Boulevard	5		7,068		0.96		4%		61		23.46		C	
	Stockton Boulevard to 59th Street	5		7,470		0.96		4%		44		35.05		F	
	59th Street to 65th Street	4		6,767		0.97		4%		62		27.40		D	
	65th Street to Howe Avenue	5		7,962		0.98		4%		57		28.05		D	
	Howe Avenue to Watt Avenue	4		7,405		0.96		4%		60		31.77		D	
	Watt Avenue to Bradshaw Road	4	1	7,935	297	0.95	0.83	4%	0%	75	75	27.22	4.78	D	A
	Bradshaw Road to Mather Field Road	4	1	7,725	370	0.96	0.81	4%	0%	44	73	45.10	6.23	F	A
	Mather Field Road to Zinfandel Drive	5	1	7,275	291	0.94	0.87	4%	0%	79	73	19.18	4.56	C	A
	Zinfandel Drive to Sunrise Boulevard	4	1	5,121	279	0.96	0.87	4%	0%	65	58	20.08	5.52	C	A
	Sunrise Boulevard to Hazel Avenue	3	1	4,985	278	0.94	0.85	6%	0%	62	61	27.67	5.34	D	A
Westbound	Hazel Avenue to Sunrise Boulevard	3	1	6,068	1,109	0.95	0.93	6%	0%	63	61	32.91	19.38	D	C
	Sunrise Boulevard to Zinfandel Drive	4	1	7,502	891	0.96	0.84	4%	0%	58	54	33.31	19.60	D	C
	Zinfandel Drive to Mather Field Road	5	1	7,548	1,028	0.96	0.78	4%	0%	70	66	21.96	20.04	C	C
	Mather Field Road to Bradshaw Road	4	1	7,859	1,121	0.95	0.79	4%	0%	46	62	44.40	23.04	F	C
	Bradshaw Road to Watt Avenue	4	1	7,550	1,235	0.90	0.80	4%	0%	38	38	54.37	40.40	F	F
	Watt Avenue to Howe Avenue	5		7,376		0.93		4%		29		53.44		F	
	Howe Avenue to 65th Street	5		8,157		0.96		4%		47		35.68		F	
	65th Street to 59th Street	4		8,278		0.98		4%		46		44.85		F	
	59th Street to Stockton Boulevard	5		9,115		0.99		4%		61		29.39		D	
	Stockton Boulevard to SR 99 / SR 51	5		8,546		0.95		4%		55		31.89		D	
		PM Peak Hour													
		Number of Lanes		Volume		Peak Hour Factor		Heavy Vehicles		Lowest 15-minute Average Speed		Density (pcplph)		LOS	
Direction	US 50 Segment	Mixed-Flow	HOV	Mixed-Flow	HOV	Mixed-Flow	HOV	Mixed-Flow	HOV	Mixed-Flow	HOV	Mixed-Flow	HOV	Mixed-Flow	HOV
Eastbound	SR 99 / SR 51 to Stockton Boulevard	5		6,415		0.98		4%		55		23.33		C	
	Stockton Boulevard to 59th Street	5		7,228		0.99		4%		35		41.46		F	
	59th Street to 65th Street	4		6,641		0.95		4%		60		28.36		D	
	65th Street to Howe Avenue	5		7,562		0.99		4%		50		29.71		D	
	Howe Avenue to Watt Avenue	4		7,602		0.98		4%		57		33.01		D	
	Watt Avenue to Bradshaw Road	4	1	7,176	568	0.98	0.98	4%	0%	72	71	24.80	8.20	C	A
	Bradshaw Road to Mather Field Road	4	1	7,366	749	1.00	0.99	4%	0%	71	75	25.50	10.13	C	A
	Mather Field Road to Zinfandel Drive	5	1	7,224	779	0.97	0.93	4%	0%	72	68	20.13	12.30	C	B
	Zinfandel Drive to Sunrise Boulevard	4	1	6,649	865	0.95	0.95	4%	0%	41	46	42.12	19.76	F	F
	Sunrise Boulevard to Hazel Avenue	3	1	5,323	961	0.94	0.95	6%	0%	49	60	37.30	16.96	F	B
Westbound	Hazel Avenue to Sunrise Boulevard	3	1	4,370	1,321	0.97	0.98	6%	0%	63	60	23.17	22.59	C	C
	Sunrise Boulevard to Zinfandel Drive	4	1	4,762	422	0.93	0.88	4%	0%	65	61	19.30	7.90	C	A
	Zinfandel Drive to Mather Field Road	5	1	5,765	487	0.95	0.84	4%	0%	80	74	14.85	7.82	B	A
	Mather Field Road to Bradshaw Road	4	1	6,939	591	0.99	0.82	4%	0%	60	49	28.66	14.66	D	F
	Bradshaw Road to Watt Avenue	4	1	6,466	773	0.96	0.82	4%	0%	50	61	32.91	15.58	D	B
	Watt Avenue to Howe Avenue	5		5,106		0.98		4%		44		22.96		F	
	Howe Avenue to 65th Street	5		7,407		0.99		4%		35		41.55		F	
	65th Street to 59th Street	4		7,358		0.99		4%		35		51.56		F	
	59th Street to Stockton Boulevard	5		7,945		0.99		4%		49		32.31		F	
	Stockton Boulevard to SR 99 / SR 51	5		8,136		0.96		4%		50		33.25		F	

Source: DKS Associates, 2013. Revised December 10, 2018.

Table D-2
Peak Hour Freeway Mainline Operations - Existing Scenarios

Direction	US 50 Segment	Number of Lanes		AM Peak Hour					
				Existing		Existing Plus Jackson Township		Existing Plus FOUR PROJECTS	
		Mixed-Flow	HOV	Mixed-Flow Volume	Level of Service	Mixed-Flow Volume	Level of Service	Mixed-Flow Volume	Level of Service
Eastbound	SR 99 / SR 51 to Stockton Boulevard	5		7,068	C	7,156	C	7,705	C
	Stockton Boulevard to 59th Street	5		7,470	**F**	7,564	**F**	8,136	**F**
	59th Street to 65th Street	4		6,767	D	6,856	D	7,439	D
	65th Street to Howe Avenue	5		7,962	D	8,084	D	8,668	D
	Howe Avenue to Watt Avenue	4		7,405	D	7,477	D	7,609	D
	Watt Avenue to Bradshaw Road	4	1	7,935	D	8,002	D	8,145	D
	Bradshaw Road to Mather Field Road	4	1	7,725	**F**	7,712	**F**	7,761	**F**
	Mather Field Road to Zinfandel Drive	5	1	7,275	C	7,268	C	7,713	C
	Zinfandel Drive to Sunrise Boulevard	4	1	5,121	C	5,289	C	5,726	C
	Sunrise Boulevard to Hazel Avenue	3	1	4,985	C	5,132	C	5,461	C
Westbound	Hazel Avenue to Sunrise Boulevard	3	1	6,068	D	6,121	D	6,334	E
	Sunrise Boulevard to Zinfandel Drive	4	1	7,502	D	7,540	D	7,846	E
	Zinfandel Drive to Mather Field Road	5	1	7,548	C	7,551	C	7,829	C
	Mather Field Road to Bradshaw Road	4	1	7,859	**F**	7,857	**F**	7,810	**F**
	Bradshaw Road to Watt Avenue	4	1	7,550	**F**	7,522	**F**	7,424	**F**
	Watt Avenue to Howe Avenue	5		7,376	**F**	7,326	**F**	7,192	**F**
	Howe Avenue to 65th Street	5		8,157	**F**	8,182	**F**	8,489	**F**
	65th Street to 59th Street	4		8,278	**F**	8,281	**F**	8,605	**F**
	59th Street to Stockton Boulevard	5		9,115	D	9,125	D	9,448	D
	Stockton Boulevard to SR 99 / SR 51	5		8,546	D	8,536	D	8,836	D

Direction	US 50 Segment	Number of Lanes		PM Peak Hour					
				Existing		Existing Plus Jackson Township		Existing Plus FOUR PROJECTS	
		Mixed-Flow	HOV	Mixed-Flow Volume	Level of Service	Mixed-Flow Volume	Level of Service	Mixed-Flow Volume	Level of Service
Eastbound	SR 99 / SR 51 to Stockton Boulevard	5		6,415	C	6,475	C	6,711	C
	Stockton Boulevard to 59th Street	5		7,228	**F**	7,290	**F**	7,546	**F**
	59th Street to 65th Street	4		6,641	D	6,689	D	6,931	D
	65th Street to Howe Avenue	5		7,562	D	7,611	D	7,854	D
	Howe Avenue to Watt Avenue	4		7,602	D	7,711	D	7,700	D
	Watt Avenue to Bradshaw Road	4	1	7,176	C	7,284	C	7,310	C
	Bradshaw Road to Mather Field Road	4	1	7,366	C	7,407	C	7,248	C
	Mather Field Road to Zinfandel Drive	5	1	7,224	C	7,264	C	7,560	C
	Zinfandel Drive to Sunrise Boulevard	4	1	6,649	**F**	6,708	**F**	7,083	**F**
	Sunrise Boulevard to Hazel Avenue	3	1	5,323	**F**	5,366	**F**	5,611	**F**
Westbound	Hazel Avenue to Sunrise Boulevard	3	1	4,370	C	4,481	C	4,707	C
	Sunrise Boulevard to Zinfandel Drive	4	1	4,762	C	4,902	C	5,134	C
	Zinfandel Drive to Mather Field Road	5	1	5,765	B	5,710	B	5,928	B
	Mather Field Road to Bradshaw Road	4	1	6,939	D	6,869	D	6,892	D
	Bradshaw Road to Watt Avenue	4	1	6,466	D	6,556	D	6,913	E
	Watt Avenue to Howe Avenue	5		5,106	**F**	5,165	**F**	5,395	**F**
	Howe Avenue to 65th Street	5		7,407	**F**	7,469	**F**	8,031	**F**
	65th Street to 59th Street	4		7,358	**F**	7,413	**F**	7,953	**F**
	59th Street to Stockton Boulevard	5		7,945	**F**	8,008	**F**	8,537	**F**
	Stockton Boulevard to SR 99 / SR 51	5		8,136	**F**	8,194	**F**	8,635	**F**

Source: DKS Associates, 2014. Revised December 10, 2018.

Table D-3
Peak Hour Freeway Mainline Operations - Cumulative Scenarios

Direction	US 50 Segment	Number of Lanes		MTP Cumulative		MTP Cumulative Plus FOUR PROJECTS		CEQA Cumulative		CEQA Cumulative Plus FOUR PROJECTS	
		Mixed-Flow	HOV	Mixed-Flow Volume	Level of Service	Mixed-Flow Volume	Level of Service	Mixed-Flow Volume	Level of Service	Mixed-Flow Volume	Level of Service
AM Peak Hour											
Eastbound	SR 99 / SR 51 to Stockton Boulevard	5	1	8,582	D	9,245	D	8,751	D	9,295	D
	Stockton Boulevard to 59th Street	5	1	8,024	**F**	8,627	**F**	8,168	**F**	8,642	**F**
	59th Street to 65th Street	4	1	7,506	D	8,094	E	7,637	D	8,099	E
	65th Street to Howe Avenue	5	1	7,971	D	8,166	D	8,019	D	8,272	D
	Howe Avenue to Watt Avenue	5	1	7,147	C	7,149	C	7,213	C	7,366	C
	Watt Avenue to Bradshaw Road	4	1	9,583	**F**	9,596	**F**	9,633	**F**	9,825	**F**
	Bradshaw Road to Mather Field Road	5	1	9,362	**F**	8,922	**F**	9,467	**F**	9,483	**F**
	Mather Field Road to Zinfandel Drive	5	1	8,935	D	8,490	C	9,072	D	9,211	D
	Zinfandel Drive to Sunrise Boulevard	5	1	6,237	C	5,990	C	6,313	C	6,400	C
	Sunrise Boulevard to Rancho Cordova Pkwy	4	1	5,335	C	4,943	C	5,835	C	5,892	C
	Rancho Cordova Pkwy to Hazel Avenue	4	1	6,571	D	6,074	C	7,170	D	7,249	D
Westbound	Hazel Avenue to Rancho Cordova Pkwy	4	1	5,240	B	5,695	B	5,376	B	5,643	B
	Rancho Cordova Pkwy to Sunrise Boulevard	4	1	6,587	C	7,048	C	6,906	C	7,103	C
	Sunrise Boulevard to Zinfandel Drive	5	1	8,392	D	8,891	D	8,587	D	8,801	D
	Zinfandel Drive to Mather Field Road	5	1	8,942	D	9,330	D	9,480	D	9,493	D
	Mather Field Road to Bradshaw Road	5	1	8,996	**F**	9,065	**F**	9,560	**F**	9,406	**F**
	Bradshaw Road to Watt Avenue	4	1	8,662	**F**	8,415	E	9,001	**F**	8,854	**F**
	Watt Avenue to Howe Avenue	5	1	7,604	**F**	7,111	**F**	7,880	**F**	7,679	**F**
	Howe Avenue to 65th Street	5	1	8,577	**F**	8,539	**F**	8,761	**F**	8,972	**F**
	65th Street to 59th Street	4	1	8,621	**F**	8,601	**F**	8,809	**F**	9,012	**F**
	59th Street to Stockton Boulevard	5	1	9,516	D	9,426	D	9,692	D	9,890	D
	Stockton Boulevard to SR 99 / SR 51	5	1	10,023	E	9,930	E	10,187	E	10,300	E
PM Peak Hour											
Eastbound	SR 99 / SR 51 to Stockton Boulevard	5	1	8,297	D	8,246	D	8,621	D	8,855	D
	Stockton Boulevard to 59th Street	5	1	7,539	**F**	7,473	**F**	7,811	**F**	8,051	**F**
	59th Street to 65th Street	4	1	7,088	D	7,033	D	7,341	D	7,521	D
	65th Street to Howe Avenue	5	1	7,455	D	7,302	D	7,658	D	7,812	D
	Howe Avenue to Watt Avenue	5	1	6,393	C	6,150	C	6,680	C	6,679	C
	Watt Avenue to Bradshaw Road	4	1	8,662	E	8,437	D	8,976	E	9,056	E
	Bradshaw Road to Mather Field Road	5	1	8,502	C	8,510	C	9,033	C	9,015	C
	Mather Field Road to Zinfandel Drive	5	1	8,234	C	8,548	C	8,765	D	8,916	D
	Zinfandel Drive to Sunrise Boulevard	5	1	6,181	**F**	6,487	**F**	6,367	**F**	6,551	**F**
	Sunrise Boulevard to Rancho Cordova Pkwy	4	1	5,450	**F**	5,894	**F**	5,875	**F**	6,121	**F**
	Rancho Cordova Pkwy to Hazel Avenue	4	1	6,395	**F**	6,887	**F**	6,651	**F**	6,929	**F**
Westbound	Hazel Avenue to Rancho Cordova Pkwy	4	1	4,367	B	3,934	B	5,168	C	5,218	C
	Rancho Cordova Pkwy to Sunrise Boulevard	4	1	3,883	B	3,515	B	4,367	B	4,461	B
	Sunrise Boulevard to Zinfandel Drive	5	1	4,914	B	4,555	B	5,211	B	5,378	B
	Zinfandel Drive to Mather Field Road	5	1	7,154	C	6,703	B	7,384	C	7,454	C
	Mather Field Road to Bradshaw Road	5	1	8,442	D	7,995	C	8,696	D	8,544	D
	Bradshaw Road to Watt Avenue	4	1	7,703	D	7,847	D	7,871	D	8,099	E
	Watt Avenue to Howe Avenue	5	1	5,740	**F**	5,836	**F**	5,864	**F**	6,132	**F**
	Howe Avenue to 65th Street	5	1	7,896	**F**	8,148	**F**	8,080	**F**	8,384	**F**
	65th Street to 59th Street	4	1	7,827	**F**	8,270	**F**	7,970	**F**	8,296	**F**
	59th Street to Stockton Boulevard	5	1	8,137	**F**	8,631	**F**	8,290	**F**	8,656	**F**
	Stockton Boulevard to SR 99 / SR 51	5	1	9,566	**F**	9,855	**F**	9,660	**F**	9,916	**F**

Source: DKS Associates, 2014. Revised December 10, 2018.

US-50 Freeway System

Mainline Analysis – Calculation Sheets

US 50 Eastbound - SR 51 / SR 99 to Stockton Boulevard						
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Mixed Flow Frwy Lanes	5	5	5	5	5	5
Volume (Vehicles)	7,068	7,156	7,705	6,415	6,475	6,711
Peak Hour Factor	0.96	0.96	0.96	0.98	0.98	0.98
Average Lane Width (ft)	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12
Ramps within three miles	16	16	16	16	16	16
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000
Calculations						
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0
TRD	2.67	2.67	2.67	2.67	2.67	2.67
FFS	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	1,497	1,515	1,632	1,341	1,353	1,402
Speed (S) (mph)	69	69	68	70	70	70
Calculated Density	21.70	22.01	24.05	19.21	19.41	20.17
Observed Existing Density	23.46	23.46	23.46	23.33	23.33	23.33
Estimated Density	23.46	23.77	25.81	23.33	23.53	24.29
Observed Existing LOS	C	C	C	C	C	C
LOS	C	C	C	C	C	C

US 50 Eastbound - SR 51 / SR 99 to Stockton Boulevard								
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Mixed Flow Frwy Lanes	5	5	5	5	5	5	5	5
Volume (Vehicles)	8,582	9,245	8,751	9,295	8,297	8,246	8,621	8,855
Peak Hour Factor	0.96	0.96	0.96	0.96	0.98	0.98	0.98	0.98
Average Lane Width (ft)	12	12	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12	12	12
Ramps within three miles	16	16	16	16	16	16	16	16
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Calculations								
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRD	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67
FFS	70	70	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	1,817	1,958	1,853	1,968	1,734	1,723	1,802	1,851
Speed (S) (mph)	66	63	65	63	67	67	66	65
Calculated Density	27.71	30.91	28.49	31.17	26.00	25.79	27.38	28.43
Density Adjustment	1.76	1.76	1.76	1.76	4.12	4.12	4.12	4.12
Estimated Density	29.48	32.67	30.25	32.93	30.12	29.91	31.50	32.55
Observed Existing LOS	C	C	C	C	C	C	C	C
LOS	D	D	D	D	D	D	D	D

US 50 Eastbound - Stockton Boulevard to 59th Street						
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Mixed Flow Frwy Lanes	5	5	5	5	5	5
Volume (Vehicles)	7,470	7,564	8,136	7,228	7,290	7,546
Peak Hour Factor	0.96	0.96	0.96	0.99	0.99	0.99
Average Lane Width (ft)	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12
Ramps within three miles	16	16	16	16	16	16
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000
Calculations						
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0
TRD	2.67	2.67	2.67	2.67	2.67	2.67
FFS	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	1,594	1,614	1,736	1,491	1,504	1,556
Speed (S) (mph)	68	68	67	69	69	69
Calculated Density	23.37	23.73	26.04	21.60	21.81	22.71
Observed Existing Density	35.05	35.05	35.05	41.46	41.46	41.46
Estimated Density	35.05	35.41	37.72	41.46	41.67	42.57
Observed Existing LOS	F	F	F	F	F	F
LOS	F	F	**F**	F	F	F

US 50 Eastbound - Stockton Boulevard to 59th Street								
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Mixed Flow Frwy Lanes	5	5	5	5	5	5	5	5
Volume (Vehicles)	8,024	8,627	8,168	8,642	7,539	7,473	7,811	8,051
Peak Hour Factor	0.96	0.96	0.96	0.96	0.99	0.99	0.99	0.99
Average Lane Width (ft)	12	12	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12	12	12
Ramps within three miles	16	16	16	16	16	16	16	16
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Calculations								
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRD	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67
FFS	70	70	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	1,712	1,841	1,743	1,844	1,555	1,541	1,611	1,661
Speed (S) (mph)	67	65	67	65	69	69	68	68
Calculated Density	25.57	28.22	26.18	28.29	22.69	22.45	23.68	24.59
Density Adjustment	11.68	11.68	11.68	11.68	19.86	19.86	19.86	19.86
Estimated Density	37.25	39.90	37.86	39.97	42.54	42.31	43.54	44.44
Observed Existing LOS	F	F	F	F	F	F	F	F
LOS	F	**F**	F	**F**	F	F	F	F

US 50 Eastbound - 59th Street to 65th Street						
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Mixed Flow Frwy Lanes	4	4	4	4	4	4
Volume (Vehicles)	6,767	6,856	7,439	6,641	6,689	6,931
Peak Hour Factor	0.97	0.97	0.97	0.95	0.95	0.95
Average Lane Width (ft)	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12
Ramps within three miles	14	14	14	14	14	14
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000
Calculations						
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0
TRD	2.33	2.33	2.33	2.33	2.33	2.33
FFS	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	1,778	1,801	1,954	1,778	1,791	1,856
Speed (S) (mph)	66	66	63	66	66	65
Calculated Density	26.88	27.37	30.82	26.89	27.17	28.55
Observed Existing Density	27.40	27.40	27.40	28.36	28.36	28.36
Estimated Density	27.40	27.88	31.34	28.36	28.63	30.02
Observed Existing LOS	D	D	D	D	D	D
LOS	D	D	D	D	D	D

US 50 Eastbound - 59th Street to 65th Street								
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Mixed Flow Frwy Lanes	4	4	4	4	4	4	4	4
Volume (Vehicles)	7,506	8,094	7,637	8,099	7,088	7,033	7,341	7,521
Peak Hour Factor	0.97	0.97	0.97	0.97	0.95	0.95	0.95	0.95
Average Lane Width (ft)	12	12	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12	12	12
Ramps within three miles	14	14	14	14	14	14	14	14
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Calculations								
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRD	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33
FFS	70	70	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	1,972	2,126	2,006	2,128	1,898	1,883	1,966	2,014
Speed (S) (mph)	63	60	62	60	64	65	63	62
Calculated Density	31.25	35.41	32.12	35.45	29.50	29.16	31.11	32.33
Density Adjustment	0.52	0.52	0.52	0.52	1.46	1.46	1.46	1.46
Estimated Density	31.77	35.93	32.64	35.96	30.96	30.63	32.57	33.79
Observed Existing LOS	D	D	D	D	D	D	D	D
LOS	D	E	D	E	D	D	D	D

US 50 Eastbound - 65th Street to Howe Avenue						
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Mixed Flow Frwy Lanes	5	5	5	5	5	5
Volume (Vehicles)	7,962	8,084	8,668	7,562	7,611	7,854
Peak Hour Factor	0.98	0.98	0.98	0.99	0.99	0.99
Average Lane Width (ft)	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12
Ramps within three miles	12	12	12	12	12	12
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000
Calculations						
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0
TRD	2.00	2.00	2.00	2.00	2.00	2.00
FFS	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	1,657	1,682	1,803	1,554	1,564	1,614
Speed (S) (mph)	68	67	66	69	68	68
Calculated Density	24.51	24.99	27.42	22.67	22.85	23.73
Observed Existing Density	28.05	28.05	28.05	29.71	29.71	29.71
Estimated Density	28.05	28.53	30.96	29.71	29.88	30.77
Observed Existing LOS	D	D	D	D	D	D
LOS	D	D	D	D	D	D

US 50 Eastbound - 65th Street to Howe Avenue								
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Mixed Flow Frwy Lanes	5	5	5	5	5	5	5	5
Volume (Vehicles)	7,971	8,166	8,019	8,272	7,455	7,302	7,658	7,812
Peak Hour Factor	0.98	0.98	0.98	0.98	0.99	0.99	0.99	0.99
Average Lane Width (ft)	12	12	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12	12	12
Ramps within three miles	12	12	12	12	12	12	12	12
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Calculations								
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRD	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
FFS	70	70	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	1,658	1,699	1,668	1,721	1,532	1,501	1,574	1,605
Speed (S) (mph)	68	67	67	67	69	69	68	68
Calculated Density	24.55	25.32	24.73	25.74	22.29	21.76	23.02	23.58
Density Adjustment	3.54	3.54	3.54	3.54	7.04	7.04	7.04	7.04
Estimated Density	28.08	28.85	28.27	29.28	29.33	28.80	30.05	30.61
Observed Existing LOS	D	D	D	D	D	D	D	D
LOS	D	D	D	D	D	D	D	D

US 50 Eastbound - Howe Avenue to Watt Avenue						
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Mixed Flow Frwy Lanes	4	4	4	4	4	4
Volume (Vehicles)	7,405	7,477	7,609	7,602	7,711	7,700
Peak Hour Factor	0.96	0.96	0.96	0.98	0.98	0.98
Average Lane Width (ft)	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12
Ramps within three miles	10	10	10	10	10	10
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000
Calculations						
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0
TRD	1.67	1.67	1.67	1.67	1.67	1.67
FFS	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	1,974	1,993	2,028	1,971	1,999	1,996
Speed (S) (mph)	63	63	62	63	63	63
Calculated Density	31.30	31.78	32.68	31.22	31.93	31.86
Observed Existing Density	31.77	31.77	31.77	33.01	33.01	33.01
Estimated Density	31.77	32.25	33.15	33.01	33.72	33.65
Observed Existing LOS	D	D	D	D	D	D
LOS	D	D	D	D	D	D

US 50 Eastbound - Howe Avenue to Watt Avenue								
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Mixed Flow Frwy Lanes	5	5	5	5	5	5	5	5
Volume (Vehicles)	7,147	7,149	7,213	7,366	6,393	6,150	6,680	6,679
Peak Hour Factor	0.96	0.96	0.96	0.96	0.98	0.98	0.98	0.98
Average Lane Width (ft)	12	12	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12	12	12
Ramps within three miles	10	10	10	10	10	10	10	10
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Calculations								
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRD	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67
FFS	70	70	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	1,524	1,524	1,538	1,571	1,326	1,275	1,385	1,385
Speed (S) (mph)	69	69	69	68	70	70	70	70
Calculated Density	22.15	22.16	22.40	22.96	18.99	18.24	19.90	19.90
Density Adjustment	0.47	0.47	0.47	0.47	1.79	1.79	1.79	1.79
Estimated Density	22.62	22.63	22.87	23.43	20.78	20.03	21.69	21.69
Observed Existing LOS	D	D	D	D	D	D	D	D
LOS	C	C	C	C	C	C	C	C

US 50 Eastbound - Watt Avenue to Bradshaw Road						
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Mixed Flow Frwy Lanes	4	4	4	4	4	4
Volume (Vehicles)	7,935	8,002	8,145	7,176	7,284	7,310
Peak Hour Factor	0.95	0.95	0.95	0.98	0.98	0.98
Average Lane Width (ft)	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12
Ramps within three miles	9	9	9	9	9	9
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000
Calculations						
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0
TRD	1.50	1.50	1.50	1.50	1.50	1.50
FFS	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	2,132	2,150	2,188	1,865	1,893	1,900
Speed (S) (mph)	60	60	59	65	64	64
Calculated Density	35.57	36.11	37.29	28.75	29.39	29.54
Observed Existing Density	27.22	27.22	27.22	24.80	24.80	24.80
Estimated Density	27.22	27.76	28.95	24.80	25.43	25.59
Observed Existing LOS	D	D	D	C	C	C
LOS	D	D	D	C	C	C

US 50 Eastbound - Watt Avenue to Bradshaw Road								
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Mixed Flow Frwy Lanes	4	4	4	4	4	4	4	4
Volume (Vehicles)	9,583	9,596	9,633	9,825	8,662	8,437	8,976	9,056
Peak Hour Factor	0.95	0.95	0.95	0.95	0.98	0.98	0.98	0.98
Average Lane Width (ft)	12	12	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12	12	12
Ramps within three miles	9	9	9	9	9	9	9	9
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Calculations								
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRD	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
FFS	70	70	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	2,574	2,578	2,588	2,640	2,252	2,193	2,333	2,354
Speed (S) (mph)	48	48	48	46	57	59	55	55
Calculated Density	53.54	53.74	54.31	57.43	39.38	37.45	42.34	43.14
Density Adjustment	-8.35	-8.35	-8.35	-8.35	-3.96	-3.96	-3.96	-3.96
Estimated Density	45.19	45.40	45.97	49.08	35.42	33.49	38.38	39.18
Observed Existing LOS	D	D	D	D	C	C	C	C
LOS	F	F	F	F	E	D	E	E

US 50 Eastbound - Bradshaw Road to Mather Field Road						
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Mixed Flow Frwy Lanes	4	4	4	4	4	4
Volume (Vehicles)	7,725	7,712	7,761	7,366	7,407	7,248
Peak Hour Factor	0.96	0.96	0.96	1.00	1.00	1.00
Average Lane Width (ft)	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12
Ramps within three miles	10	10	10	10	10	10
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000
Calculations						
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0
TRD	1.67	1.67	1.67	1.67	1.67	1.67
FFS	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	2,062	2,059	2,072	1,883	1,893	1,852
Speed (S) (mph)	61	61	61	65	64	65
Calculated Density	33.60	33.51	33.86	29.14	29.38	28.47
Observed Existing Density	45.10	45.10	45.10	25.50	25.50	25.50
Estimated Density	45.10	45.00	45.36	25.50	25.74	24.83
Observed Existing LOS	F	F	F	C	C	C
LOS	F	F	F	C	C	C

US 50 Eastbound - Bradshaw Road to Mather Field Road								
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Mixed Flow Frwy Lanes	5	5	5	5	5	5	5	5
Volume (Vehicles)	9,362	8,922	9,467	9,483	8,502	8,510	9,033	9,015
Peak Hour Factor	0.96	0.96	0.96	0.96	1.00	1.00	1.00	1.00
Average Lane Width (ft)	12	12	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12	12	12
Ramps within three miles	10	10	10	10	10	10	10	10
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Calculations								
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRD	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67
FFS	70	70	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	1,999	1,906	2,022	2,025	1,738	1,740	1,847	1,843
Speed (S) (mph)	63	64	62	62	67	67	65	65
Calculated Density	31.94	29.67	32.52	32.61	26.09	26.12	28.35	28.27
Density Adjustment	11.49	11.49	11.49	11.49	-3.64	-3.64	-3.64	-3.64
Estimated Density	43.44	41.16	44.02	44.11	22.45	22.48	24.71	24.63
Observed Existing LOS	F	F	F	F	C	C	C	C
LOS	F	F	F	F	C	C	C	C

US 50 Eastbound - Mather Field Road to Zinfandel Drive						
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Mixed Flow Frwy Lanes	5	5	5	5	5	5
Volume (Vehicles)	7,275	7,268	7,713	7,224	7,264	7,560
Peak Hour Factor	0.94	0.94	0.94	0.97	0.97	0.97
Average Lane Width (ft)	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12
Ramps within three miles	11	11	11	11	11	11
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000
Calculations						
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0
TRD	1.83	1.83	1.83	1.83	1.83	1.83
FFS	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	1,570	1,569	1,665	1,512	1,520	1,582
Speed (S) (mph)	68	68	67	69	69	68
Calculated Density	22.96	22.93	24.67	21.95	22.09	23.16
Observed Existing Density	19.18	19.18	19.18	20.13	20.13	20.13
Estimated Density	19.18	19.15	20.89	20.13	20.27	21.34
Observed Existing LOS	C	C	C	C	C	C
LOS	C	C	C	C	C	C

US 50 Eastbound - Mather Field Road to Zinfandel Drive								
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Mixed Flow Frwy Lanes	5	5	5	5	5	5	5	5
Volume (Vehicles)	8,935	8,490	9,072	9,211	8,234	8,548	8,765	8,916
Peak Hour Factor	0.94	0.94	0.94	0.94	0.97	0.97	0.97	0.97
Average Lane Width (ft)	12	12	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12	12	12
Ramps within three miles	11	11	11	11	11	11	11	11
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Calculations								
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRD	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83
FFS	70	70	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	1,929	1,833	1,959	1,988	1,723	1,789	1,834	1,866
Speed (S) (mph)	64	65	63	63	67	66	65	65
Calculated Density	30.21	28.05	30.93	31.67	25.79	27.12	28.08	28.77
Density Adjustment	-3.78	-3.78	-3.78	-3.78	-1.82	-1.82	-1.82	-1.82
Estimated Density	26.43	24.27	27.15	27.89	23.96	25.29	26.25	26.95
Observed Existing LOS	C	C	C	C	C	C	C	C
LOS	D	C	D	D	C	C	D	D

US 50 Eastbound - Zinfandel Drive to Sunrise Boulevard						
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Mixed Flow Frwy Lanes	4	4	4	4	4	4
Volume (Vehicles)	5,121	5,289	5,726	6,649	6,708	7,083
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95
Average Lane Width (ft)	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12
Ramps within three miles	8	8	8	8	8	8
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000
Calculations						
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0
TRD	1.33	1.33	1.33	1.33	1.33	1.33
FFS	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	1,365	1,410	1,526	1,786	1,802	1,902
Speed (S) (mph)	70	69	69	66	66	64
Calculated Density	19.59	20.29	22.19	27.05	27.38	29.60
Observed Existing Density	20.08	20.08	20.08	42.12	42.12	42.12
Estimated Density	20.08	20.78	22.68	42.12	42.45	44.66
Observed Existing LOS	C	C	C	F	F	F
LOS	C	C	C	F	F	**F**

US 50 Eastbound - Zinfandel Drive to Sunrise Boulevard								
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Mixed Flow Frwy Lanes	5	5	5	5	5	5	5	5
Volume (Vehicles)	6,237	5,990	6,313	6,400	6,181	6,487	6,367	6,551
Peak Hour Factor	0.96	0.96	0.96	0.96	0.95	0.95	0.95	0.95
Average Lane Width (ft)	12	12	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12	12	12
Ramps within three miles	13	13	13	13	13	13	13	13
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Calculations								
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRD	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17
FFS	70	70	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	1,330	1,277	1,346	1,365	1,328	1,394	1,368	1,408
Speed (S) (mph)	70	70	70	70	70	70	70	70
Calculated Density	19.05	18.26	19.30	19.58	19.03	20.04	19.64	20.25
Density Adjustment	0.49	0.49	0.49	0.49	15.07	15.07	15.07	15.07
Estimated Density	19.54	18.75	19.79	20.07	34.09	35.10	34.70	35.32
Observed Existing LOS	C	C	C	C	F	F	F	F
LOS	C	C	C	C	F	F	F	F

US 50 Eastbound - Sunrise Boulevard to Hazel Avenue						
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Mixed Flow Frwy Lanes	3	3	3	3	3	3
Volume (Vehicles)	4,985	5,132	5,461	5,323	5,366	5,611
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Average Lane Width (ft)	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12
Ramps within three miles	7	7	7	7	7	7
Truck Percentage	6%	6%	6%	6%	6%	6%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000
Calculations						
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0
TRD	1.17	1.17	1.17	1.17	1.17	1.17
FFS	70	70	70	70	70	70
f_{HV}	0.97	0.97	0.97	0.97	0.97	0.97
Demand Flow Rate per Lane (v_p)	1,811	1,864	1,984	1,938	1,953	2,043
Speed (S) (mph)	66	65	63	64	63	62
Calculated Density	27.58	28.74	31.56	30.43	30.81	33.08
Observed Existing Density	27.67	27.67	27.67	37.30	37.30	37.30
Estimated Density	27.67	28.83	31.66	37.30	37.67	39.94
Observed Existing LOS	D	D	D	F	F	F
LOS	D	D	D	F	F	**F**

US 50 Eastbound - Sunrise Boulevard to Rancho Cordova Parkway								
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Mixed Flow Frwy Lanes	4	4	4	4	4	4	4	4
Volume (Vehicles)	5,335	4,943	5,835	5,892	5,450	5,894	5,875	6,121
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Average Lane Width (ft)	12	12	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12	12	12
Ramps within three miles	10	10	10	10	10	10	10	10
Truck Percentage	6%	6%	6%	6%	6%	6%	6%	6%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Calculations								
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRD	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67
FFS	70	70	70	70	70	70	70	70
f_{HV}	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Demand Flow Rate per Lane (v_p)	1,454	1,347	1,590	1,605	1,488	1,609	1,604	1,671
Speed (S) (mph)	69	70	68	68	69	68	68	67
Calculated Density	20.99	19.31	23.30	23.58	21.55	23.65	23.55	24.79
Density Adjustment	0.09	0.09	0.09	0.09	6.87	6.87	6.87	6.87
Estimated Density	21.09	19.41	23.39	23.67	28.42	30.51	30.42	31.65
Observed Existing LOS	D	D	D	D	F	F	F	F
LOS	C	C	C	C	F	**F**	F	F

US 50 Eastbound - Rancho Cordova Parkway to Hazel Avenue								
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Mixed Flow Frwy Lanes	4	4	4	4	4	4	4	4
Volume (Vehicles)	6,571	6,074	7,170	7,249	6,395	6,887	6,651	6,929
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Average Lane Width (ft)	12	12	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12	12	12
Ramps within three miles	9	9	9	9	9	9	9	9
Truck Percentage	6%	6%	6%	6%	6%	6%	6%	6%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Calculations								
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRD	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
FFS	70	70	70	70	70	70	70	70
f_{HV}	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Demand Flow Rate per Lane (v_p)	1,791	1,655	1,954	1,975	1,746	1,880	1,816	1,892
Speed (S) (mph)	66	68	63	63	67	65	66	64
Calculated Density	27.15	24.49	30.81	31.34	26.24	29.10	27.69	29.36
Density Adjustment	0.09	0.09	0.09	0.09	6.87	6.87	6.87	6.87
Estimated Density	27.24	24.58	30.91	31.43	33.11	35.96	34.55	36.22
Observed Existing LOS	D	D	D	D	F	F	F	F
LOS	D	C	D	D	F	**F**	F	F

US 50 Westbound - Hazel Avenue to Sunrise Boulevard						
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Mixed Flow Frwy Lanes	3	3	3	3	3	3
Volume (Vehicles)	6,068	6,121	6,334	4,370	4,481	4,707
Peak Hour Factor	0.95	0.95	0.95	0.97	0.97	0.97
Average Lane Width (ft)	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12
Ramps within three miles	8	8	8	8	8	8
Truck Percentage	6%	6%	6%	6%	6%	6%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000
Calculations						
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0
TRD	1.33	1.33	1.33	1.33	1.33	1.33
FFS	70	70	70	70	70	70
f_{HV}	0.97	0.97	0.97	0.97	0.97	0.97
Demand Flow Rate per Lane (v_p)	2,199	2,218	2,295	1,545	1,584	1,664
Speed (S) (mph)	58	58	56	69	68	67
Calculated Density	37.62	38.24	40.92	22.52	23.20	24.66
Observed Existing Density	32.91	32.91	32.91	23.17	23.17	23.17
Estimated Density	32.91	33.53	36.21	23.17	23.85	25.30
Observed Existing LOS	D	D	D	C	C	C
LOS	D	D	E	C	C	C

US 50 Westbound - Hazel Avenue to Rancho Cordova Parkway								
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Mixed Flow Frwy Lanes	4	4	4	4	4	4	4	4
Volume (Vehicles)	5,240	5,695	5,376	5,643	4,367	3,934	5,168	5,218
Peak Hour Factor	0.95	0.95	0.95	0.95	0.97	0.97	0.97	0.97
Average Lane Width (ft)	12	12	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12	12	12
Ramps within three miles	9	9	9	9	9	9	9	9
Truck Percentage	6%	6%	6%	6%	6%	6%	6%	6%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Calculations								
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRD	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
FFS	70	70	70	70	70	70	70	70
f_{HV}	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Demand Flow Rate per Lane (v_p)	1,424	1,548	1,461	1,533	1,158	1,043	1,371	1,384
Speed (S) (mph)	69	69	69	69	70	70	70	70
Calculated Density	20.51	22.56	21.11	22.32	16.54	14.91	19.67	19.88
Density Adjustment	-4.71	-4.71	-4.71	-4.71	0.65	0.65	0.65	0.65
Estimated Density	15.80	17.85	16.40	17.61	17.19	15.55	20.32	20.53
Observed Existing LOS	D	D	D	D	C	C	C	C
LOS	B	B	B	B	B	B	C	C

US 50 Westbound - Rancho Cordova Parkway to Sunrise Boulevard								
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Mixed Flow Frwy Lanes	4	4	4	4	4	4	4	4
Volume (Vehicles)	6,587	7,048	6,906	7,103	3,883	3,515	4,367	4,461
Peak Hour Factor	0.95	0.95	0.95	0.95	0.97	0.97	0.97	0.97
Average Lane Width (ft)	12	12	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12	12	12
Ramps within three miles	10	10	10	10	10	10	10	10
Truck Percentage	6%	6%	6%	6%	6%	6%	6%	6%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Calculations								
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRD	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67
FFS	70	70	70	70	70	70	70	70
f_{HV}	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Demand Flow Rate per Lane (v_p)	1,790	1,915	1,877	1,930	1,030	932	1,158	1,183
Speed (S) (mph)	66	64	65	64	70	70	70	70
Calculated Density	27.14	29.90	29.01	30.25	14.71	13.32	16.54	16.90
Density Adjustment	-4.71	-4.71	-4.71	-4.71	0.65	0.65	0.65	0.65
Estimated Density	22.43	25.19	24.30	25.54	15.36	13.96	17.19	17.55
Observed Existing LOS	D	D	D	D	C	C	C	C
LOS	C	C	C	C	B	B	B	B

US 50 Westbound - Sunrise Boulevard to Zinfandel Drive						
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Mixed Flow Frwy Lanes	4	4	4	4	4	4
Volume (Vehicles)	7,502	7,540	7,846	4,762	4,902	5,134
Peak Hour Factor	0.96	0.96	0.96	0.93	0.93	0.93
Average Lane Width (ft)	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12
Ramps within three miles	8	8	8	8	8	8
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000
Calculations						
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0
TRD	1.33	1.33	1.33	1.33	1.33	1.33
FFS	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	1,994	2,004	2,085	1,306	1,344	1,408
Speed (S) (mph)	63	63	61	70	70	69
Calculated Density	31.81	32.06	34.24	18.69	19.27	20.26
Observed Existing Density	33.31	33.31	33.31	19.30	19.30	19.30
Estimated Density	33.31	33.57	35.75	19.30	19.88	20.87
Observed Existing LOS	D	D	D	C	C	C
LOS	D	D	E	C	C	C

US 50 Westbound - Sunrise Boulevard to Zinfandel Drive								
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Mixed Flow Frwy Lanes	5	5	5	5	5	5	5	5
Volume (Vehicles)	8,392	8,891	8,587	8,801	4,914	4,555	5,211	5,378
Peak Hour Factor	0.96	0.96	0.96	0.96	0.93	0.93	0.93	0.93
Average Lane Width (ft)	12	12	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12	12	12
Ramps within three miles	10	10	10	10	10	10	10	10
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Calculations								
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRD	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67
FFS	70	70	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	1,784	1,891	1,826	1,871	1,078	999	1,143	1,180
Speed (S) (mph)	66	64	65	65	70	70	70	70
Calculated Density	27.02	29.32	27.89	28.89	15.40	14.28	16.33	16.86
Density Adjustment	1.51	1.51	1.51	1.51	0.61	0.61	0.61	0.61
Estimated Density	28.53	30.83	29.40	30.40	16.01	14.89	16.94	17.47
Observed Existing LOS	D	D	D	D	C	C	C	C
LOS	D	D	D	D	B	B	B	B

US 50 Westbound - Zinfandel Drive to Mather Field Road						
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Mixed Flow Frwy Lanes	5	5	5	5	5	5
Volume (Vehicles)	7,548	7,551	7,829	5,765	5,710	5,928
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95
Average Lane Width (ft)	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12
Ramps within three miles	11	11	11	11	11	11
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000
Calculations						
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0
TRD	1.83	1.83	1.83	1.83	1.83	1.83
FFS	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	1,601	1,601	1,660	1,239	1,227	1,274
Speed (S) (mph)	68	68	68	70	70	70
Calculated Density	23.49	23.50	24.58	17.70	17.53	18.22
Observed Existing Density	21.96	21.96	21.96	14.85	14.85	14.85
Estimated Density	21.96	21.97	23.05	14.85	14.68	15.36
Observed Existing LOS	C	C	C	B	B	B
LOS	C	C	C	B	B	B

US 50 Westbound - Zinfandel Drive to Mather Field Road								
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Mixed Flow Frwy Lanes	5	5	5	5	5	5	5	5
Volume (Vehicles)	8,942	9,330	9,480	9,493	7,154	6,703	7,384	7,454
Peak Hour Factor	0.96	0.96	0.96	0.96	0.95	0.95	0.95	0.95
Average Lane Width (ft)	12	12	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12	12	12
Ramps within three miles	11	11	11	11	11	11	11	11
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Calculations								
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRD	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83
FFS	70	70	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	1,896	1,979	2,011	2,013	1,538	1,440	1,587	1,602
Speed (S) (mph)	64	63	62	62	69	69	68	68
Calculated Density	29.46	31.43	32.23	32.31	22.39	20.78	23.25	23.52
Density Adjustment	-1.54	-1.54	-1.54	-1.54	-2.86	-2.86	-2.86	-2.86
Estimated Density	27.92	29.89	30.70	30.77	19.53	17.92	20.39	20.66
Observed Existing LOS	C	C	C	C	B	B	B	B
LOS	D	D	D	D	C	B	C	C

US 50 Westbound - Mather Field Road to Bradshaw Road						
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Mixed Flow Frwy Lanes	4	4	4	4	4	4
Volume (Vehicles)	7,859	7,857	7,810	6,939	6,869	6,892
Peak Hour Factor	0.95	0.95	0.95	0.99	0.99	0.99
Average Lane Width (ft)	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12
Ramps within three miles	10	10	10	10	10	10
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000
Calculations						
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0
TRD	1.67	1.67	1.67	1.67	1.67	1.67
FFS	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	2,102	2,101	2,089	1,787	1,769	1,775
Speed (S) (mph)	61	61	61	66	66	66
Calculated Density	34.70	34.69	34.33	27.07	26.70	26.82
Observed Existing Density	44.40	44.40	44.40	28.66	28.66	28.66
Estimated Density	44.40	44.39	44.03	28.66	28.30	28.42
Observed Existing LOS	F	F	F	D	D	D
LOS	F	F	F	D	D	D

US 50 Westbound - Mather Field Road to Bradshaw Road								
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Mixed Flow Frwy Lanes	5	5	5	5	5	5	5	5
Volume (Vehicles)	8,996	9,065	9,560	9,406	8,442	7,995	8,696	8,544
Peak Hour Factor	0.95	0.95	0.95	0.95	0.99	0.99	0.99	0.99
Average Lane Width (ft)	12	12	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12	12	12
Ramps within three miles	10	10	10	10	10	10	10	10
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Calculations								
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRD	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67
FFS	70	70	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	1,925	1,940	2,046	2,013	1,739	1,647	1,791	1,760
Speed (S) (mph)	64	64	62	62	67	68	66	66
Calculated Density	30.12	30.47	33.15	32.28	26.09	24.33	27.16	26.52
Density Adjustment	9.70	9.70	9.70	9.70	1.60	1.60	1.60	1.60
Estimated Density	39.81	40.17	42.85	41.98	27.69	25.93	28.76	28.12
Observed Existing LOS	F	F	F	F	D	D	D	D
LOS	F	F	F	F	D	C	D	D

US 50 Westbound - Bradshaw Road to Watt Avenue						
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Mixed Flow Frwy Lanes	4	4	4	4	4	4
Volume (Vehicles)	7,550	7,522	7,424	6,466	6,556	6,913
Peak Hour Factor	0.90	0.90	0.90	0.96	0.96	0.96
Average Lane Width (ft)	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12
Ramps within three miles	10	10	10	10	10	10
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000
Calculations						
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0
TRD	1.67	1.67	1.67	1.67	1.67	1.67
FFS	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	2,134	2,126	2,099	1,721	1,745	1,840
Speed (S) (mph)	60	60	61	67	67	65
Calculated Density	35.64	35.41	34.61	25.74	26.22	28.20
Observed Existing Density	54.37	54.37	54.37	32.91	32.91	32.91
Estimated Density	54.37	54.13	53.34	32.91	33.39	35.36
Observed Existing LOS	F	F	F	D	D	D
LOS	F	F	F	D	D	E

US 50 Westbound - Bradshaw Road to Watt Avenue								
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Mixed Flow Frwy Lanes	4	4	4	4	4	4	4	4
Volume (Vehicles)	8,662	8,415	9,001	8,854	7,703	7,847	7,871	8,099
Peak Hour Factor	0.90	0.90	0.90	0.90	0.96	0.96	0.96	0.96
Average Lane Width (ft)	12	12	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12	12	12
Ramps within three miles	10	10	10	10	10	10	10	10
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Calculations								
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRD	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67
FFS	70	70	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	2,448	2,379	2,544	2,503	2,050	2,089	2,095	2,156
Speed (S) (mph)	52	54	49	50	62	61	61	59
Calculated Density	47.16	44.15	51.89	49.74	33.27	34.33	34.50	36.28
Observed Existing Density	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Estimated Density	47.16	44.15	51.89	49.74	33.27	34.33	34.50	36.28
Observed Existing LOS	F	F	F	F	D	D	D	D
LOS	F	F	F	F	D	D	D	E

US 50 Westbound - Watt Avenue to Howe Avenue						
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Mixed Flow Frwy Lanes	5	5	5	5	5	5
Volume (Vehicles)	7,376	7,326	7,192	5,106	5,165	5,395
Peak Hour Factor	0.93	0.93	0.93	0.98	0.98	0.98
Average Lane Width (ft)	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12
Ramps within three miles	10	10	10	10	10	10
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000
Calculations						
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0
TRD	1.67	1.67	1.67	1.67	1.67	1.67
FFS	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	1,617	1,605	1,576	1,059	1,071	1,119
Speed (S) (mph)	68	68	68	70	70	70
Calculated Density	23.78	23.58	23.06	15.13	15.30	15.98
Observed Existing Density	53.44	53.44	53.44	22.96	22.96	22.96
Estimated Density	53.44	53.25	52.73	22.96	23.14	23.82
Observed Existing LOS	F	F	F	F	F	F
LOS	F	F	F	F	F	**F**

US 50 Westbound - Watt Avenue to Howe Avenue								
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Mixed Flow Frwy Lanes	5	5	5	5	5	5	5	5
Volume (Vehicles)	7,604	7,111	7,880	7,679	5,740	5,836	5,864	6,132
Peak Hour Factor	0.93	0.93	0.93	0.93	0.98	0.98	0.98	0.98
Average Lane Width (ft)	12	12	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12	12	12
Ramps within three miles	10	10	10	10	10	10	10	10
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Calculations								
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRD	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67
FFS	70	70	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	1,666	1,558	1,727	1,683	1,190	1,210	1,216	1,272
Speed (S) (mph)	67	69	67	67	70	70	70	70
Calculated Density	24.70	22.75	25.86	25.01	17.01	17.29	17.37	18.18
Density Adjustment	29.67	29.67	29.67	29.67	7.84	7.84	7.84	7.84
Estimated Density	54.36	52.41	55.53	54.68	24.84	25.12	25.21	26.02
Observed Existing LOS	F	F	F	F	F	F	F	F
LOS	F	F	F	F	F	F	F	F

US 50 Westbound - Howe Avenue to 65th Street						
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Mixed Flow Frwy Lanes	5	5	5	5	5	5
Volume (Vehicles)	8,157	8,182	8,489	7,407	7,469	8,031
Peak Hour Factor	0.96	0.96	0.96	0.99	0.99	0.99
Average Lane Width (ft)	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12
Ramps within three miles	15	15	15	15	15	15
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000
Calculations						
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0
TRD	2.50	2.50	2.50	2.50	2.50	2.50
FFS	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	1,739	1,745	1,810	1,527	1,540	1,656
Speed (S) (mph)	67	67	66	69	69	68
Calculated Density	26.11	26.21	27.56	22.21	22.43	24.49
Observed Existing Density	35.68	35.68	35.68	41.55	41.55	41.55
Estimated Density	35.68	35.79	37.14	41.55	41.77	43.83
Observed Existing LOS	F	F	F	F	F	F
LOS	F	F	F	F	F	**F**

US 50 Westbound - Howe Avenue to 65th Street								
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Mixed Flow Frwy Lanes	5	5	5	5	5	5	5	5
Volume (Vehicles)	8,577	8,539	8,761	8,972	7,896	8,148	8,080	8,384
Peak Hour Factor	0.96	0.96	0.96	0.96	0.99	0.99	0.99	0.99
Average Lane Width (ft)	12	12	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12	12	12
Ramps within three miles	15	15	15	15	15	15	15	15
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Calculations								
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRD	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
FFS	70	70	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	1,829	1,821	1,868	1,913	1,628	1,680	1,666	1,728
Speed (S) (mph)	65	66	65	64	68	67	67	67
Calculated Density	27.96	27.79	28.82	29.85	23.98	24.95	24.68	25.89
Density Adjustment	9.58	9.58	9.58	9.58	19.34	19.34	19.34	19.34
Estimated Density	37.54	37.36	38.40	39.43	43.32	44.29	44.02	45.23
Observed Existing LOS	F	F	F	F	F	F	F	F
LOS	F	F	F	F	F	F	F	F

US 50 Westbound - 65th Street to 59th Street						
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Mixed Flow Frwy Lanes	4	4	4	4	4	4
Volume (Vehicles)	8,278	8,281	8,605	7,358	7,413	7,953
Peak Hour Factor	0.98	0.98	0.98	0.99	0.99	0.99
Average Lane Width (ft)	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12
Ramps within three miles	16	16	16	16	16	16
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000
Calculations						
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0
TRD	2.67	2.67	2.67	2.67	2.67	2.67
FFS	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	2,157	2,158	2,242	1,904	1,918	2,058
Speed (S) (mph)	59	59	57	64	64	61
Calculated Density	36.32	36.34	39.05	29.63	29.96	33.48
Observed Existing Density	44.85	44.85	44.85	51.56	51.56	51.56
Estimated Density	44.85	44.88	47.59	51.56	51.88	55.41
Observed Existing LOS	F	F	F	F	F	F
LOS	F	F	F	F	F	**F**

US 50 Westbound - 65th Street to 59th Street								
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 70 MPH Free Flow Speed**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Mixed Flow Frwy Lanes	4	4	4	4	4	4	4	4
Volume (Vehicles)	8,621	8,601	8,809	9,012	7,827	8,270	7,970	8,296
Peak Hour Factor	0.98	0.98	0.98	0.98	0.99	0.99	0.99	0.99
Average Lane Width (ft)	12	12	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12	12	12
Ramps within three miles	16	16	16	16	16	16	16	16
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Calculations								
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRD	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67
FFS	70	70	70	70	70	70	70	70
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	2,246	2,241	2,295	2,348	2,025	2,140	2,062	2,147
Speed (S) (mph)	57	57	56	55	62	60	61	60
Calculated Density	39.19	39.02	40.91	42.91	32.61	35.81	33.60	36.01
Density Adjustment	8.53	8.53	8.53	8.53	21.92	21.92	21.92	21.92
Estimated Density	47.73	47.55	49.45	51.44	54.53	57.74	55.52	57.94
Observed Existing LOS	F	F	F	F	F	F	F	F
LOS	F	F	F	F	F	**F**	F	F

US 50 Westbound - 59th Street to Stockton Boulevard						
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 65 MPH Free Flow Speed**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Mixed Flow Frwy Lanes	5	5	5	5	5	5
Volume (Vehicles)	9,115	9,125	9,448	7,945	8,008	8,537
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Average Lane Width (ft)	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12
Ramps within three miles	18	18	18	18	18	18
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000
Calculations						
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0
TRD	3.00	3.00	3.00	3.00	3.00	3.00
FFS	65	65	65	65	65	65
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	1,880	1,882	1,949	1,643	1,656	1,766
Speed (S) (mph)	62	62	61	64	64	63
Calculated Density	30.45	30.50	32.09	25.61	25.85	27.98
Observed Existing Density	29.39	29.39	29.39	32.31	32.31	32.31
Estimated Density	29.39	29.44	31.02	32.31	32.55	34.68
Observed Existing LOS	D	D	D	F	F	F
LOS	D	D	D	F	F	**F**

US 50 Westbound - 59th Street to Stockton Boulevard								
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 65 MPH Free Flow Speed**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Mixed Flow Frwy Lanes	5	5	5	5	5	5	5	5
Volume (Vehicles)	9,516	9,426	9,692	9,890	8,137	8,631	8,290	8,656
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Average Lane Width (ft)	12	12	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12	12	12
Ramps within three miles	18	18	18	18	18	18	18	18
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Calculations								
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRD	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
FFS	65	65	65	65	65	65	65	65
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	1,963	1,944	1,999	2,040	1,683	1,785	1,715	1,790
Speed (S) (mph)	61	61	60	59	64	63	64	63
Calculated Density	32.43	31.98	33.36	34.46	26.35	28.38	26.96	28.49
Density Adjustment	-1.07	-1.07	-1.07	-1.07	6.70	6.70	6.70	6.70
Estimated Density	31.37	30.91	32.30	33.39	33.05	35.08	33.66	35.19
Observed Existing LOS	D	D	D	D	F	F	F	F
LOS	D	D	D	D	F	**F**	F	F

US 50 Westbound - Stockton Boulevard to SR 51 / SR 99						
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 65 MPH Free Flow Speed**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Mixed Flow Frwy Lanes	5	5	5	5	5	5
Volume (Vehicles)	8,546	8,536	8,836	8,136	8,194	8,635
Peak Hour Factor	0.95	0.95	0.95	0.96	0.96	0.96
Average Lane Width (ft)	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12
Ramps within three miles	19	19	19	19	19	19
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000
Calculations						
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0
TRD	3.17	3.17	3.17	3.17	3.17	3.17
FFS	65	65	65	65	65	65
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	1,830	1,828	1,892	1,723	1,736	1,829
Speed (S) (mph)	62	62	62	64	63	62
Calculated Density	29.33	29.29	30.73	27.13	27.38	29.32
Observed Existing Density	31.89	31.89	31.89	33.25	33.25	33.25
Estimated Density	31.89	31.85	33.29	33.25	33.49	35.43
Observed Existing LOS	D	D	D	F	F	F
LOS	D	D	D	F	F	**F**

US 50 Westbound - Stockton Boulevard to SR 51 / SR 99								
Highway Capacity Manual 2010 Edition **Basic Freeway Segment Analysis - Level Terrain - 65 MPH Free Flow Speed**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Mixed Flow Frwy Lanes	5	5	5	5	5	5	5	5
Volume (Vehicles)	10,023	9,930	10,187	10,300	9,566	9,855	9,660	9,916
Peak Hour Factor	0.95	0.95	0.95	0.95	0.96	0.96	0.96	0.96
Average Lane Width (ft)	12	12	12	12	12	12	12	12
Right side lateral clearance (ft)	12	12	12	12	12	12	12	12
Ramps within three miles	19	19	19	19	19	19	19	19
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor (f_P)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Calculations								
f_{LW}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
f_{LC}	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRD	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17
FFS	65	65	65	65	65	65	65	65
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Demand Flow Rate per Lane (v_p)	2,146	2,126	2,181	2,205	2,026	2,087	2,046	2,101
Speed (S) (mph)	57	58	56	56	59	58	59	58
Calculated Density	37.58	36.97	38.72	39.52	34.09	35.81	34.63	36.19
Density Adjustment	2.56	2.56	2.56	2.56	6.12	6.12	6.12	6.12
Estimated Density	40.14	39.53	41.27	42.08	40.21	41.92	40.75	42.31
Observed Existing LOS	D	D	D	D	F	F	F	F
LOS	E	E	E	E	F	F	F	F

US-50 Freeway System

Merge/Diverge Analysis – Summary Tables

Table D-4								
Peak Hour Freeway Ramp Operations - Existing Scenarios - AM Peak Hour								
			Existing		**Existing Plus Jackson Township**		**Existing Plus FOUR PROJECTS**	
Direction	**US 50 Ramp**	**Junction Type**	**Ramp Volume**	**Level of Service**	**Ramp Volume**	**Level of Service**	**Ramp Volume**	**Level of Service**
Eastbound	Northbound 65th Street Slip Entrance	Weave	765	D	771	D	730	**F**
	Howe Avenue / Hornet Drive Exit		1,631		1,681		2,175	
	Southbound Howe Avenue Loop Entrance	One-Lane Merge	484	C	485	C	556	C
	Northbound Howe Avenue Slip Entrance	One-Lane Merge	419	C	435	C	390	C
	Watt Avenue Exit	Two-Lane Diverge	1,317	B	1,333	B	1,149	B
	Watt Avenue Entrance	One-Lane Merge	2,134	**F**	2,143	**F**	1,951	E
	Bradshaw Road Exit	Two-Lane Diverge	1,520	B	1,572	B	1,891	C
	Southbound Bradshaw Road Loop Entrance	One-Lane Merge	220	C	224	C	151	C
	Northbound Bradshaw Road Slip Entrance	One-Lane Merge	971	C	923	C	1,280	D
	Mather Field Road Exit	Two-Lane Diverge	1,266	B	1,275	B	1,188	B
	Southbound Mather Field Road Loop Entrance	One-Lane Merge	125	C	134	C	121	C
	Northbound Mather Field Road Slip Entrance	Weave	317	**F**	325	**F**	634	**F**
	Zinfandel Drive Exit		2,932		2,945		2,918	
	Southbound Zinfandel Drive Loop Entrance	One-Lane Merge	182	B	176	B	177	B
	Northbound Zinfandel Drive Slip Entrance	One-Lane Merge	348	B	562	B	522	C
	Sunrise Boulevard Exit	Major Diverge	1,773	C	1,821	C	1,953	C
	Sunrise Boulevard Entrance	One-Lane Merge	992	C	1,011	C	1,028	C
	Hazel Avenue Exit	Two-Lane Diverge	933	B	993	B	1,094	C
	Hazel Avenue Entrance	Weave	804	C	803	C	704	C
	Aerojet Road Exit		241		242		241	
Westbound	Hazel Avenue Exit	Two-Lane Diverge	631	A	686	A	622	A
	Northbound Hazel Avenue Loop Entrance	One-Lane Merge	160	B	166	B	174	B
	Southbound Hazel Avenue Slip Entrance	One-Lane Merge	1,550	B	1,608	B	1,748	C
	Sunrise Boulevard Exit	One-Lane Diverge	749	E	729	E	655	E
	Sunrise Boulevard Entrance	Lane Addition	2,183	**F**	2,186	**F**	2,192	**F**
	Zinfandel Drive Exit	One-Lane Diverge	1,034	E	1,060	E	1,088	E
	Northbound Zinfandel Drive Loop Entrance	Lane Addition	585	B	599	B	532	B
	Southbound Zinfandel Drive Slip Entrance	One-Lane Merge	442	C	437	C	410	C
	Mather Field Road Exit	One-Lane Drop	1,093	C	1,110	C	1,496	C
	Northbound Mather Field Road Loop Entrance	One-Lane Merge	515	B	511	B	385	B
	Southbound Mather Field Road Slip Entrance	One-Lane Merge	387	B	390	B	519	B
	Bradshaw Road Exit	Two-Lane Diverge	1,236	B	1,277	B	1,583	B
	Northbound Bradshaw Road Loop Entrance	One-Lane Merge	914	D	932	D	1,236	D
	Southbound Bradshaw Road Slip Entrance	One-Lane Merge	338	D	334	D	365	D
	Watt Avenue Exit	Major Diverge	1,373	D	1,357	D	1,257	D
	Northbound Watt Avenue Entrance	One-Lane Merge	820	D	803	D	788	D
	Southbound Watt Avenue Slip Entrance	Lane Addition / Weave	1,232	C	1,211	C	1,091	C
	Howe Avenue Exit	Major Diverge / Weave	1,531	D	1,549	D	1,349	D
	Northbound Howe Avenue Loop Entrance	One-Lane Merge	654	D	665	D	689	D
	Southbound Howe Avenue Slip Entrance	One-Lane Merge	574	C	575	C	688	C
Source: DKS Associates, 2018.								

Table D-5

Peak Hour Freeway Ramp Operations - Existing Scenarios - PM Peak Hour

Direction	US 50 Ramp	Junction Type	Existing		Existing Plus Jackson Township		Existing Plus FOUR PROJECTS	
			Ramp Volume	Level of Service	Ramp Volume	Level of Service	Ramp Volume	Level of Service
Eastbound	Northbound 65th Street Slip Entrance	Weave	653	C	636	C	576	C
	Howe Avenue / Hornet Drive Exit		1,417		1,354		1,627	
	Southbound Howe Avenue Loop Entrance	One-Lane Merge	881	C	853	C	927	D
	Northbound Howe Avenue Slip Entrance	One-Lane Merge	431	C	426	C	401	C
	Watt Avenue Exit	Two-Lane Diverge	1,634	B	1,641	B	1,470	B
	Watt Avenue Entrance	One-Lane Merge	1,724	D	1,739	D	1,553	D
	Bradshaw Road Exit	Two-Lane Diverge	1,228	B	1,284	B	1,574	B
	Southbound Bradshaw Road Loop Entrance	One-Lane Merge	422	C	425	C	423	C
	Northbound Bradshaw Road Slip Entrance	One-Lane Merge	918	C	910	C	1,105	C
	Mather Field Road Exit	Two-Lane Diverge	1,062	A	1,092	A	987	A
	Southbound Mather Field Road Loop Entrance	One-Lane Merge	101	B	100	B	107	B
	Northbound Mather Field Road Slip Entrance	Weave	816	C	828	C	1,187	D
	Zinfandel Drive Exit		1,452		1,471		1,419	
	Southbound Zinfandel Drive Loop Entrance	One-Lane Merge	129	C	132	C	116	C
	Northbound Zinfandel Drive Slip Entrance	One-Lane Merge	540	C	591	C	627	C
	Sunrise Boulevard Exit	Major Diverge	1,959	D	1,954	D	2,073	D
	Sunrise Boulevard Entrance	One-Lane Merge	889	D	870	D	834	D
	Hazel Avenue Exit	Two-Lane Diverge	1,541	C	1,555	C	1,673	C
	Hazel Avenue Entrance	Weave	945	C	949	C	945	C
	Aerojet Road Exit		55		58		52	
Westbound	Hazel Avenue Exit	Two-Lane Diverge	869	A	877	B	849	B
	Northbound Hazel Avenue Loop Entrance	One-Lane Merge	600	B	595	B	593	B
	Southbound Hazel Avenue Slip Entrance	One-Lane Merge	800	B	868	B	962	B
	Sunrise Boulevard Exit	One-Lane Diverge	758	D	780	D	763	D
	Sunrise Boulevard Entrance	Lane Addition	1,656	D	1,685	D	1,686	D
	Zinfandel Drive Exit	One-Lane Diverge	608	C	764	C	759	C
	Northbound Zinfandel Drive Loop Entrance	Lane Addition	1,197	B	1,194	B	1,118	B
	Southbound Zinfandel Drive Slip Entrance	One-Lane Merge	561	B	533	B	550	B
	Mather Field Road Exit	One-Lane Drop	556	A	575	A	740	A
	Northbound Mather Field Road Loop Entrance	One-Lane Merge	861	B	889	B	843	B
	Southbound Mather Field Road Slip Entrance	One-Lane Merge	380	B	370	B	363	B
	Bradshaw Road Exit	Two-Lane Diverge	1,327	B	1,266	B	1,510	B
	Northbound Bradshaw Road Loop Entrance	One-Lane Merge	910	C	959	C	1,523	D
	Southbound Bradshaw Road Slip Entrance	One-Lane Merge	590	C	633	C	669	D
	Watt Avenue Exit	Major Diverge	1,188	C	1,209	C	1,181	C
	Northbound Watt Avenue Entrance	One-Lane Merge	943	C	936	C	900	C
	Southbound Watt Avenue Slip Entrance	Lane Addition / Weave	1,317	D	1,313	**F**	1,196	B
	Howe Avenue Exit	Major Diverge / Weave	1,419		1,467		1,313	D
	Northbound Howe Avenue Loop Entrance	One-Lane Merge	602	C	621	C	647	C
	Southbound Howe Avenue Slip Entrance	One-Lane Merge	574	C	569	C	484	C

Source: DKS Associates, 2018.

Table D-6
Peak Hour Freeway Ramp Operations - Cumulative Scenarios

			Ramp Volume				Level of Service			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Direction	US 50 Ramp	Junction Type	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus PROJECT	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS
Eastbound	Northbound 65th Street Slip Entrance	Weave	956	902	799	665	**F**	**F**	**F**	**F**
	Howe Avenue / Hornet Drive Exit		2,070	2,322	2,201	2,237				
	Southbound Howe Avenue Loop Entrance	One-Lane Merge	731	808	1,291	1,152	D	D	D	D
	Northbound Howe Avenue Slip Entrance	One-Lane Merge	591	463	582	555	D	D	D	C
	Watt Avenue Exit	Two-Lane Diverge	1,553	1,518	1,762	1,609	B	B	B	A
	Southbound Watt Avenue Entrance	One-Lane Merge	1,644	1,582	1,306	1,101	D	D	C	C
	Northbound Watt Avenue Entrance	One-Lane Merge	733	667	684	773	D	D	C	C
	Bradshaw Road Exit	Two-Lane Diverge	2,035	2,366	1,608	1,789	**F**	**F**	B	B
	Southbound Bradshaw Road Loop Entrance	One-Lane Merge	253	216	399	564	D	C	C	C
	Northbound Bradshaw Road Slip Entrance	One-Lane Merge	1,409	1,340	843	1,173	D	C	C	C
	Mather Field Road Exit	Two-Lane Diverge	1,492	1,464	1,462	1,400	B	B	B	B
	Southbound Mather Field Road Loop Entrance	One-Lane Merge	236	206	197	167	C	C	C	C
	Northbound Mather Field Road Slip Entrance	Weave	432	447	920	1,210	**F**	**F**	D	**F**
	Zinfandel Drive Exit		3,097	3,052	1,759	1,708				
	Southbound Zinfandel Drive Loop Entrance	One-Lane Merge	187	183	170	161	C	C	C	C
	Northbound Zinfandel Drive Slip Entrance	Lane Addition	644	661	819	938	A	A	B	B
	Sunrise Boulevard Exit	Major Diverge	2,135	2,085	2,353	2,421	C	C	C	C
	Sunrise Boulevard Entrance	Lane Addition / Weave	1,152	1,101	1,145	1,182	B	A	C	C
	Rancho Cordova Parkway Exit	Two-Lane Diverge / Weave	78	25	448	535	C	C		
	Rancho Cordova Parkway Entrance	Weave	1,342	1,202	1,499	1,651	**F**	**F**	**F**	**F**
	Hazel Avenue Exit		1,869	1,710	2,657	2,826				
	Hazel Avenue Entrance	Weave	1,088	1,048	2,320	2,087	D	D	**F**	D
	Aerojet Road Exit		674	736	122	130				
Westbound	Hazel Avenue Exit	Two-Lane Diverge	1,077	905	959	951	B	B	B	B
	Northbound Hazel Avenue Loop Entrance	One-Lane Merge	52	124	434	434	B	C	C	B
	Southbound Hazel Avenue Slip Entrance	Weave	2,283	2,376	1,814	1,725	**F**	**F**	**F**	**F**
	Rancho Cordova Parkway Exit		1,512	1,644	1,595	1,479				
	Rancho Cordova Parkway Entrance	Lane Addition / Weave	875	897	791	747	A	A	A	A
	Sunrise Boulevard Exit	Two-Lane Diverge / Weave	623	611	627	580	C	C	C	C
	Northbound Sunrise Boulevard Entrance	Lane Addition	167	169	197	106	A	A	A	A
	Southbound Sunrise Boulevard Entrance	Lane Addition	2,334	2,345	1,673	1,746	**F**	**F**	C	D
	Zinfandel Drive Exit	One-Lane Diverge	1,478	1,488	1,124	1,097	E	E	D	C
	Northbound Zinfandel Drive Loop Entrance	Lane Addition	780	689	1,314	1,178	B	C	C	B
	Southbound Zinfandel Drive Slip Entrance	One-Lane Merge	1,349	1,219	723	708	D	D	B	B
	Mather Field Road Exit	One-Lane Drop	1,372	1,768	809	848	D	E	C	B
	Northbound Mather Field Road Loop Entrance	One-Lane Merge	578	439	1,189	1,185	B	B	C	B
	Southbound Mather Field Road Slip Entrance	One-Lane Merge	343	481	474	467	C	C	B	B
	Bradshaw Road Exit	Two-Lane Diverge	1,376	1,788	1,733	1,724	C	C	B	B
	Northbound Bradshaw Road Loop Entrance	One-Lane Merge	1,091	1,313	1,023	1,667	D	D	D	D
	Southbound Bradshaw Road Slip Entrance	One-Lane Merge	385	387	836	894	**F**	**F**	D	D
	Watt Avenue Exit	Major Diverge	1,577	1,381	1,167	1,054	D	D	D	D
	Northbound Watt Avenue Entrance	One-Lane Merge	806	738	1,104	1,050	D	D	D	D
	Southbound Watt Avenue Slip Entrance	Lane Addition	1,224	845	1,201	1,098	D	D	C	C
	Howe Avenue Exit	Major Diverge	1,806	1,520	1,677	1,694	E	D	D	D
	Northbound Howe Avenue Loop Entrance	One-Lane Merge	582	668	503	519	D	D	C	D
	Southbound Howe Avenue Slip Entrance	One-Lane Merge	732	781	763	689	**F**	**F**	C	C

Source: DKS Associates, 2018.

Table D-7
Peak Hour Freeway Ramp Operations - Cumulative Scenarios

			Ramp Volume				Level of Service			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Direction	US 50 Ramp	Junction Type	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Eastbound	Northbound 65th Street Slip Entrance	Weave	945	918	777	724	**F**	**F**	**F**	**F**
	Howe Avenue / Hornet Drive Exit		2,088	2,120	2,140	2,267				
	Southbound Howe Avenue Loop Entrance	One-Lane Merge	729	750	1,342	1,332	D	D	D	D
	Northbound Howe Avenue Slip Entrance	One-Lane Merge	609	528	532	524	D	D	D	D
	Watt Avenue Exit	Two-Lane Diverge	1,538	1,532	1,705	1,604	B	B	B	A
	Southbound Watt Avenue Entrance	One-Lane Merge	1,615	1,551	1,368	1,213	D	D	C	C
	Northbound Watt Avenue Entrance	One-Lane Merge	682	608	588	597	D	D	C	C
	Bradshaw Road Exit	Two-Lane Diverge	2,068	2,264	1,631	1,835	**F**	**F**	B	C
	Southbound Bradshaw Road Loop Entrance	One-Lane Merge	268	274	422	505	D	D	D	D
	Northbound Bradshaw Road Slip Entrance	One-Lane Merge	1,486	1,511	1,029	1,102	D	D	C	C
	Mather Field Road Exit	Two-Lane Diverge	1,490	1,481	1,530	1,489	B	B	B	B
	Southbound Mather Field Road Loop Entrance	One-Lane Merge	252	252	222	169	C	C	C	C
	Northbound Mather Field Road Slip Entrance	Weave	431	571	894	1,123	**F**	**F**	**F**	**F**
	Zinfandel Drive Exit		3,083	3,082	1,861	1,797				
	Southbound Zinfandel Drive Loop Entrance	One-Lane Merge	183	185	173	151	C	C	C	C
	Northbound Zinfandel Drive Slip Entrance	Lane Addition	665	656	714	784	A	B	B	B
	Sunrise Boulevard Exit	Major Diverge	1,878	1,899	2,308	2,364	C	C	C	C
	Sunrise Boulevard Entrance	Lane Addition / Weave	1,233	1,174	1,122	1,162	D	B	C	C
	Rancho Cordova Parkway Exit	Two-Lane Diverge / Weave	374	327	763	816		C		
	Rancho Cordova Parkway Entrance	Weave	1,787	1,748	1,748	1,823	**F**	**F**	**F**	**F**
	Hazel Avenue Exit		1,904	1,950	2,611	2,718				
	Hazel Avenue Entrance	Weave	1,174	1,072	2,148	2,091	E	D	**F**	D
	Aerojet Road Exit		584	613	203	171				
Westbound	Hazel Avenue Exit	Two-Lane Diverge	1,098	1,057	1,031	1,032	B	B	C	C
	Northbound Hazel Avenue Loop Entrance	One-Lane Merge	69	93	434	434	B	B	C	C
	Southbound Hazel Avenue Slip Entrance	Weave	2,306	2,369	2,263	2,302	**F**	**F**	**F**	**F**
	Rancho Cordova Parkway Exit		1,800	1,867	2,225	2,173				
	Rancho Cordova Parkway Entrance	Lane Addition / Weave	1,428	1,389	1,165	1,138	C	C	B	B
	Sunrise Boulevard Exit	Two-Lane Diverge / Weave	729	760	751	729			C	C
	Northbound Sunrise Boulevard Entrance	Lane Addition	169	170	259	234	A	A	A	A
	Southbound Sunrise Boulevard Entrance	Lane Addition	2,323	2,354	1,524	1,613	**F**	**F**	C	C
	Zinfandel Drive Exit	One-Lane Diverge	1,384	1,393	1,183	1,200	E	E	D	D
	Northbound Zinfandel Drive Loop Entrance	Lane Addition	909	803	1,443	1,295	C	C	D	C
	Southbound Zinfandel Drive Slip Entrance	One-Lane Merge	1,544	1,349	663	663	D	D	B	B
	Mather Field Road Exit	One-Lane Drop	1,350	1,581	826	1,025	D	D	C	C
	Northbound Mather Field Road Loop Entrance	One-Lane Merge	626	499	1,192	1,193	C	C	C	C
	Southbound Mather Field Road Slip Entrance	One-Lane Merge	303	427	504	428	C	C	C	B
	Bradshaw Road Exit	Two-Lane Diverge	1,533	1,692	1,756	1,809	C	C	B	B
	Northbound Bradshaw Road Loop Entrance	One-Lane Merge	999	1,318	927	1,593	**F**	**F**	D	D
	Southbound Bradshaw Road Slip Entrance	One-Lane Merge	385	391	851	816	**F**	**F**	D	D
	Watt Avenue Exit	Major Diverge	1,568	1,364	1,112	991	E	E	D	D
	Northbound Watt Avenue Entrance	One-Lane Merge	774	726	1,125	1,100	D	D	D	D
	Southbound Watt Avenue Slip Entrance	Lane Addition	1,134	919	1,062	1,006	D	D	C	D
	Howe Avenue Exit	Major Diverge	1,879	1,709	1,687	1,695	E	E	D	D
	Northbound Howe Avenue Loop Entrance	One-Lane Merge	613	607	572	563	D	D	D	D
	Southbound Howe Avenue Slip Entrance	One-Lane Merge	668	807	699	646	**F**	**F**	C	C

Source: DKS Associates, 2018.

US-50 Freeway System

Merge/Diverge Analysis – Calculation Sheets

US 50 Eastbound Weave - 65th Street to Howe Avenue

Highway Capacity Manual
2010 Edition
One-Sided Weave - Level Terrain

Existing Conditions

Input Data

Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4
Upstream Ramp Lanes	1	1	1	1	1	1
Downstream Ramp Lanes	2	2	2	2	2	2
N - Number of Lanes	5	5	5	5	5	5
N_{WL} - Number of Lanes in Weaving Section	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	7,197	7,312	7,938	6,909	6,975	7,278
PHF	0.98	0.98	0.98	0.98	0.98	0.98
Entering Ramp Volume (vehicles)	765	771	730	653	636	576
Exiting Ramp Volume (vehicles)	1,631	1,681	2,175	1,417	1,354	1,627
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_S - Weaving Length (ft)	2,480	2,480	2,480	2,480	2,480	2,480
ID (Interchange Density within 3 miles)	1.0	1.0	1.0	1.0	1.0	1.0
Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	6,331	6,402	6,493	6,145	6,257	6,227
c_{IFL}	2,400	2,400	2,400	2,400	2,400	2,400
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
Upstream Freeway Volume (pc/h)	7,487	7,607	8,258	7,191	7,260	7,575
Entering Ramp Volume (pc/h)	796	803	759	680	662	600
Exiting Ramp Volume (pc/h))	1,697	1,749	2,263	1,475	1,409	1,694
Downstream Freeway Volume (pc/h)	6,586	6,660	6,754	6,396	6,512	6,481
v_{FF}	5,953	6,025	6,186	5,844	5,968	6,005
v_{RF}	633	636	569	552	544	475
v_{FR}	1,534	1,582	2,073	1,347	1,292	1,569
v_{RR}	163	167	191	127	118	124
v_W	2,167	2,218	2,641	1,900	1,836	2,045
v_{NW}	6,116	6,192	6,376	5,971	6,086	6,130
v	8,283	8,409	9,017	7,871	7,922	8,174
VR	0.262	0.264	0.293	0.241	0.232	0.250
LC_{RF}	1	1	1	1	1	1
LC_{FR}	0	0	0	0	0	0
LC_{MIN}	633	636	569	552	544	475
L_{MAX}	5,175	5,198	5,508	4,964	4,863	5,055
Weaving Operations?	YES	YES	YES	YES	YES	YES
Capacity Controlled by Density (pc/h)	10,969	10,960	10,842	11,050	11,088	11,015
Capacity Controllled by Maximum Weaving Flow Rate (pc/h)	9,176	9,101	8,194	9,943	10,356	9,594
Capacity (pc/h)	9,176	9,101	8,194	9,943	10,356	9,594
Volume-to-Capacity Ratio	0.90	0.92	1.10	0.79	0.76	0.85
LC_W	1,425	1,428	1,361	1,345	1,337	1,268
I_{NW}	1,517	1,536	1,581	1,481	1,509	1,520
LC_{NW1}	1,641	1,657	1,695	1,611	1,635	1,644
LC_{NW2}	3,053	3,070	3,111	3,021	3,046	3,056
LC_{NW3}	2,112	2,169	2,307	2,003	2,089	2,122
LC_{NW}	2,112	2,169	2,307	2,003	2,089	2,122
LC_{ALL}	3,538	3,597	3,669	3,348	3,426	3,390
W - Weaving Intensity	0.299	0.303	0.308	0.286	0.292	0.289
S_W	57.3	57.2	57.1	57.8	57.6	57.7
S_{NW}	57.5	57.4	57.2	58.5	58.5	58.7
S	57.5	57.3	57.2	58.3	58.3	58.5
D	28.8	29.3	31.5	27.0	27.2	28.0
LOS	D	D	F	C	C	C

US 50 Eastbound Weave - 65th Street to Howe Avenue

Highway Capacity Manual
2010 Edition
One-Sided Weave - Level Terrain
Cumulative Conditions
Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	4	4	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4	4	4
Upstream Ramp Lanes	1	1	1	1	1	1	1	1
Downstream Ramp Lanes	2	2	2	2	2	2	2	2
N - Number of Lanes	5	5	5	5	5	5	5	5
N_{WL} - Number of Lanes in Weaving Section	2	2	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	7,971	8,166	8,019	8,272	7,455	7,302	7,658	7,812
PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Entering Ramp Volume (vehicles)	956	902	945	918	799	665	777	724
Exiting Ramp Volume (vehicles)	2,070	2,322	2,088	2,120	2,201	2,237	2,140	2,267
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L_S - Weaving Length (ft)	2,480	2,480	2,480	2,480	2,480	2,480	2,480	2,480
ID (Interchange Density within 3 miles)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	6,857	6,746	6,877	7,069	6,053	5,730	6,295	6,270
c_{IFL}	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Upstream Freeway Volume (pc/h)	8,292	8,495	8,342	8,605	7,759	7,600	7,971	8,131
Entering Ramp Volume (pc/h)	995	938	984	954	832	693	809	754
Exiting Ramp Volume (pc/h))	2,154	2,415	2,172	2,205	2,291	2,329	2,227	2,359
Downstream Freeway Volume (pc/h)	7,133	7,018	7,154	7,354	6,300	5,964	6,552	6,526
v_{FF}	6,369	6,320	6,399	6,620	5,690	5,466	5,949	5,972
v_{RF}	764	698	754	734	610	498	603	554
v_{FR}	1,923	2,175	1,943	1,985	2,069	2,134	2,022	2,159
v_{RR}	231	240	229	220	222	194	205	200
v_W	2,687	2,873	2,697	2,719	2,679	2,632	2,626	2,713
v_{NW}	6,600	6,560	6,628	6,840	5,912	5,660	6,154	6,172
v	9,287	9,433	9,326	9,559	8,591	8,293	8,779	8,885
VR	0.289	0.305	0.289	0.284	0.312	0.317	0.299	0.305
LC_{RF}	1	1	1	1	1	1	1	1
LC_{FR}	0	0	0	0	0	0	0	0
LC_{MIN}	764	698	754	734	610	498	603	554
L_{MAX}	5,470	5,633	5,469	5,418	5,711	5,772	5,574	5,641
Weaving Operations?	YES	YES	YES	YES	YES	YES	YES	YES
Capacity Controlled by Density (pc/h)	10,856	10,794	10,857	10,876	10,764	10,741	10,816	10,791
Capacity Controllled by Maximum Weaving Flow Rate (pc/h)	8,294	7,880	8,298	8,437	7,697	7,561	8,024	7,861
Capacity (pc/h)	8,294	7,880	8,298	8,437	7,697	7,561	8,024	7,861
Volume-to-Capacity Ratio	1.12	1.20	1.12	1.13	1.12	1.10	1.09	1.13
LC_W	1,557	1,491	1,547	1,527	1,403	1,291	1,396	1,346
I_{NW}	1,637	1,627	1,644	1,696	1,466	1,404	1,526	1,531
LC_{NW1}	1,741	1,733	1,747	1,790	1,599	1,547	1,649	1,653
LC_{NW2}	3,161	3,152	3,167	3,214	3,007	2,951	3,061	3,065
LC_{NW3}	2,476	2,446	2,498	2,659	1,959	1,771	2,140	2,154
LC_{NW}	2,476	2,446	2,498	2,659	1,959	1,771	2,140	2,154
LC_{ALL}	4,033	3,937	4,045	4,186	3,362	3,062	3,536	3,500
W - Weaving Intensity	0.332	0.325	0.332	0.342	0.287	0.267	0.299	0.297
S_W	56.3	56.5	56.3	56.0	57.7	58.4	57.3	57.4
S_{NW}	55.6	55.9	55.6	55.5	57.4	58.5	57.2	57.5
S	55.8	56.1	55.8	55.7	57.5	58.4	57.3	57.5
D	33.3	33.6	33.4	34.3	29.9	28.4	30.7	30.9
LOS	F	F	F	F	F	F	F	F

US 50 Eastbound Merge - Howe Avenue Loop Ramp						
Highway Capacity Manual 2010 Edition **One-Lane Merge - 8-Lane Freeway - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	6,331	6,402	6,493	6,145	6,257	6,227
PHF	0.98	0.98	0.98	0.98	0.98	0.98
Entering Ramp Volume (vehicles)	484	485	556	881	853	927
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	700	700	700	700	700	700
S_{FR} - Ramp Free-flow Speed (mph)	25	25	25	25	25	25
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	6,815	6,888	7,049	7,026	7,110	7,154
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	6,586	6,660	6,754	6,396	6,512	6,481
v_R - Entering Ramp Volume (pc/h)	504	505	579	917	888	965
Downstream Freeway Volume (pc/h)	7,090	7,165	7,333	7,313	7,400	7,446
v_F / S_{FR}	263	266	270	256	260	259
P_{FM}	0.155	0.155	0.145	0.103	0.107	0.097
v_{12}	1,020	1,030	982	660	696	630
v_{av34}	2,783	2,815	2,886	2,868	2,908	2,925
v_{12a}	1,186	1,260	1,354	996	1,112	1,081
v_{12a}	2,634	2,664	2,702	2,558	2,605	2,592
v_{R12}	3,138	3,169	3,281	3,475	3,493	3,557
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.74	0.75	0.76	0.76	0.77	0.78
Ramp Capacity (pc/h)	1,900	1,900	1,900	1,900	1,900	1,900
Ramp Volume-to-Capacity Ratio	0.27	0.27	0.30	0.48	0.47	0.51
D_R	25.3	25.6	26.4	27.8	27.9	28.4
LOS	C	C	C	C	C	D

US 50 Eastbound Merge - Howe Avenue Loop Ramp

Highway Capacity Manual
2010 Edition
One-Lane Merge - 8-Lane Freeway - Level Terrain

Cumulative Conditions

Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	4	4	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	6,857	6,746	6,877	7,069	6,053	5,730	6,295	6,270
PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Entering Ramp Volume (vehicles)	731	808	729	750	1,291	1,152	1,342	1,332
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	700	700	700	700	700	700	700	700
S_{FR} - Ramp Free-flow Speed (mph)	25	25	25	25	25	25	25	25
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	7,588	7,554	7,605	7,820	7,344	6,882	7,637	7,602
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	7,133	7,018	7,154	7,354	6,300	5,964	6,552	6,526
v_R - Entering Ramp Volume (pc/h)	761	841	758	781	1,344	1,199	1,396	1,387
Downstream Freeway Volume (pc/h)	7,894	7,859	7,912	8,135	7,644	7,162	7,948	7,912
v_F / S_{FR}	285	281	286	294	252	239	262	261
P_{FM}	0.123	0.113	0.123	0.120	0.050	0.068	0.043	0.044
v_{12}	875	791	880	884	314	405	283	290
v_{av34}	3,129	3,113	3,137	3,235	2,993	2,779	3,134	3,118
v_{12a}	1,733	1,618	1,754	1,954	900	564	1,152	1,126
v_{12a}	2,853	2,807	2,862	2,942	2,520	2,386	2,621	2,610
v_{R12}	3,614	3,648	3,619	3,722	3,864	3,584	4,017	3,997
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.82	0.82	0.82	0.85	0.80	0.75	0.83	0.82
Ramp Capacity (pc/h)	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900
Ramp Volume-to-Capacity Ratio	0.40	0.44	0.40	0.41	0.71	0.63	0.73	0.73
D_R	28.9	29.2	29.0	29.8	30.6	28.5	31.8	31.6
LOS	D	D	D	D	D	D	D	D

US 50 Eastbound Merge - Howe Avenue Slip Ramp						
Highway Capacity Manual 2010 Edition **One-Lane Merge - 8-Lane Freeway - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	6,815	6,888	7,049	7,026	7,110	7,154
PHF	0.98	0.98	0.98	0.98	0.98	0.98
Entering Ramp Volume (vehicles)	419	435	390	431	426	401
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	775	775	775	775	775	775
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	7,234	7,323	7,439	7,457	7,535	7,555
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	7,090	7,165	7,333	7,313	7,400	7,446
v_R - Entering Ramp Volume (pc/h)	436	453	406	449	443	418
Downstream Freeway Volume (pc/h)	7,526	7,618	7,739	7,761	7,843	7,863
v_F / S_{FR}	177	179	183	183	185	186
P_{FM}	0.163	0.161	0.167	0.162	0.162	0.166
v_{12}	1,158	1,155	1,225	1,183	1,202	1,233
v_{av34}	2,966	3,005	3,054	3,065	3,099	3,106
v_{12a}	1,690	1,765	1,933	1,913	2,000	2,046
v_{12a}	2,836	2,866	2,933	2,925	2,960	2,978
v_{R12}	3,272	3,319	3,339	3,374	3,403	3,396
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.78	0.79	0.81	0.81	0.82	0.82
Ramp Capacity (pc/h)	2,000	2,000	2,000	2,000	2,000	2,000
Ramp Volume-to-Capacity Ratio	0.22	0.23	0.20	0.22	0.22	0.21
D_R	25.9	26.3	26.5	26.7	27.0	26.9
LOS	C	C	C	C	C	C

US 50 Eastbound Merge - Howe Avenue Slip Ramp

Highway Capacity Manual
2010 Edition
One-Lane Merge - 8-Lane Freeway - Level Terrain

Cumulative Conditions

Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	4	4	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	7,588	7,554	7,605	7,820	7,344	6,882	7,637	7,602
PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Entering Ramp Volume (vehicles)	591	463	609	528	582	555	532	524
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	775	775	775	775	775	775	775	775
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	8,179	8,018	8,214	8,348	7,926	7,437	8,169	8,126
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	7,894	7,859	7,912	8,135	7,644	7,162	7,948	7,912
v_R - Entering Ramp Volume (pc/h)	615	482	633	549	606	578	554	545
Downstream Freeway Volume (pc/h)	8,509	8,341	8,545	8,685	8,250	7,740	8,502	8,458
v_F / S_{FR}	197	196	198	203	191	179	199	198
P_{FM}	0.141	0.158	0.139	0.149	0.142	0.146	0.149	0.150
v_{12}	1,113	1,238	1,097	1,213	1,086	1,043	1,181	1,184
v_{av34}	3,391	3,310	3,407	3,461	3,279	3,060	3,384	3,364
v_{12a}	2,494	2,459	2,512	2,735	2,244	1,762	2,548	2,512
v_{12a}	3,157	3,143	3,165	3,254	3,058	2,865	3,179	3,165
v_{R12}	3,772	3,626	3,798	3,803	3,663	3,443	3,733	3,710
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.89	0.87	0.89	0.90	0.86	0.81	0.89	0.88
Ramp Capacity (pc/h)	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Ramp Volume-to-Capacity Ratio	0.31	0.24	0.32	0.27	0.30	0.29	0.28	0.27
D_R	29.8	28.7	29.9	30.0	28.9	27.2	29.5	29.3
LOS	D	D	D	D	D	C	D	D

US 50 Eastbound Diverge - Watt Avenue						
Highway Capacity Manual 2010 Edition **Two-Lane Diverge - 8-Lane Freeway - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4
Ramp Lanes	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	7,405	7,477	7,609	7,602	7,711	7,700
PHF	0.96	0.96	0.96	0.98	0.98	0.98
Exiting Ramp Volume (vehicles)	1,317	1,333	1,149	1,634	1,641	1,470
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_D - Deceleration Lane Length (ft)	2,290	2,290	2,290	2,290	2,290	2,290
S_{FR} - Ramp Free-flow Speed (mph)	55	55	55	55	55	55
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	6,088	6,144	6,460	5,968	6,071	6,230
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	7,895	7,971	8,112	7,882	7,995	7,984
v_R - Exiting Ramp Volume (pc/h)	1,404	1,421	1,225	1,694	1,701	1,524
Downstream Freeway Volume (pc/h)	6,491	6,550	6,887	6,188	6,294	6,460
P_{FD}	0.260	0.260	0.260	0.260	0.260	0.260
v_{12}	3,092	3,124	3,016	3,303	3,338	3,203
v_{av34}	2,402	2,424	2,548	2,290	2,329	2,390
v_{12a}	3,092	3,124	3,016	3,303	3,338	3,203
v_{12a}	3,158	3,188	3,245	3,303	3,338	3,203
Upstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600
Upstream Volume-to-Capacity Ratio	0.82	0.83	0.84	0.82	0.83	0.83
Ramp Capacity (pc/h)	4,400	4,400	4,400	4,400	4,400	4,400
Ramp Volume-to-Capacity Ratio	0.32	0.32	0.28	0.39	0.39	0.35
D_R	10.8	11.1	11.5	12.0	12.3	11.2
LOS	B	B	B	B	B	B

US 50 Eastbound Diverge - Watt Avenue

Highway Capacity Manual
2010 Edition
Two-Lane Diverge - 8-Lane Freeway - Level Terrain

Cumulative Conditions

Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	5	5	5	5	5	5	5	5
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4	4	4
Ramp Lanes	2	2	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	7,147	7,149	7,213	7,366	6,393	6,150	6,680	6,679
PHF	0.96	0.96	0.96	0.96	0.98	0.98	0.98	0.98
Exiting Ramp Volume (vehicles)	1,553	1,518	1,538	1,532	1,762	1,609	1,705	1,604
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L_D - Deceleration Lane Length (ft)	2,290	2,290	2,290	2,290	2,290	2,290	2,290	2,290
S_{FR} - Ramp Free-flow Speed (mph)	55	55	55	55	55	55	55	55
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	5,594	5,631	5,675	5,834	4,630	4,541	4,976	5,075
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	7,619	7,621	7,690	7,853	6,628	6,376	6,927	6,925
v_R - Exiting Ramp Volume (pc/h)	1,656	1,618	1,640	1,633	1,827	1,668	1,767	1,663
Downstream Freeway Volume (pc/h)	5,964	6,003	6,050	6,219	4,801	4,708	5,159	5,262
P_{FD}	0.260	0.260	0.260	0.260	0.260	0.260	0.260	0.260
v_{12}	3,206	3,179	3,213	3,250	3,075	2,892	3,109	3,031
v_{av34}	2,207	2,221	2,239	2,301	1,776	1,742	1,909	1,947
v_{12a}	3,206	3,179	3,213	3,250	3,075	2,892	3,109	3,031
v_{12a}	3,206	3,179	3,213	3,250	3,075	2,892	3,109	3,031
Upstream Capacity (pc/h)	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Upstream Volume-to-Capacity Ratio	0.63	0.64	0.64	0.65	0.55	0.53	0.58	0.58
Ramp Capacity (pc/h)	4,400	4,400	4,400	4,400	4,400	4,400	4,400	4,400
Ramp Volume-to-Capacity Ratio	0.38	0.37	0.37	0.37	0.42	0.38	0.40	0.38
D_R	11.2	11.0	11.3	11.6	10.1	8.5	10.4	9.7
LOS	B	B	B	B	B	A	B	A

US 50 Eastbound Merge - Watt Avenue						
Highway Capacity Manual 2010 Edition **One-Lane Merge - 8-Lane Freeway - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	6,088	6,144	6,460	5,968	6,071	6,230
PHF	0.96	0.96	0.96	0.98	0.98	0.98
Entering Ramp Volume (vehicles)	2,134	2,143	1,951	1,724	1,739	1,553
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	775	775	775	775	775	775
S_{FR} - Ramp Free-flow Speed (mph)	55	55	55	55	55	55
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	8,222	8,286	8,411	7,692	7,809	7,783
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	6,491	6,550	6,887	6,188	6,294	6,460
v_R - Entering Ramp Volume (pc/h)	2,275	2,284	2,080	1,788	1,803	1,610
Downstream Freeway Volume (pc/h)	8,766	8,834	8,967	7,975	8,097	8,070
v_F / S_{FR}	118	119	125	113	114	117
P_{FM}	-0.067	-0.068	-0.042	-0.006	-0.008	0.017
v_{12}	-432	-444	-291	-35	-48	107
v_{av34}	3,461	3,497	3,589	3,111	3,171	3,176
v_{12a}	1,091	1,150	1,487	788	894	1,060
v_{12a}	2,596	2,620	2,755	2,475	2,518	2,584
v_{R12}	4,871	4,904	4,835	4,263	4,321	4,194
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.91	0.92	0.93	0.83	0.84	0.84
Ramp Capacity (pc/h)	2,200	2,200	2,200	2,200	2,200	2,200
Ramp Volume-to-Capacity Ratio	1.03	1.04	0.95	0.81	0.82	0.73
D_R	37.6	37.8	37.4	33.0	33.5	32.6
LOS	F	F	E	D	D	D

US 50 Eastbound Merge - Watt Avenue Loop Ramp

Highway Capacity Manual
2010 Edition
One-Lane Merge - 8-Lane Freeway - Level Terrain

Cumulative Conditions

Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	4	4	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	5,594	5,631	5,675	5,834	4,630	4,541	4,976	5,075
PHF	0.96	0.96	0.96	0.96	0.98	0.98	0.98	0.98
Entering Ramp Volume (vehicles)	1,644	1,582	1,615	1,551	1,306	1,101	1,368	1,213
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	775	775	775	775	775	775	775	775
S_{FR} - Ramp Free-flow Speed (mph)	30	30	30	30	30	30	30	30
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	7,238	7,213	7,291	7,384	5,936	5,642	6,344	6,288
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	5,964	6,003	6,050	6,219	4,801	4,708	5,159	5,262
v_R - Entering Ramp Volume (pc/h)	1,753	1,687	1,722	1,653	1,354	1,142	1,419	1,257
Downstream Freeway Volume (pc/h)	7,716	7,690	7,773	7,873	6,155	5,850	6,578	6,520
v_F / S_{FR}	199	200	202	207	160	157	172	175
P_{FM}	-0.001	0.007	0.003	0.011	0.049	0.075	0.040	0.061
v_{12}	-8	42	15	69	233	353	209	319
v_{av34}	2,986	2,981	3,018	3,075	2,284	2,177	2,475	2,472
v_{12a}	564	603	650	819	233	353	209	319
v_{12a}	2,385	2,401	2,420	2,488	1,920	1,883	2,064	2,105
v_{R12}	4,138	4,088	4,142	4,141	3,275	3,025	3,482	3,362
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.80	0.80	0.81	0.82	0.64	0.61	0.69	0.68
Ramp Capacity (pc/h)	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900
Ramp Volume-to-Capacity Ratio	0.92	0.89	0.91	0.87	0.71	0.60	0.75	0.66
D_R	32.1	31.7	32.1	32.2	25.5	23.7	27.1	26.3
LOS	D	D	D	D	C	C	C	C

US 50 Eastbound Merge - Watt Avenue Slip Ramp

Highway Capacity Manual
2010 Edition
One-Lane Merge - 8-Lane Freeway - Level Terrain

Cumulative Conditions

Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	4	4	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	7,238	7,213	7,291	7,384	5,936	5,642	6,344	6,288
PHF	0.96	0.96	0.96	0.96	0.98	0.98	0.98	0.98
Entering Ramp Volume (vehicles)	733	667	682	608	684	773	588	597
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	775	775	775	775	775	775	775	775
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	7,971	7,880	7,973	7,992	6,620	6,415	6,932	6,885
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	7,716	7,690	7,773	7,873	6,155	5,850	6,578	6,520
v_R - Entering Ramp Volume (pc/h)	782	711	727	648	709	801	610	619
Downstream Freeway Volume (pc/h)	8,498	8,402	8,500	8,521	6,864	6,651	7,188	7,139
v_F / S_{FR}	193	192	194	197	154	146	164	163
P_{FM}	0.120	0.129	0.127	0.137	0.129	0.118	0.142	0.140
v_{12}	927	991	986	1,077	795	688	931	915
v_{av34}	3,395	3,350	3,393	3,398	2,680	2,581	2,823	2,802
v_{12a}	2,316	2,290	2,373	2,473	795	688	1,178	1,120
v_{12a}	3,086	3,076	3,109	3,149	2,462	2,340	2,631	2,608
v_{R12}	3,868	3,787	3,836	3,797	3,171	3,141	3,241	3,227
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.89	0.88	0.89	0.89	0.72	0.69	0.75	0.74
Ramp Capacity (pc/h)	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Ramp Volume-to-Capacity Ratio	0.39	0.36	0.36	0.32	0.35	0.40	0.30	0.31
D_R	30.4	29.8	30.2	29.9	25.0	24.7	25.6	25.5
LOS	D	D	D	D	C	C	C	C

US 50 Eastbound Diverge - Watt Avenue						
Highway Capacity Manual 2010 Edition **Two-Lane Diverge - 8-Lane Freeway - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4
Ramp Lanes	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	7,935	8,002	8,145	7,176	7,284	7,310
PHF	0.95	0.95	0.95	0.98	0.98	0.98
Exiting Ramp Volume (vehicles)	1,520	1,572	1,891	1,228	1,284	1,574
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_D - Deceleration Lane Length (ft)	1,830	1,830	1,830	1,830	1,830	1,830
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	6,415	6,429	6,254	5,948	6,000	5,736
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	8,527	8,599	8,752	7,461	7,573	7,600
v_R - Exiting Ramp Volume (pc/h)	1,633	1,690	2,032	1,277	1,335	1,636
Downstream Freeway Volume (pc/h)	6,894	6,909	6,720	6,184	6,238	5,964
P_{FD}	0.260	0.260	0.260	0.260	0.260	0.260
v_{12}	3,426	3,486	3,779	2,885	2,957	3,187
v_{av34}	2,551	2,556	2,487	2,288	2,308	2,207
v_{12a}	3,426	3,486	3,779	2,885	2,957	3,187
v_{12a}	3,426	3,486	3,779	2,984	3,029	3,187
Upstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600
Upstream Volume-to-Capacity Ratio	0.89	0.90	0.91	0.78	0.79	0.79
Ramp Capacity (pc/h)	4,000	4,000	4,000	4,000	4,000	4,000
Ramp Volume-to-Capacity Ratio	0.41	0.42	0.51	0.32	0.33	0.41
D_R	17.2	17.8	20.3	13.4	13.8	15.2
LOS	B	B	C	B	B	B

US 50 Eastbound Diverge - Bradshaw Road								
Highway Capacity Manual 2010 Edition **Two-Lane Diverge - 8-Lane Freeway - Level Terrain**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	4	4	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4	4	4
Ramp Lanes	2	2	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	9,583	9,596	9,633	9,825	8,662	8,437	8,976	9,056
PHF	0.95	0.95	0.95	0.95	0.98	0.98	0.98	0.98
Exiting Ramp Volume (vehicles)	2,035	2,366	2,068	2,264	1,608	1,789	1,631	1,835
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L_D - Deceleration Lane Length (ft)	1,830	1,830	1,830	1,830	1,830	1,830	1,830	1,830
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	7,547	7,230	7,566	7,561	7,054	6,648	7,345	7,221
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	10,298	10,312	10,352	10,558	9,006	8,772	9,332	9,415
v_R - Exiting Ramp Volume (pc/h)	2,187	2,543	2,222	2,433	1,672	1,861	1,696	1,907
Downstream Freeway Volume (pc/h)	8,110	7,769	8,130	8,125	7,334	6,912	7,637	7,508
P_{FD}	0.260	0.260	0.260	0.260	0.260	0.260	0.260	0.260
v_{12}	4,296	4,563	4,336	4,546	3,579	3,658	3,681	3,859
v_{av34}	3,001	2,875	3,008	3,006	2,714	2,557	2,826	2,778
v_{12a}	4,898	4,912	4,952	5,158	3,606	3,658	3,932	4,015
v_{12a}	4,898	4,912	4,952	5,158	3,603	3,658	3,733	4,015
Upstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600
Upstream Volume-to-Capacity Ratio	1.07	1.07	1.08	1.10	0.94	0.91	0.97	0.98
Ramp Capacity (pc/h)	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Ramp Volume-to-Capacity Ratio	0.55	0.64	0.56	0.61	0.42	0.47	0.42	0.48
D_R	29.9	30.0	30.4	32.1	18.8	19.2	19.9	22.3
LOS	F	**F**	F	F	B	B	B	C

US 50 Eastbound Merge - Bradshaw Road Loop Ramp						
Highway Capacity Manual 2010 Edition **One-Lane Merge - 8-Lane Freeway - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	6,415	6,429	6,254	5,948	6,000	5,736
PHF	0.95	0.95	0.95	0.98	0.98	0.98
Entering Ramp Volume (vehicles)	220	224	151	422	425	423
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	615	615	615	615	615	615
S_{FR} - Ramp Free-flow Speed (mph)	25	25	25	25	25	25
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	6,635	6,653	6,405	6,370	6,425	6,159
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	6,894	6,909	6,720	6,184	6,238	5,964
v_R - Entering Ramp Volume (pc/h)	236	240	163	439	442	440
Downstream Freeway Volume (pc/h)	7,130	7,150	6,883	6,623	6,680	6,404
v_F / S_{FR}	276	276	269	247	250	239
P_{FM}	0.188	0.188	0.197	0.163	0.163	0.163
v_{12}	1,298	1,297	1,327	1,008	1,014	971
v_{av34}	2,798	2,806	2,697	2,588	2,612	2,496
v_{12a}	1,494	1,509	1,327	1,008	1,014	971
v_{12a}	2,757	2,764	2,688	2,474	2,495	2,386
v_{R12}	2,994	3,004	2,851	2,912	2,937	2,825
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.74	0.74	0.72	0.69	0.70	0.67
Ramp Capacity (pc/h)	1,900	1,900	1,900	1,900	1,900	1,900
Ramp Volume-to-Capacity Ratio	0.12	0.13	0.09	0.23	0.23	0.23
D_R	24.9	24.9	23.8	24.1	24.3	23.5
LOS	C	C	C	C	C	C

US 50 Eastbound Weave - Bradshaw Road to Mather Field Road

Highway Capacity Manual
2010 Edition
One-Sided Weave - Level Terrain
Cumulative Conditions
Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus PROJECT	CEQA Cumulative	CEQA Cumulative Plus PROJECT	MTP Cumulative	MTP Cumulative Plus PROJECT	CEQA Cumulative	CEQA Cumulative Plus PROJECT
Existing Upstrm Frwy Lanes	4	4	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4	4	4
Upstream Ramp Lanes	1	1	1	1	1	1	1	1
Downstream Ramp Lanes	2	2	2	2	2	2	2	2
N - Number of Lanes	5	5	5	5	5	5	5	5
N_{WL} - Number of Lanes in Weaving Section	2	2	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	7,547	7,230	7,566	7,561	7,054	6,648	7,345	7,221
PHF	0.95	0.95	0.95	0.95	0.98	0.98	0.98	0.98
Entering Ramp Volume (vehicles)	1,409	1,340	1,486	1,511	843	1,173	1,029	1,102
Exiting Ramp Volume (vehicles)	1,492	1,464	1,490	1,481	1,462	1,400	1,530	1,489
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L_S - Weaving Length (ft)	7,020	7,020	7,020	7,020	7,020	7,020	7,020	7,020
ID (Interchange Density within 3 miles)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	7,464	7,106	7,562	7,591	6,436	6,421	6,844	6,835
c_{IFL}	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Upstream Freeway Volume (pc/h)	8,110	7,769	8,130	8,125	7,334	6,912	7,637	7,508
Entering Ramp Volume (pc/h)	1,514	1,440	1,597	1,624	876	1,220	1,070	1,146
Exiting Ramp Volume (pc/h))	1,603	1,574	1,601	1,592	1,520	1,456	1,591	1,548
Downstream Freeway Volume (pc/h)	8,021	7,636	8,126	8,157	6,691	6,676	7,116	7,106
v_{FF}	6,759	6,442	6,792	6,799	5,977	5,674	6,241	6,165
v_{RF}	1,262	1,194	1,334	1,359	714	1,002	874	941
v_{FR}	1,351	1,327	1,338	1,326	1,357	1,237	1,395	1,343
v_{RR}	252	246	263	265	162	218	195	205
v_W	2,613	2,522	2,672	2,685	2,072	2,239	2,270	2,284
v_{NW}	7,012	6,688	7,055	7,064	6,139	5,893	6,437	6,370
v	9,624	9,210	9,727	9,749	8,211	8,132	8,707	8,654
VR	0.271	0.274	0.275	0.275	0.252	0.275	0.261	0.264
LC_{RF}	1	1	1	1	1	1	1	1
LC_{FR}	0	0	0	0	0	0	0	0
LC_{MIN}	1,262	1,194	1,334	1,359	714	1,002	874	941
L_{MAX}	5,280	5,305	5,315	5,322	5,078	5,321	5,166	5,200
Weaving Operations?	NO	NO	NO	NO	NO	NO	NO	NO
Capacity Controlled by Density (pc/h)	12,666	12,656	12,652	12,649	12,743	12,650	12,709	12,696
Capacity Controllled by Maximum Weaving Flow Rate (pc/h)	8,841	8,765	8,736	8,713	9,512	8,716	9,206	9,094
Capacity (pc/h)	8,841	8,765	8,736	8,713	9,512	8,716	9,206	9,094
Volume-to-Capacity Ratio	1.09	1.05	1.11	1.12	0.86	0.93	0.95	0.95
LC_W	2,653	2,586	2,726	2,750	2,106	2,393	2,266	2,333
I_{NW}	4,922	4,695	4,952	4,959	4,310	4,137	4,519	4,472
LC_{NW1}	4,286	4,220	4,295	4,297	4,107	4,056	4,168	4,154
LC_{NW2}	3,253	3,180	3,262	3,264	3,058	3,003	3,124	3,109
LC_{NW3}	-1,474	-1,208	-1,509	-1,516	-748	-538	-999	-943
LC_{NW}	3,253	3,180	3,262	3,264	3,058	3,003	3,124	3,109
LC_{ALL}	5,906	5,766	5,988	6,015	5,164	5,396	5,390	5,442
W - Weaving Intensity	0.197	0.194	0.199	0.200	0.177	0.184	0.183	0.185
S_W	60.9	61.1	60.9	60.8	61.7	61.5	61.5	61.4
S_{NW}	51.7	52.6	51.1	50.9	57.0	55.0	55.3	54.9
S	53.9	54.6	53.4	53.3	58.1	56.6	56.8	56.5
D	35.7	33.7	36.4	36.6	28.3	28.7	30.6	30.6
LOS	F	F	F	F	D	D	D	D

US 50 Eastbound Merge - Bradshaw Road Loop Ramp

Highway Capacity Manual
2010 Edition
One-Lane Merge - 8-Lane Freeway - Level Terrain

Cumulative Conditions

Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	4	4	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	7,547	7,230	7,566	7,561	7,054	6,648	7,345	7,221
PHF	0.95	0.95	0.95	0.95	0.98	0.98	0.98	0.98
Entering Ramp Volume (vehicles)	253	216	268	274	399	564	422	505
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	615	615	615	615	615	615	615	615
S_{FR} - Ramp Free-flow Speed (mph)	25	25	25	25	25	25	25	25
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	7,800	7,446	7,834	7,835	7,453	7,212	7,768	7,726
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	8,110	7,769	8,130	8,125	7,334	6,912	7,637	7,508
v_R - Entering Ramp Volume (pc/h)	272	232	288	294	415	587	439	525
Downstream Freeway Volume (pc/h)	8,382	8,002	8,418	8,419	7,749	7,498	8,076	8,033
v_F / S_{FR}	324	311	325	325	293	276	305	300
P_{FM}	0.184	0.189	0.182	0.181	0.166	0.144	0.163	0.152
v_{12}	1,491	1,467	1,478	1,471	1,217	999	1,244	1,143
v_{av34}	3,310	3,151	3,326	3,327	3,059	2,957	3,196	3,183
v_{12a}	2,710	2,369	2,730	2,725	1,934	1,512	2,237	2,108
v_{12a}	3,244	3,108	3,252	3,250	2,934	2,765	3,055	3,003
v_{R12}	3,516	3,340	3,540	3,544	3,349	3,351	3,494	3,528
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.87	0.83	0.88	0.88	0.81	0.78	0.84	0.84
Ramp Capacity (pc/h)	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900
Ramp Volume-to-Capacity Ratio	0.14	0.12	0.15	0.15	0.22	0.31	0.23	0.28
D_R	28.9	27.6	29.1	29.1	27.5	27.5	28.7	28.9
LOS	D	C	D	D	C	C	D	D

US 50 Eastbound Merge - Bradshaw Road Slip Ramp						
Highway Capacity Manual 2010 Edition **One-Lane Merge - 8-Lane Freeway - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	6,635	6,653	6,405	6,370	6,425	6,159
PHF	0.95	0.95	0.95	0.98	0.98	0.98
Entering Ramp Volume (vehicles)	971	923	1,280	918	910	1,105
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	1,400	1,400	1,400	1,400	1,400	1,400
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	7,606	7,576	7,686	7,288	7,335	7,264
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	7,130	7,150	6,883	6,623	6,680	6,404
v_R - Entering Ramp Volume (pc/h)	1,043	992	1,376	954	946	1,149
Downstream Freeway Volume (pc/h)	8,173	8,142	8,259	7,577	7,626	7,553
v_F / S_{FR}	178	179	172	166	167	160
P_{FM}	0.087	0.094	0.046	0.098	0.100	0.074
v_{12}	623	671	315	652	665	475
v_{av34}	3,254	3,239	3,284	2,985	3,008	2,964
v_{12a}	1,730	1,750	1,483	1,223	1,280	1,004
v_{12a}	2,852	2,860	2,753	2,649	2,672	2,561
v_{R12}	3,895	3,852	4,129	3,604	3,618	3,711
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.85	0.85	0.86	0.79	0.79	0.79
Ramp Capacity (pc/h)	2,000	2,000	2,000	2,000	2,000	2,000
Ramp Volume-to-Capacity Ratio	0.52	0.50	0.69	0.48	0.47	0.57
D_R	26.6	26.3	28.3	24.4	24.5	25.1
LOS	C	C	D	C	C	C

US 50 Eastbound Ramp Addition - Northbound Bradshaw Road								
Highway Capacity Manual 2010 Edition **Lane Addition - Level Terrain**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	4	4	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	5	5	5	5	5	5	5	5
Ramp Lanes	1	1	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	7,800	7,446	7,834	7,835	7,453	7,212	7,768	7,726
PHF	0.95	0.95	0.95	0.95	0.98	0.98	0.98	0.98
Entering Ramp Volume (vehicles)	1,409	1,340	1,486	1,511	843	1,173	1,029	1,102
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	9,209	8,787	9,320	9,346	8,296	8,386	8,797	8,828
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	8,382	8,002	8,418	8,419	7,749	7,498	8,076	8,033
v_R - Entering Ramp Volume (pc/h)	1,514	1,440	1,597	1,624	876	1,220	1,070	1,146
Downstream Freeway Volume (pc/h)	9,896	9,442	10,015	10,043	8,626	8,718	9,146	9,179
Downstream Capacity (pc/h)	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Downstream Volume-to-Capacity Ratio	0.82	0.79	0.83	0.84	0.72	0.73	0.76	0.76
Ramp Capacity (pc/h)	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Ramp Volume-to-Capacity Ratio	0.76	0.72	0.80	0.81	0.44	0.61	0.53	0.57
V/C_{MAX}	0.82	0.79	0.83	0.84	0.72	0.73	0.76	0.76
LOS	D	C	D	D	C	C	C	C

US 50 Eastbound Diverge - Mather Field Road

Highway Capacity Manual
2010 Edition
Two-Lane Diverge - 8-Lane Freeway - Level Terrain

Existing Conditions

Input Data

Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4
Ramp Lanes	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	7,725	7,712	7,761	7,366	7,407	7,248
PHF	0.96	0.96	0.96	1.00	1.00	1.00
Exiting Ramp Volume (vehicles)	1,266	1,275	1,188	1,062	1,092	987
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_D - Deceleration Lane Length (ft)	2,400	2,400	2,400	2,400	2,400	2,400
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	6,459	6,437	6,572	6,304	6,315	6,261
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	8,249	8,235	8,287	7,530	7,573	7,410
v_R - Exiting Ramp Volume (pc/h)	1,352	1,361	1,269	1,086	1,117	1,009
Downstream Freeway Volume (pc/h)	6,897	6,874	7,018	6,445	6,456	6,401
P_{FD}	0.260	0.260	0.260	0.260	0.260	0.260
v_{12}	3,145	3,148	3,094	2,761	2,795	2,673
v_{av34}	2,552	2,543	2,597	2,385	2,389	2,368
v_{12a}	3,145	3,148	3,094	2,761	2,795	2,673
v_{12a}	3,300	3,294	3,315	3,012	3,029	2,964
Upstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600
Upstream Volume-to-Capacity Ratio	0.86	0.86	0.86	0.78	0.79	0.77
Ramp Capacity (pc/h)	4,000	4,000	4,000	4,000	4,000	4,000
Ramp Volume-to-Capacity Ratio	0.34	0.34	0.32	0.27	0.28	0.25
D_R	11.0	11.0	11.2	8.6	8.7	8.1
LOS	B	B	B	A	A	A

US 50 Eastbound Diverge - Mather Field Road

Highway Capacity Manual
2010 Edition
Two-Lane Diverge - 8-Lane Freeway - Level Terrain

Cumulative Conditions

Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	5	5	5	5	5	5	5	5
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4	4	4
Ramp Lanes	2	2	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	9,362	8,922	9,467	9,483	8,502	8,510	9,033	9,015
PHF	0.96	0.96	0.96	0.96	1.00	1.00	1.00	1.00
Exiting Ramp Volume (vehicles)	1,492	1,464	1,490	1,481	1,462	1,400	1,530	1,489
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L_D - Deceleration Lane Length (ft)	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	7,870	7,458	7,977	8,002	7,040	7,110	7,503	7,526
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	9,997	9,528	10,109	10,126	8,692	8,700	9,234	9,216
v_R - Exiting Ramp Volume (pc/h)	1,593	1,564	1,591	1,582	1,494	1,432	1,564	1,522
Downstream Freeway Volume (pc/h)	8,404	7,964	8,518	8,544	7,197	7,269	7,670	7,694
P_{FD}	0.260	0.260	0.260	0.260	0.260	0.260	0.260	0.260
v_{12}	3,778	3,634	3,806	3,803	3,366	3,321	3,559	3,522
v_{av34}	3,109	2,947	3,152	3,161	2,663	2,689	2,838	2,847
v_{12a}	4,597	4,128	4,709	4,726	3,366	3,321	3,834	3,816
v_{12a}	3,999	3,811	4,044	4,050	3,477	3,480	3,694	3,687
Upstream Capacity (pc/h)	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Upstream Volume-to-Capacity Ratio	0.83	0.79	0.84	0.84	0.72	0.73	0.77	0.77
Ramp Capacity (pc/h)	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Ramp Volume-to-Capacity Ratio	0.40	0.39	0.40	0.40	0.37	0.36	0.39	0.38
D_R	17.0	15.4	17.4	17.5	12.6	12.6	14.4	14.4
LOS	B	B	B	B	B	B	B	B

US 50 Eastbound Merge - Mather Field Road Loop Ramp						
Highway Capacity Manual 2010 Edition **One-Lane Merge - 8-Lane Freeway - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	6,459	6,437	6,572	6,304	6,315	6,261
PHF	0.96	0.96	0.96	1.00	1.00	1.00
Entering Ramp Volume (vehicles)	125	134	121	101	100	107
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	1,100	1,100	1,100	1,100	1,100	1,100
S_{FR} - Ramp Free-flow Speed (mph)	25	25	25	25	25	25
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	6,584	6,572	6,694	6,405	6,415	6,369
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	6,897	6,874	7,018	6,445	6,456	6,401
v_R - Entering Ramp Volume (pc/h)	133	143	130	103	103	110
Downstream Freeway Volume (pc/h)	7,031	7,017	7,148	6,548	6,558	6,511
v_F / S_{FR}	276	275	281	258	258	256
P_{FM}	0.201	0.200	0.202	0.205	0.205	0.204
v_{12}	1,387	1,374	1,415	1,320	1,323	1,306
v_{av34}	2,755	2,750	2,802	2,562	2,566	2,547
v_{12a}	1,497	1,474	1,618	1,320	1,323	1,306
v_{12a}	2,759	2,750	2,807	2,578	2,582	2,560
v_{R12}	2,892	2,893	2,937	2,681	2,685	2,670
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.73	0.73	0.74	0.68	0.68	0.68
Ramp Capacity (pc/h)	1,900	1,900	1,900	1,900	1,900	1,900
Ramp Volume-to-Capacity Ratio	0.07	0.08	0.07	0.05	0.05	0.06
D_R	21.1	21.1	21.4	19.4	19.5	19.4
LOS	C	C	C	B	B	B

US 50 Eastbound Merge - Mather Field Road Loop Ramp

Highway Capacity Manual
2010 Edition
One-Lane Merge - 8-Lane Freeway - Level Terrain

Cumulative Conditions

Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	4	4	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	7,870	7,458	7,977	8,002	7,040	7,110	7,503	7,526
PHF	0.96	0.96	0.96	0.96	1.00	1.00	1.00	1.00
Entering Ramp Volume (vehicles)	236	206	252	252	197	167	222	169
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100
S_{FR} - Ramp Free-flow Speed (mph)	25	25	25	25	25	25	25	25
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	8,106	7,664	8,229	8,254	7,238	7,277	7,725	7,695
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	8,404	7,964	8,518	8,544	7,197	7,269	7,670	7,694
v_R - Entering Ramp Volume (pc/h)	252	220	269	269	202	171	227	172
Downstream Freeway Volume (pc/h)	8,656	8,184	8,787	8,814	7,399	7,440	7,898	7,867
v_F / S_{FR}	336	319	341	342	288	291	307	308
P_{FM}	0.186	0.190	0.184	0.184	0.193	0.196	0.189	0.196
v_{12}	1,565	1,515	1,568	1,574	1,386	1,428	1,453	1,510
v_{av34}	3,419	3,224	3,475	3,485	2,906	2,920	3,109	3,092
v_{12a}	3,004	2,564	3,118	3,144	1,797	1,869	2,270	2,294
v_{12a}	3,361	3,186	3,407	3,418	2,879	2,907	3,068	3,078
v_{R12}	3,614	3,406	3,677	3,687	3,081	3,078	3,295	3,250
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.90	0.85	0.92	0.92	0.77	0.77	0.82	0.82
Ramp Capacity (pc/h)	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900
Ramp Volume-to-Capacity Ratio	0.13	0.12	0.14	0.14	0.11	0.09	0.12	0.09
D_R	26.6	25.0	27.1	27.2	22.5	22.5	24.2	23.8
LOS	C	C	C	C	C	C	C	C

US 50 Eastbound Weave - Mather Field Road to Zinfandel Drive

Highway Capacity Manual
2010 Edition
One-Sided Weave - Level Terrain

Existing Conditions

Input Data

Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4
Upstream Ramp Lanes	1	1	1	1	1	1
Downstream Ramp Lanes	2	2	2	2	2	2
N - Number of Lanes	5	5	5	5	5	5
N_{WL} - Number of Lanes in Weaving Section	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	6,958	6,943	7,079	6,408	6,436	6,373
PHF	0.94	0.94	0.94	0.97	0.97	0.97
Entering Ramp Volume (vehicles)	317	325	634	816	828	1,187
Exiting Ramp Volume (vehicles)	2,932	2,945	2,918	1,452	1,471	1,419
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_S - Weaving Length (ft)	4,955	4,955	4,955	4,955	4,955	4,955
ID (Interchange Density within 3 miles)	0.5	0.5	0.5	0.5	0.5	0.5
Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	4,343	4,323	4,795	5,772	5,793	6,141
c_{IFL}	2,400	2,400	2,400	2,400	2,400	2,400
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
Upstream Freeway Volume (pc/h)	7,510	7,494	7,641	6,706	6,735	6,669
Entering Ramp Volume (pc/h)	342	350	684	854	866	1,242
Exiting Ramp Volume (pc/h))	3,165	3,178	3,150	1,519	1,539	1,485
Downstream Freeway Volume (pc/h)	4,688	4,666	5,176	6,040	6,062	6,426
v_{FF}	4,483	4,458	4,750	5,358	5,371	5,417
v_{RF}	204	208	425	682	691	1,009
v_{FR}	3,027	3,036	2,891	1,348	1,364	1,252
v_{RR}	138	142	259	172	175	233
v_W	3,231	3,245	3,317	2,030	2,055	2,261
v_{NW}	4,621	4,600	5,009	5,529	5,546	5,650
v	7,852	7,844	8,326	7,559	7,601	7,911
VR	0.411	0.414	0.398	0.269	0.270	0.286
LC_{RF}	1	1	1	1	1	1
LC_{FR}	0	0	0	0	0	0
LC_{MIN}	204	208	425	682	691	1,009
L_{MAX}	6,810	6,835	6,663	5,249	5,268	5,432
Weaving Operations?	YES	YES	YES	YES	YES	YES
Capacity Controlled by Density (pc/h)	11,290	11,281	11,347	11,888	11,880	11,817
Capacity Controllled by Maximum Weaving Flow Rate (pc/h)	5,833	5,802	6,025	8,937	8,879	8,398
Capacity (pc/h)	5,833	5,802	6,025	8,937	8,879	8,398
Volume-to-Capacity Ratio	1.35	1.35	1.38	0.85	0.86	0.94
LC_W	1,124	1,129	1,345	1,602	1,611	1,929
I_{NW}	1,145	1,140	1,241	1,370	1,374	1,400
LC_{NW1}	2,675	2,670	2,754	2,862	2,865	2,886
LC_{NW2}	2,720	2,715	2,806	2,922	2,926	2,949
LC_{NW3}	2,664	2,659	2,750	2,868	2,872	2,896
LC_{NW}	2,675	2,670	2,754	2,868	2,872	2,896
LC_{ALL}	3,799	3,799	4,100	4,471	4,483	4,825
W - Weaving Intensity	0.183	0.183	0.195	0.208	0.209	0.221
S_W	61.5	61.5	61.0	60.5	60.5	60.0
S_{NW}	61.0	61.0	58.9	57.8	57.7	55.1
S	61.2	61.2	59.8	58.5	58.5	56.5
D	25.7	25.6	27.9	25.8	26.0	28.0
LOS	F	F	F	C	C	D

US 50 Eastbound Weave - Mather Field Road to Zinfandel Drive

Highway Capacity Manual
2010 Edition
One-Sided Weave - Level Terrain

Cumulative Conditions

Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	4	4	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4	4	4
Upstream Ramp Lanes	1	1	1	1	1	1	1	1
Downstream Ramp Lanes	2	2	2	2	2	2	2	2
N - Number of Lanes	5	5	5	5	5	5	5	5
N_{WL} - Number of Lanes in Weaving Section	2	2	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	8,503	8,043	8,641	8,640	7,314	7,339	7,871	7,793
PHF	0.94	0.94	0.94	0.94	0.97	0.97	0.97	0.97
Entering Ramp Volume (vehicles)	432	447	431	571	920	1,210	894	1,123
Exiting Ramp Volume (vehicles)	3,097	3,052	3,083	3,082	1,759	1,708	1,861	1,797
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L_S - Weaving Length (ft)	4,955	4,955	4,955	4,955	4,955	4,955	4,955	4,955
ID (Interchange Density within 3 miles)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	5,838	5,438	5,990	6,128	6,475	6,840	6,903	7,120
c_{IFL}	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Upstream Freeway Volume (pc/h)	9,178	8,682	9,327	9,326	7,654	7,679	8,236	8,155
Entering Ramp Volume (pc/h)	466	483	465	616	962	1,266	935	1,175
Exiting Ramp Volume (pc/h))	3,343	3,295	3,327	3,327	1,840	1,788	1,948	1,880
Downstream Freeway Volume (pc/h)	6,301	5,870	6,465	6,615	6,776	7,158	7,224	7,450
v_{FF}	5,996	5,561	6,158	6,205	6,019	6,145	6,487	6,512
v_{RF}	305	309	307	410	757	1,013	737	939
v_{FR}	3,181	3,121	3,169	3,121	1,635	1,535	1,749	1,643
v_{RR}	162	173	158	206	206	253	199	237
v_W	3,486	3,430	3,476	3,531	2,391	2,548	2,486	2,582
v_{NW}	6,158	5,734	6,316	6,411	6,224	6,398	6,686	6,749
v	9,644	9,164	9,793	9,942	8,616	8,945	9,172	9,330
VR	0.361	0.374	0.355	0.355	0.278	0.285	0.271	0.277
LC_{RF}	1	1	1	1	1	1	1	1
LC_{FR}	0	0	0	0	0	0	0	0
LC_{MIN}	305	309	307	410	757	1,013	737	939
L_{MAX}	6,252	6,395	6,181	6,183	5,344	5,421	5,275	5,335
Weaving Operations?	YES	YES	YES	YES	YES	YES	YES	YES
Capacity Controlled by Density (pc/h)	11,504	11,449	11,531	11,530	11,851	11,822	11,878	11,854
Capacity Controllled by Maximum Weaving Flow Rate (pc/h)	6,640	6,412	6,761	6,758	8,647	8,427	8,856	8,674
Capacity (pc/h)	6,640	6,412	6,761	6,758	8,647	8,427	8,856	8,674
Volume-to-Capacity Ratio	1.45	1.43	1.45	1.47	1.00	1.06	1.04	1.08
LC_W	1,225	1,229	1,227	1,330	1,677	1,933	1,657	1,859
I_{NW}	1,526	1,421	1,565	1,588	1,542	1,585	1,656	1,672
LC_{NW1}	2,991	2,904	3,024	3,043	3,005	3,041	3,100	3,113
LC_{NW2}	3,062	2,968	3,098	3,119	3,077	3,116	3,180	3,194
LC_{NW3}	3,016	2,916	3,054	3,077	3,032	3,073	3,144	3,159
LC_{NW}	3,016	2,916	3,054	3,077	3,032	3,073	3,144	3,159
LC_{ALL}	4,240	4,145	4,281	4,407	4,709	5,007	4,800	5,018
W - Weaving Intensity	0.200	0.196	0.201	0.206	0.217	0.228	0.220	0.228
S_W	60.8	61.0	60.8	60.6	60.2	59.8	60.1	59.8
S_{NW}	58.5	59.0	58.4	57.5	56.3	54.1	55.9	54.3
S	59.4	59.7	59.2	58.6	57.3	55.6	57.0	55.7
D	32.5	30.7	33.1	33.9	30.1	32.2	32.2	33.5
LOS	F	F	F	F	D	F	F	F

US 50 Eastbound Merge - Zinfandel Drive Loop Ramp						
Highway Capacity Manual 2010 Edition **One-Lane Merge - 8-Lane Freeway - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	4,343	4,323	4,795	5,772	5,793	6,141
PHF	0.94	0.94	0.94	0.97	0.97	0.97
Entering Ramp Volume (vehicles)	182	176	177	129	132	116
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	520	520	520	520	520	520
S_{FR} - Ramp Free-flow Speed (mph)	25	25	25	25	25	25
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	4,525	4,499	4,971	5,901	5,925	6,257
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	4,688	4,666	5,176	6,040	6,062	6,426
v_R - Entering Ramp Volume (pc/h)	196	190	191	135	138	122
Downstream Freeway Volume (pc/h)	4,884	4,857	5,366	6,175	6,200	6,547
v_F / S_{FR}	188	187	207	242	242	257
P_{FM}	0.193	0.194	0.194	0.201	0.201	0.203
v_{12}	906	905	1,004	1,214	1,215	1,302
v_{av34}	1,891	1,880	2,086	2,413	2,423	2,562
v_{12a}	906	905	1,004	1,214	1,215	1,302
v_{12a}	1,875	1,866	2,070	2,416	2,425	2,570
v_{R12}	2,072	2,057	2,261	2,551	2,563	2,692
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.51	0.51	0.56	0.64	0.65	0.68
Ramp Capacity (pc/h)	1,900	1,900	1,900	1,900	1,900	1,900
Ramp Volume-to-Capacity Ratio	0.10	0.10	0.10	0.07	0.07	0.06
D_R	18.3	18.2	19.8	22.1	22.1	23.2
LOS	B	B	B	C	C	C

US 50 Eastbound Merge - Zinfandel Drive Loop Ramp

Highway Capacity Manual
2010 Edition
One-Lane Merge - 8-Lane Freeway - Level Terrain

Cumulative Conditions

Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	4	4	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	5,838	5,438	5,990	6,128	6,475	6,840	6,903	7,120
PHF	0.94	0.94	0.94	0.94	0.97	0.97	0.97	0.97
Entering Ramp Volume (vehicles)	187	183	183	185	170	161	173	151
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	520	520	520	520	520	520	520	520
S_{FR} - Ramp Free-flow Speed (mph)	25	25	25	25	25	25	25	25
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	6,025	5,621	6,173	6,314	6,645	7,001	7,076	7,271
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	6,301	5,870	6,465	6,615	6,776	7,158	7,224	7,450
v_R - Entering Ramp Volume (pc/h)	202	198	198	200	177	168	181	158
Downstream Freeway Volume (pc/h)	6,503	6,068	6,663	6,815	6,953	7,326	7,405	7,608
v_F / S_{FR}	252	235	259	265	271	286	289	298
P_{FM}	0.193	0.193	0.193	0.193	0.196	0.197	0.195	0.198
v_{12}	1,213	1,133	1,248	1,275	1,325	1,408	1,410	1,476
v_{av34}	2,544	2,368	2,609	2,670	2,725	2,875	2,907	2,987
v_{12a}	1,213	1,133	1,248	1,275	1,376	1,758	1,824	2,050
v_{12a}	2,520	2,348	2,586	2,646	2,710	2,863	2,890	2,980
v_{R12}	2,723	2,546	2,784	2,846	2,888	3,031	3,070	3,138
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.68	0.63	0.69	0.71	0.72	0.76	0.77	0.79
Ramp Capacity (pc/h)	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900
Ramp Volume-to-Capacity Ratio	0.11	0.10	0.10	0.11	0.09	0.09	0.10	0.08
D_R	23.4	22.0	23.8	24.3	24.7	25.8	26.1	26.6
LOS	C	C	C	C	C	C	C	C

US 50 Eastbound Merge - Zinfandel Drive Slip Ramp						
Highway Capacity Manual 2010 Edition **One-Lane Merge - 8-Lane Freeway - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	4,525	4,499	4,971	5,901	5,925	6,257
PHF	0.94	0.94	0.94	0.97	0.97	0.97
Entering Ramp Volume (vehicles)	348	562	522	540	591	627
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	840	840	840	840	840	840
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	4,873	5,062	5,494	6,441	6,516	6,884
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	4,884	4,857	5,366	6,175	6,200	6,547
v_R - Entering Ramp Volume (pc/h)	376	607	564	565	619	656
Downstream Freeway Volume (pc/h)	5,260	5,463	5,930	6,740	6,819	7,204
v_F / S_{FR}	122	121	134	154	155	164
P_{FM}	0.171	0.142	0.147	0.147	0.140	0.136
v_{12}	834	689	791	909	871	889
v_{av34}	2,025	2,084	2,288	2,633	2,665	2,829
v_{12a}	834	689	791	909	871	1,147
v_{12a}	1,954	1,943	2,146	2,470	2,480	2,619
v_{R12}	2,329	2,549	2,710	3,035	3,099	3,275
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.55	0.57	0.62	0.70	0.71	0.75
Ramp Capacity (pc/h)	2,000	2,000	2,000	2,000	2,000	2,000
Ramp Volume-to-Capacity Ratio	0.19	0.30	0.28	0.28	0.31	0.33
D_R	18.2	19.8	21.1	23.6	24.1	25.5
LOS	B	B	C	C	C	C

US 50 Eastbound Ramp Addition - Northbound Zinfandel Drive								
Highway Capacity Manual 2010 Edition **Lane Addition - Level Terrain**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	4	4	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	5	5	5	5	5	5	5	5
Ramp Lanes	1	1	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	6,025	5,621	6,173	6,314	6,645	7,001	7,076	7,271
PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Entering Ramp Volume (vehicles)	644	661	665	656	819	938	714	784
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	6,669	6,282	6,838	6,970	7,464	7,939	7,790	8,054
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	6,269	5,848	6,423	6,569	6,913	7,284	7,362	7,564
v_R - Entering Ramp Volume (pc/h)	670	688	692	682	852	976	743	815
Downstream Freeway Volume (pc/h)	6,938	6,536	7,115	7,251	7,765	8,259	8,105	8,380
Downstream Capacity (pc/h)	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Downstream Volume-to-Capacity Ratio	0.58	0.54	0.59	0.60	0.65	0.69	0.68	0.70
Ramp Capacity (pc/h)	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Ramp Volume-to-Capacity Ratio	0.33	0.34	0.35	0.34	0.43	0.49	0.37	0.41
V/C_{MAX}	0.58	0.54	0.59	0.60	0.65	0.69	0.68	0.70
LOS	A	A	A	B	B	B	B	B

US 50 Eastbound Diverge - Sunrise Boulevard						
Highway Capacity Manual 2010 Edition **Major Diverge - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	3	3	3	3	3	3
Ramp Lanes	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	5,121	5,289	5,726	6,649	6,708	7,083
PHF	0.96	0.96	0.96	0.95	0.95	0.95
Exiting Ramp Volume (vehicles)	1,773	1,821	1,953	1,959	1,954	2,073
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	3,348	3,469	3,773	4,690	4,755	5,010
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	5,459	5,639	6,104	7,144	7,207	7,610
v_R - Exiting Ramp Volume (pc/h)	1,890	1,941	2,082	2,105	2,099	2,227
Downstream Freeway Volume (pc/h)	3,569	3,698	4,022	5,039	5,108	5,383
Upstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600
Upstream Volume-to-Capacity Ratio	0.57	0.59	0.64	0.74	0.75	0.79
Downstream Capacity (pc/h)	7,200	7,200	7,200	7,200	7,200	7,200
Downstream Volume-to-Capacity Ratio	0.50	0.51	0.56	0.70	0.71	0.75
Ramp Capacity (pc/h)	4,000	4,000	4,000	4,000	4,000	4,000
Ramp Volume-to-Capacity Ratio	0.47	0.49	0.52	0.53	0.52	0.56
D_R	23.9	24.7	26.7	31.3	31.5	33.3
LOS	C	C	C	D	D	D

US 50 Eastbound Diverge - Sunrise Boulevard

Highway Capacity Manual
2010 Edition
Major Diverge - Level Terrain
Cumulative Conditions

Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	5	5	5	5	5	5	5	5
Existing Dnstrm Frwy Lanes	3	3	3	3	3	3	3	3
Ramp Lanes	2	2	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	6,237	5,990	6,313	6,400	6,181	6,487	6,367	6,551
PHF	0.96	0.96	0.96	0.96	0.95	0.95	0.95	0.95
Exiting Ramp Volume (vehicles)	2,135	2,085	1,878	1,899	2,353	2,421	2,308	2,364
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	4,103	3,905	4,435	4,501	3,828	4,066	4,059	4,187
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	6,649	6,386	6,730	6,823	6,641	6,969	6,840	7,038
v_R - Exiting Ramp Volume (pc/h)	2,276	2,223	2,002	2,024	2,528	2,601	2,480	2,540
Downstream Freeway Volume (pc/h)	4,373	4,163	4,728	4,798	4,113	4,368	4,361	4,498
Upstream Capacity (pc/h)	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Upstream Volume-to-Capacity Ratio	0.55	0.53	0.56	0.57	0.55	0.58	0.57	0.59
Downstream Capacity (pc/h)	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200
Downstream Volume-to-Capacity Ratio	0.61	0.58	0.66	0.67	0.57	0.61	0.61	0.62
Ramp Capacity (pc/h)	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Ramp Volume-to-Capacity Ratio	0.57	0.56	0.50	0.51	0.63	0.65	0.62	0.63
D_R	23.3	22.4	23.6	23.9	23.2	24.4	23.9	24.6
LOS	C	C	C	C	C	C	C	C

US 50 Eastbound Merge - Sunrise Boulevard						
Highway Capacity Manual 2010 Edition **One-Lane Merge - 6-Lane Freeway - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	3	3	3	3	3	3
Existing Dnstrm Frwy Lanes	3	3	3	3	3	3
Ramp Lanes	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	3,348	3,469	3,773	4,690	4,755	5,010
PHF	0.96	0.96	0.96	0.95	0.95	0.95
Entering Ramp Volume (vehicles)	992	1,011	1,028	889	870	834
Truck Percentage	6%	6%	6%	6%	6%	6%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_{UP} - Distance to Upstream Exit Ramp (ft)	3,895	3,895	3,895	3,895	3,895	3,895
L_A - Acceleration Lane Length (ft)	1,475	1,475	1,475	1,475	1,475	1,475
S_{FR} - Ramp Free-flow Speed (mph)	50	50	50	50	50	50
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	4,340	4,480	4,800	5,579	5,624	5,844
f_{HV}	0.97	0.97	0.97	0.97	0.97	0.97
v_F - Upstream Freeway Volume (pc/h)	3,604	3,734	4,061	5,088	5,159	5,436
v_R - Entering Ramp Volume (pc/h)	1,068	1,088	1,106	964	944	905
Downstream Freeway Volume (pc/h)	4,672	4,823	5,168	6,053	6,102	6,341
v_F / S_{FR}	72	75	81	102	103	109
P_{FM} (13-3)	0.619	0.619	0.619	0.619	0.619	0.619
P_{FM} (13-4)	0.746	0.744	0.740	0.728	0.727	0.724
P_{FM}	0.746	0.744	0.740	0.728	0.727	0.724
v_{12}	2,690	2,780	3,004	3,703	3,751	3,935
v_{av34}	457	477	529	693	704	750
v_{12a}	2,690	2,780	3,004	3,703	3,751	3,935
v_{12a}	2,690	2,780	3,004	3,703	3,751	3,935
v_{R12}	3,758	3,868	4,110	4,668	4,694	4,840
Downstream Capacity (pc/h)	7,200	7,200	7,200	7,200	7,200	7,200
Downstream Volume-to-Capacity Ratio	0.65	0.67	0.72	0.84	0.85	0.88
Ramp Capacity (pc/h)	2,100	2,100	2,100	2,100	2,100	2,100
Ramp Volume-to-Capacity Ratio	0.51	0.52	0.53	0.46	0.45	0.43
D_R	25.0	25.9	27.8	32.2	32.4	33.6
LOS	C	C	C	D	D	D

US 50 Eastbound Weave - Sunrise Boulevard to Rancho Cordova Parkway

Highway Capacity Manual
2010 Edition
One-Sided Weave - Level Terrain
Cumulative Conditions

Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	3	3	3	3	3	3	3	3
Existing Dnstrm Frwy Lanes	3	3	3	3	3	3	3	3
Upstream Ramp Lanes	1	1	1	1	1	1	1	1
Downstream Ramp Lanes	2	2	2	2	2	2	2	2
N - Number of Lanes	4	4	4	4	4	4	4	4
N_{WL} - Number of Lanes in Weaving Section	2	2	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	4,103	3,905	4,435	4,501	3,828	4,066	4,059	4,187
PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Entering Ramp Volume (vehicles)	1,152	1,101	1,233	1,174	1,145	1,182	1,122	1,162
Exiting Ramp Volume (vehicles)	78	25	374	327	448	535	763	816
Truck Percentage	6%	6%	6%	6%	6%	6%	6%	6%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L_S - Weaving Length (ft)	5,052	5,052	5,052	5,052	5,052	5,052	5,052	5,052
ID (Interchange Density within 3 miles)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	5,176	4,981	5,294	5,347	4,525	4,712	4,418	4,532
c_{IFL}	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
f_{HV}	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Upstream Freeway Volume (pc/h)	4,472	4,256	4,834	4,906	4,181	4,440	4,433	4,573
Entering Ramp Volume (pc/h)	1,255	1,200	1,344	1,279	1,250	1,291	1,225	1,269
Exiting Ramp Volume (pc/h))	85	27	408	356	489	585	833	891
Downstream Freeway Volume (pc/h)	5,642	5,429	5,770	5,828	4,943	5,147	4,825	4,950
v_{FF}	4,405	4,235	4,515	4,623	3,805	3,987	3,780	3,875
v_{RF}	1,237	1,194	1,255	1,205	1,138	1,159	1,045	1,075
v_{FR}	67	21	319	283	377	453	653	698
v_{RR}	19	6	89	74	113	132	180	194
v_W	1,303	1,215	1,574	1,488	1,514	1,612	1,697	1,773
v_{NW}	4,424	4,241	4,604	4,697	3,917	4,119	3,961	4,068
v	5,727	5,456	6,178	6,185	5,432	5,731	5,658	5,841
VR	0.228	0.223	0.255	0.241	0.279	0.281	0.300	0.303
LC_{RF}	1	1	1	1	1	1	1	1
LC_{FR}	0	0	0	0	0	0	0	0
LC_{MIN}	1,237	1,194	1,255	1,205	1,138	1,159	1,045	1,075
L_{MAX}	4,820	4,770	5,104	4,956	5,358	5,384	5,584	5,621
Weaving Operations?	NO	NO	YES	NO	YES	YES	YES	YES
Capacity Controlled by Density (pc/h)			9,584		9,506	9,498	9,437	9,426
Capacity Controllled by Maximum Weaving Flow Rate (pc/h)			9,418		8,608	8,532	8,000	7,908
Capacity (pc/h)			9,418		8,608	8,532	8,000	7,908
Volume-to-Capacity Ratio			0.66		0.63	0.67	0.71	0.74
LC_W			1,850		1,733	1,754	1,640	1,670
I_{NW}			1,163		990	1,041	1,000	1,028
LC_{NW1}			2,916		2,775	2,816	2,784	2,806
LC_{NW2}			2,716		2,563	2,608	2,572	2,596
LC_{NW3}			2,958		2,876	2,900	2,881	2,894
LC_{NW}			2,916		2,775	2,816	2,784	2,806
LC_{ALL}			4,766		4,508	4,571	4,424	4,476
W - Weaving Intensity			0.216		0.207	0.209	0.204	0.205
S_W			60.2		60.6	60.5	60.7	60.6
S_{NW}			53.5		55.3	54.8	55.7	55.2
S			55.1		56.7	56.3	57.1	56.8
D			28.0		24.0	25.5	24.8	25.7
LOS			D		C	C	C	C

US 50 Eastbound Ramp Addition - Sunrise Boulevard

Highway Capacity Manual
2010 Edition
Lane Addition - Level Terrain
Cumulative Conditions

Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	3	3		3				
Existing Dnstrm Frwy Lanes	4	4		4				
Ramp Lanes	1	1		1				
Upstream Freeway Volume (vehicles)	4,103	3,905		4,501				
PHF	0.98	0.98		0.98				
Entering Ramp Volume (vehicles)	1,152	1,101		1,174				
Truck Percentage	6%	6%		6%				
RV Percentage	0%	0%		0%				
Driver Population Factor	1.000	1.000		1.000				
S_{FR} - Ramp Free-flow Speed (mph)	40	40		40				
Freeway Free-flow Speed (mph)	70	70		70				
Calculations								
Downstream Freeway Volume (vehicles)	5,254	5,006		5,674				
f_{HV}	0.97	0.97		0.97				
v_F - Upstream Freeway Volume (pc/h)	4,310	4,103		4,729				
v_R - Entering Ramp Volume (pc/h)	1,210	1,157		1,233				
Downstream Freeway Volume (pc/h)	5,520	5,259		5,961				
Downstream Capacity (pc/h)	9,600	9,600		9,600				
Downstream Volume-to-Capacity Ratio	0.58	0.55		0.62				
Ramp Capacity (pc/h)	2,000	2,000		2,000				
Ramp Volume-to-Capacity Ratio	0.60	0.58		0.62				
V/C_{MAX}	0.60	0.58		0.62				
LOS	B	A		B				

US 50 Eastbound Diverge - Rancho Cordova Parkway								
Highway Capacity Manual 2010 Edition **Major Diverge - Level Terrain**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	4	4		4				
Existing Dnstrm Frwy Lanes	3	3		3				
Ramp Lanes	2	2		2				
Upstream Freeway Volume (vehicles)	5,254	5,006		5,674				
PHF	0.97	0.97		0.97				
Exiting Ramp Volume (vehicles)	78	25		327				
Truck Percentage	6%	6%		6%				
RV Percentage	0%	0%		0%				
Driver Population Factor	1.000	1.000		1.000				
S_{FR} - Ramp Free-flow Speed (mph)	40	40		40				
Freeway Free-flow Speed (mph)	70	70		70				
Calculations								
Downstream Freeway Volume (vehicles)	5,176	4,981		5,347				
f_{HV}	0.97	0.97		0.97				
v_F - Upstream Freeway Volume (pc/h)	5,574	5,311		6,020				
v_R - Exiting Ramp Volume (pc/h)	83	27		347				
Downstream Freeway Volume (pc/h)	5,491	5,284		5,673				
Upstream Capacity (pc/h)	9,600	9,600		9,600				
Upstream Volume-to-Capacity Ratio	0.58	0.55		0.63				
Downstream Capacity (pc/h)	7,200	7,200		7,200				
Downstream Volume-to-Capacity Ratio	0.76	0.73		0.79				
Ramp Capacity (pc/h)	4,000	4,000		4,000				
Ramp Volume-to-Capacity Ratio	0.02	0.01		0.09				
D_R	24.4	23.2		26.3				
LOS	C	C		C				

US 50 Eastbound Weave - Rancho Cordova Parkway to Hazel Avenue

Highway Capacity Manual
2010 Edition
One-Sided Weave - Level Terrain
Cumulative Conditions
Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	3	3	3	3	3	3	3	3
Existing Dnstrm Frwy Lanes	3	3	3	3	3	3	3	3
Upstream Ramp Lanes	1	1	1	1	1	1	1	1
Downstream Ramp Lanes	2	2	2	2	2	2	2	2
N - Number of Lanes	4	4	4	4	4	4	4	4
N_{WL} - Number of Lanes in Weaving Section	2	2	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	5,176	4,981	5,294	5,347	4,525	4,712	4,418	4,532
PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Entering Ramp Volume (vehicles)	1,342	1,202	1,787	1,748	1,499	1,651	1,748	1,823
Exiting Ramp Volume (vehicles)	1,869	1,710	1,904	1,950	2,657	2,826	2,611	2,718
Truck Percentage	6%	6%	6%	6%	6%	6%	6%	6%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L_S - Weaving Length (ft)	4,780	4,780	4,780	4,780	4,780	4,780	4,780	4,780
ID (Interchange Density within 3 miles)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	4,649	4,473	5,177	5,146	3,368	3,538	3,555	3,637
c_{IFL}	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
f_{HV}	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Upstream Freeway Volume (pc/h)	5,642	5,429	5,770	5,828	4,943	5,147	4,825	4,950
Entering Ramp Volume (pc/h)	1,462	1,310	1,948	1,906	1,637	1,803	1,909	1,991
Exiting Ramp Volume (pc/h))	2,037	1,864	2,075	2,125	2,902	3,086	2,852	2,969
Downstream Freeway Volume (pc/h)	5,067	4,876	5,643	5,609	3,678	3,864	3,882	3,973
v_{FF}	4,024	3,928	4,219	4,227	2,763	2,861	2,782	2,833
v_{RF}	1,043	948	1,424	1,382	915	1,003	1,100	1,140
v_{FR}	1,618	1,501	1,551	1,601	2,180	2,286	2,043	2,117
v_{RR}	419	362	524	524	722	801	808	852
v_W	2,661	2,449	2,976	2,983	3,095	3,288	3,144	3,257
v_{NW}	4,443	4,290	4,742	4,751	3,485	3,662	3,590	3,685
v	7,104	6,739	7,718	7,734	6,580	6,950	6,734	6,941
VR	0.375	0.363	0.386	0.386	0.470	0.473	0.467	0.469
LC_{RF}	1	1	1	1	1	1	1	1
LC_{FR}	0	0	0	0	0	0	0	0
LC_{MIN}	1,043	948	1,424	1,382	915	1,003	1,100	1,140
L_{MAX}	6,397	6,274	6,520	6,522	7,482	7,514	7,442	7,468
Weaving Operations?	YES	YES	YES	YES	YES	YES	YES	YES
Capacity Controlled by Density (pc/h)	9,105	9,143	9,068	9,067	8,773	8,763	8,786	8,777
Capacity Controllled by Maximum Weaving Flow Rate (pc/h)	6,408	6,604	6,225	6,222	5,102	5,073	5,141	5,115
Capacity (pc/h)	6,408	6,604	6,225	6,222	5,102	5,073	5,141	5,115
Volume-to-Capacity Ratio	1.11	1.02	1.24	1.24	1.29	1.37	1.31	1.36
LC_W	1,621	1,526	2,002	1,960	1,493	1,580	1,678	1,717
I_{NW}	1,062	1,025	1,133	1,135	833	875	858	881
LC_{NW1}	2,736	2,704	2,797	2,799	2,538	2,575	2,560	2,579
LC_{NW2}	2,680	2,646	2,747	2,748	2,466	2,506	2,490	2,511
LC_{NW3}	2,756	2,729	2,810	2,812	2,590	2,620	2,608	2,624
LC_{NW}	2,736	2,704	2,797	2,799	2,538	2,575	2,560	2,579
LC_{ALL}	4,356	4,230	4,799	4,759	4,031	4,155	4,238	4,297
W - Weaving Intensity	0.210	0.205	0.227	0.225	0.198	0.202	0.206	0.208
S_W	60.5	60.6	59.8	59.9	60.9	60.7	60.6	60.5
S_{NW}	54.0	55.1	50.5	50.8	55.5	54.4	54.0	53.5
S	56.2	57.0	53.7	53.9	57.9	57.3	56.9	56.6
D	31.6	29.6	35.9	35.8	28.4	30.3	29.6	30.7
LOS	F	F	F	F	F	F	F	F

US 50 Eastbound Diverge - Hazel Avenue						
Highway Capacity Manual 2010 Edition **Two-Lane Diverge - 6-Lane Freeway - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	3	3	3	3	3	3
Existing Dnstrm Frwy Lanes	3	3	3	3	3	3
Ramp Lanes	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	4,985	5,132	5,461	5,323	5,366	5,611
PHF	0.94	0.94	0.94	0.94	0.94	0.94
Exiting Ramp Volume (vehicles)	933	993	1,094	1,541	1,555	1,673
Truck Percentage	6%	6%	6%	6%	6%	6%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_{UP} - Distance to Upstream Entrance Ramp (ft)	14,015	14,015	14,015	14,015	14,015	14,015
L_{UP} - Distance to Downstream Entrance Ramp (ft)	2,305	2,305	2,305	2,305	2,305	2,305
L_D - Deceleration Lane Length (ft)	1,800	1,800	1,800	1,800	1,800	1,800
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	4,052	4,138	4,367	3,782	3,811	3,938
f_{HV}	0.97	0.97	0.97	0.97	0.97	0.97
v_F - Upstream Freeway Volume (pc/h)	5,434	5,593	5,953	5,814	5,860	6,129
v_R - Exiting Ramp Volume (pc/h)	1,017	1,083	1,192	1,683	1,698	1,828
v_U - Upstream Ramp Volume (pc/h)	1,068	1,088	1,106	964	944	905
Downstream Freeway Volume (pc/h)	4,417	4,511	4,760	4,131	4,162	4,301
P_{FD} (13-9)	0.577	0.570	0.556	0.537	0.535	0.523
P_{FD} (13-10)	0.549	0.546	0.536	0.563	0.562	0.557
P_{FD}	0.577	0.570	0.556	0.563	0.562	0.557
v_{12}	3,567	3,655	3,841	4,008	4,036	4,222
v_{av34}	933	969	1,056	903	912	953
v_{12a}	3,567	3,655	3,841	4,008	4,036	4,222
v_{12a}	3,567	3,655	3,841	4,008	4,036	4,222
Upstream Capacity (pc/h)	7,200	7,200	7,200	7,200	7,200	7,200
Upstream Volume-to-Capacity Ratio	0.75	0.78	0.83	0.81	0.81	0.85
Ramp Capacity (pc/h)	4,000	4,000	4,000	4,000	4,000	4,000
Ramp Volume-to-Capacity Ratio	0.25	0.27	0.30	0.42	0.42	0.46
D_R	18.7	19.5	21.1	22.5	22.8	24.4
LOS	B	B	C	C	C	C

US 50 Eastbound Weave - Hazel Avenue to Aerojet Road

Highway Capacity Manual
2010 Edition
One-Sided Weave - Level Terrain

Existing Conditions

Input Data

Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	3	3	3	3	3	3
Existing Dnstrm Frwy Lanes	3	3	3	3	3	3
Upstream Ramp Lanes	1	1	1	1	1	1
Downstream Ramp Lanes	3	3	3	3	3	3
N - Number of Lanes	4	4	4	4	4	4
N_{WL} - Number of Lanes in Weaving Section	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	4,052	4,138	4,367	3,782	3,811	3,938
PHF	0.94	0.94	0.94	0.94	0.94	0.94
Entering Ramp Volume (vehicles)	804	803	704	945	949	945
Exiting Ramp Volume (vehicles)	241	242	241	55	58	52
Truck Percentage	6%	6%	6%	6%	6%	6%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_S - Weaving Length (ft)	615	615	615	615	615	615
ID (Interchange Density within 3 miles)	0.5	0.5	0.5	0.5	0.5	0.5
Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	4,615	4,700	4,831	4,672	4,702	4,831
c_{IFL}	2,400	2,400	2,400	2,400	2,400	2,400
f_{HV}	0.97	0.97	0.97	0.97	0.97	0.97
Upstream Freeway Volume (pc/h)	4,417	4,511	4,760	4,131	4,162	4,301
Entering Ramp Volume (pc/h)	876	876	767	1,032	1,036	1,032
Exiting Ramp Volume (pc/h))	263	264	262	60	63	57
Downstream Freeway Volume (pc/h)	5,030	5,123	5,265	5,103	5,135	5,276
v_{FF}	4,197	4,290	4,534	4,083	4,111	4,255
v_{RF}	833	833	731	1,020	1,024	1,021
v_{FR}	219	221	226	48	51	46
v_{RR}	43	43	36	12	13	11
v_W	1,052	1,054	957	1,068	1,075	1,067
v_{NW}	4,241	4,333	4,571	4,095	4,124	4,266
v	5,293	5,386	5,527	5,163	5,199	5,333
VR	0.199	0.196	0.173	0.207	0.207	0.200
LC_{RF}	1	1	1	1	1	1
LC_{FR}	1	1	1	1	1	1
LC_{MIN}	1,052	1,054	957	1,068	1,075	1,067
L_{MAX}	4,524	4,492	4,263	4,607	4,605	4,537
Weaving Operations?	YES	YES	YES	YES	YES	YES
Capacity Controlled by Density (pc/h)	8,404	8,414	8,484	8,378	8,379	8,400
Capacity Controllled by Maximum Weaving Flow Rate (pc/h)	12,075	12,266	13,867	11,600	11,610	11,998
Capacity (pc/h)	8,404	8,414	8,484	8,378	8,379	8,400
Volume-to-Capacity Ratio	0.63	0.64	0.65	0.62	0.62	0.63
LC_W	1,205	1,207	1,110	1,221	1,228	1,220
I_{NW}	130	133	141	126	127	131
LC_{NW1}	437	455	505	406	412	442
LC_{NW2}	2,635	2,655	2,708	2,602	2,609	2,640
LC_{NW3}	-3,519	-3,493	-3,426	-3,560	-3,551	-3,512
LC_{NW}	437	455	505	406	412	442
LC_{ALL}	1,642	1,663	1,614	1,628	1,640	1,662
W - Weaving Intensity	0.490	0.495	0.484	0.487	0.490	0.495
S_W	51.9	51.8	52.1	52.0	51.9	51.8
S_{NW}	56.1	55.9	56.5	56.1	56.0	55.9
S	55.2	55.1	55.7	55.2	55.1	55.0
D	24.0	24.4	24.8	23.4	23.6	24.2
LOS	C	C	**C**	C	C	C

US 50 Eastbound Weave - Hazel Avenue to Aerojet Road

Highway Capacity Manual
2010 Edition
One-Sided Weave - Level Terrain
Cumulative Conditions
Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	3	3	3	3	3	3	3	3
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4	4	4
Upstream Ramp Lanes	1	1	1	1	1	1	1	1
Downstream Ramp Lanes	3	3	3	3	3	3	3	3
N - Number of Lanes	4	4	4	4	4	4	4	4
N_{WL} - Number of Lanes in Weaving Section	2	2	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	4,649	4,473	5,177	5,146	3,368	3,538	3,555	3,637
PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Entering Ramp Volume (vehicles)	1,088	1,048	1,174	1,072	2,320	2,087	2,148	2,091
Exiting Ramp Volume (vehicles)	674	736	584	613	122	130	203	171
Truck Percentage	6%	6%	6%	6%	6%	6%	6%	6%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L_S - Weaving Length (ft)	615	615	615	615	615	615	615	615
ID (Interchange Density within 3 miles)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	5,063	4,786	5,767	5,605	5,565	5,495	5,499	5,557
c_{IFL}	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
f_{HV}	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Upstream Freeway Volume (pc/h)	5,067	4,876	5,643	5,609	3,678	3,864	3,882	3,973
Entering Ramp Volume (pc/h)	1,186	1,143	1,279	1,168	2,533	2,279	2,346	2,284
Exiting Ramp Volume (pc/h))	734	802	636	668	133	142	222	187
Downstream Freeway Volume (pc/h)	5,519	5,217	6,286	6,109	6,078	6,001	6,006	6,070
v_{FF}	4,472	4,226	5,124	5,056	3,599	3,775	3,744	3,854
v_{RF}	1,047	990	1,162	1,053	2,479	2,226	2,262	2,216
v_{FR}	595	649	519	553	79	89	138	119
v_{RR}	139	152	118	115	54	53	84	68
v_W	1,642	1,640	1,680	1,606	2,558	2,316	2,400	2,335
v_{NW}	4,611	4,378	5,242	5,171	3,654	3,827	3,828	3,922
v	6,253	6,018	6,922	6,777	6,211	6,143	6,228	6,257
VR	0.263	0.272	0.243	0.237	0.412	0.377	0.385	0.373
LC_{RF}	1	1	1	1	1	1	1	1
LC_{FR}	1	1	1	1	1	1	1	1
LC_{MIN}	1,642	1,640	1,680	1,606	2,558	2,316	2,400	2,335
L_{MAX}	5,186	5,291	4,978	4,918	6,814	6,424	6,518	6,382
Weaving Operations?	YES	YES	YES	YES	YES	YES	YES	YES
Capacity Controlled by Density (pc/h)	8,201	8,169	8,265	8,283	7,703	7,822	7,794	7,835
Capacity Controllled by Maximum Weaving Flow Rate (pc/h)	9,140	8,808	9,887	10,128	5,828	6,367	6,227	6,432
Capacity (pc/h)	8,201	8,169	8,265	8,283	5,828	6,367	6,227	6,432
Volume-to-Capacity Ratio	0.76	0.74	0.84	0.82	1.07	0.96	1.00	0.97
LC_W	1,795	1,793	1,834	1,759	2,711	2,469	2,554	2,488
I_{NW}	142	135	161	159	112	118	118	121
LC_{NW1}	513	465	643	628	316	351	351	371
LC_{NW2}	2,717	2,665	2,858	2,842	2,504	2,542	2,543	2,564
LC_{NW3}	-3,415	-3,480	-3,238	-3,258	-3,683	-3,634	-3,634	-3,608
LC_{NW}	513	465	643	628	316	351	351	371
LC_{ALL}	2,308	2,258	2,476	2,387	3,027	2,820	2,905	2,859
W - Weaving Intensity	0.642	0.631	0.678	0.659	0.795	0.752	0.769	0.760
S_W	48.5	48.7	47.8	48.2	45.6	46.4	46.1	46.3
S_{NW}	50.7	51.0	49.6	50.3	44.1	46.0	45.2	45.7
S	50.1	50.3	49.1	49.8	44.7	46.1	45.6	45.9
D	31.2	29.9	35.2	34.0	34.7	33.3	34.2	34.1
LOS	D	D	E	D	F	D	F	D

US 50 Westbound Diverge - Hazel Avenue						
Highway Capacity Manual 2010 Edition **Two-Lane Diverge - 6-Lane Freeway - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	3	3	3	3	3	3
Existing Dnstrm Frwy Lanes	3	3	3	3	3	3
Ramp Lanes	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	3,108	3,099	3,173	2,803	2,862	2,981
PHF	0.96	0.96	0.96	0.93	0.93	0.93
Exiting Ramp Volume (vehicles)	631	686	622	869	877	849
Upstream Ramp Volume (vehicles)	1,588	1,603	1,619	1,340	1,353	1,420
Truck Percentage	6%	6%	6%	6%	6%	6%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_{UP} - Distance to Upstream Entrance Ramp (ft)	3,420	3,420	3,420	3,420	3,420	3,420
L_{UP} - Distance to Downstream Entrance Ramp (ft)	1,745	1,745	1,745	1,745	1,745	1,745
L_D - Deceleration Lane Length (ft)	1,880	1,880	1,880	1,880	1,880	1,880
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	2,477	2,413	2,552	1,934	1,985	2,132
f_{HV}	0.97	0.97	0.97	0.97	0.97	0.97
v_F - Upstream Freeway Volume (pc/h)	3,348	3,338	3,418	3,112	3,177	3,309
v_R - Exiting Ramp Volume (pc/h)	680	739	670	965	974	942
v_U - Upstream Ramp Volume (pc/h)	1,710	1,727	1,744	1,488	1,502	1,576
Downstream Freeway Volume (pc/h)	2,668	2,599	2,748	2,147	2,203	2,367
P_{FD} (13-9)	0.645	0.643	0.644	0.638	0.636	0.634
P_{FD} (13-10)	0.706	0.717	0.702	0.766	0.765	0.754
P_{FD}	0.706	0.717	0.702	0.766	0.765	0.754
v_{12}	2,564	2,604	2,599	2,609	2,660	2,728
v_{av34}	392	367	410	251	259	291
v_{12a}	2,564	2,604	2,599	2,609	2,660	2,728
v_{12a}	2,564	2,604	2,599	2,609	2,660	2,728
Upstream Capacity (pc/h)	7,200	7,200	7,200	7,200	7,200	7,200
Upstream Volume-to-Capacity Ratio	0.46	0.46	0.47	0.43	0.44	0.46
Ramp Capacity (pc/h)	4,000	4,000	4,000	4,000	4,000	4,000
Ramp Volume-to-Capacity Ratio	0.17	0.18	0.17	0.24	0.24	0.24
D_R	9.4	9.7	9.7	9.8	10.2	10.8
LOS	A	A	A	A	B	B

US 50 Westbound Diverge - Hazel Avenue

Highway Capacity Manual
2010 Edition
Two-Lane Diverge - 6-Lane Freeway - Level Terrain

Cumulative Conditions

Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	4	4	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	3	3	3	3	3	3	3	3
Ramp Lanes	2	2	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	4,198	4,352	4,242	4,408	4,100	3,767	4,420	4,458
PHF	0.96	0.96	0.96	0.96	0.93	0.93	0.93	0.93
Exiting Ramp Volume (vehicles)	1,077	905	1,098	1,057	959	951	1,031	1,032
Upstream Ramp Volume (vehicles)	1,708	1,749	1,725	1,778	1,671	1,613	1,729	1,784
Truck Percentage	6%	6%	6%	6%	6%	6%	6%	6%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L_{UP} - Distance to Upstream Entrance Ramp (ft)	3,420	3,420	3,420	3,420	3,420	3,420	3,420	3,420
L_{UP} - Distance to Downstream Entrance Ramp (ft)	1,745	1,745	1,745	1,745	1,745	1,745	1,745	1,745
L_D - Deceleration Lane Length (ft)	1,880	1,880	1,880	1,880	1,880	1,880	1,880	1,880
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	3,121	3,447	3,144	3,352	3,141	2,816	3,389	3,426
f_{HV}	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
v_F - Upstream Freeway Volume (pc/h)	4,521	4,687	4,569	4,748	4,551	4,181	4,907	4,949
v_R - Exiting Ramp Volume (pc/h)	1,160	975	1,182	1,138	1,065	1,056	1,144	1,146
v_U - Upstream Ramp Volume (pc/h)	1,840	1,884	1,858	1,915	1,855	1,791	1,920	1,981
Downstream Freeway Volume (pc/h)	3,361	3,713	3,387	3,610	3,487	3,125	3,763	3,803
P_{FD} (13-9)	0.594	0.598	0.591	0.589	0.597	0.607	0.585	0.584
P_{FD} (13-10)	0.746	0.706	0.748	0.733	0.728	0.740	0.728	0.726
P_{FD}	0.746	0.706	0.748	0.733	0.728	0.740	0.728	0.726
v_{12}	3,666	3,597	3,714	3,784	3,601	3,370	3,882	3,908
v_{av34}	428	545	427	482	475	406	512	520
v_{12a}	3,666	3,597	3,714	3,784	3,601	3,370	3,882	3,908
v_{12a}	3,666	3,597	3,714	3,784	3,601	3,370	3,882	3,908
Upstream Capacity (pc/h)	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200
Upstream Volume-to-Capacity Ratio	0.63	0.65	0.63	0.66	0.63	0.58	0.68	0.69
Ramp Capacity (pc/h)	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Ramp Volume-to-Capacity Ratio	0.29	0.24	0.30	0.28	0.27	0.26	0.29	0.29
D_R	18.9	18.3	19.3	19.9	18.3	16.3	20.7	20.9
LOS	B	B	B	B	B	B	C	C

US 50 Westbound Merge - Hazel Avenue Loop Ramp						
Highway Capacity Manual 2010 Edition **One-Lane Merge - 6-Lane Freeway - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	3	3	3	3	3	3
Existing Dnstrm Frwy Lanes	3	3	3	3	3	3
Ramp Lanes	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	2,477	2,413	2,552	1,934	1,985	2,132
PHF	0.96	0.96	0.96	0.93	0.93	0.93
Entering Ramp Volume (vehicles)	160	166	174	600	595	593
Truck Percentage	6%	6%	6%	6%	6%	6%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_{UP} - Distance to Upstream Exit Ramp (ft)	1,745	1,745	1,745	1,745	1,745	1,745
L_A - Acceleration Lane Length (ft)	1,040	1,040	1,040	1,040	1,040	1,040
S_{FR} - Ramp Free-flow Speed (mph)	25	25	25	25	25	25
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	2,637	2,580	2,726	2,534	2,580	2,725
f_{HV}	0.97	0.97	0.97	0.97	0.97	0.97
v_F - Upstream Freeway Volume (pc/h)	2,668	2,599	2,748	2,147	2,203	2,367
v_R - Entering Ramp Volume (pc/h)	172	179	188	666	661	658
Downstream Freeway Volume (pc/h)	2,840	2,779	2,936	2,813	2,864	3,025
v_F / S_{FR}	107	104	110	86	88	95
P_{FM} (13-3)	0.607	0.607	0.607	0.607	0.607	0.607
P_{FM} (13-4)	0.718	0.719	0.717	0.718	0.718	0.716
P_{FM}	0.718	0.719	0.717	0.718	0.718	0.716
v_{12}	1,916	1,869	1,970	1,542	1,581	1,694
v_{av34}	376	365	389	302	311	337
v_{12a}	1,916	1,869	1,970	1,542	1,581	1,694
v_{12a}	1,916	1,869	1,970	1,542	1,581	1,694
v_{R12}	2,088	2,048	2,158	2,209	2,242	2,352
Downstream Capacity (pc/h)	7,200	7,200	7,200	7,200	7,200	7,200
Downstream Volume-to-Capacity Ratio	0.39	0.39	0.41	0.39	0.40	0.42
Ramp Capacity (pc/h)	1,900	1,900	1,900	1,900	1,900	1,900
Ramp Volume-to-Capacity Ratio	0.09	0.09	0.10	0.35	0.35	0.35
D_R	15.2	14.8	15.7	15.9	16.1	17.0
LOS	B	B	B	B	B	B

US 50 Westbound Merge - Hazel Avenue Loop Ramp

Highway Capacity Manual
2010 Edition
One-Lane Merge - 6-Lane Freeway - Level Terrain
Cumulative Conditions

Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	3	3	3	3	3	3	3	3
Existing Dnstrm Frwy Lanes	3	3	3	3	3	3	3	3
Ramp Lanes	1	1	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	3,121	3,447	3,144	3,352	3,141	2,816	3,389	3,426
PHF	0.96	0.96	0.96	0.96	0.93	0.93	0.93	0.93
Entering Ramp Volume (vehicles)	52	124	69	93	434	434	434	434
Truck Percentage	6%	6%	6%	6%	6%	6%	6%	6%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L_{UP} - Distance to Upstream Exit Ramp (ft)	1,745	1,745	1,745	1,745	1,745	1,745	1,745	1,745
L_A - Acceleration Lane Length (ft)	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040
S_{FR} - Ramp Free-flow Speed (mph)	25	25	25	25	25	25	25	25
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	3,173	3,571	3,213	3,445	3,575	3,249	3,823	3,860
f_{HV}	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
v_F - Upstream Freeway Volume (pc/h)	3,361	3,713	3,387	3,610	3,487	3,125	3,763	3,803
v_R - Entering Ramp Volume (pc/h)	56	134	74	100	481	481	481	481
Downstream Freeway Volume (pc/h)	3,417	3,846	3,461	3,710	3,968	3,607	4,244	4,285
v_F / S_{FR}	134	149	135	144	139	125	151	152
P_{FM} (13-3)	0.607	0.607	0.607	0.607	0.607	0.607	0.607	0.607
P_{FM} (13-4)	0.710	0.705	0.710	0.706	0.703	0.708	0.699	0.699
P_{FM}	0.710	0.705	0.710	0.706	0.703	0.708	0.699	0.699
v_{12}	2,387	2,616	2,404	2,550	2,451	2,212	2,631	2,657
v_{av34}	487	549	492	530	518	457	566	573
v_{12a}	2,387	2,616	2,404	2,550	2,451	2,212	2,631	2,657
v_{12a}	2,387	2,616	2,404	2,550	2,451	2,212	2,631	2,657
v_{R12}	2,444	2,749	2,478	2,650	2,932	2,693	3,112	3,139
Downstream Capacity (pc/h)	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200
Downstream Volume-to-Capacity Ratio	0.47	0.53	0.48	0.52	0.55	0.50	0.59	0.60
Ramp Capacity (pc/h)	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900
Ramp Volume-to-Capacity Ratio	0.03	0.07	0.04	0.05	0.25	0.25	0.25	0.25
D_R	18.0	20.3	18.2	19.6	21.6	19.7	23.0	23.2
LOS	B	C	B	B	C	B	C	C

US 50 Westbound Merge - Hazel Avenue Slip Ramp						
Highway Capacity Manual 2010 Edition **One-Lane Merge - 6-Lane Freeway - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	3	3	3	3	3	3
Existing Dnstrm Frwy Lanes	3	3	3	3	3	3
Ramp Lanes	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	2,637	2,580	2,726	2,534	2,580	2,725
PHF	0.96	0.96	0.96	0.93	0.93	0.93
Entering Ramp Volume (vehicles)	1,550	1,608	1,748	800	868	962
Truck Percentage	6%	6%	6%	6%	6%	6%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_{UP} - Distance to Upstream Ramp (ft)	1,900	1,900	1,900	1,900	1,900	1,900
L_{DOWN} - Distance to Downstream Ramp (ft)	13,410	13,410	13,410	13,410	13,410	13,410
L_A - Acceleration Lane Length (ft)	2,010	2,010	2,010	2,010	2,010	2,010
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	4,187	4,188	4,474	3,334	3,448	3,687
f_{HV}	0.97	0.97	0.97	0.97	0.97	0.97
v_F - Upstream Freeway Volume (pc/h)	2,840	2,779	2,936	2,813	2,864	3,025
v_R - Entering Ramp Volume (pc/h)	1,669	1,732	1,883	888	964	1,068
v_D - Downstream Ramp Volume (pc/h)	805	784	704	841	865	847
Downstream Freeway Volume (pc/h)	4,510	4,510	4,819	3,701	3,828	4,093
v_F / S_{FR}	71	69	73	70	72	76
P_{FM} (13-3)	0.634	0.634	0.634	0.634	0.634	0.634
P_{FM} (13-5)	0.564	0.564	0.563	0.565	0.566	0.565
P_{FM}	0.634	0.634	0.634	0.634	0.634	0.634
v_{12}	1,800	1,761	1,861	1,783	1,815	1,917
v_{av34}	520	509	538	515	524	554
v_{12a}	1,800	1,761	1,861	1,783	1,815	1,917
v_{12a}	1,800	1,761	1,861	1,783	1,815	1,917
v_{R12}	3,470	3,493	3,744	2,671	2,779	2,985
Downstream Capacity (pc/h)	7,200	7,200	7,200	7,200	7,200	7,200
Downstream Volume-to-Capacity Ratio	0.63	0.63	0.67	0.51	0.53	0.57
Ramp Capacity (pc/h)	2,000	2,000	2,000	2,000	2,000	2,000
Ramp Volume-to-Capacity Ratio	0.83	0.87	0.94	0.44	0.48	0.53
D_R	19.2	19.3	21.2	13.3	14.1	15.7
LOS	B	B	C	B	B	B

US 50 Westbound Weave - Hazel Avenue to Rancho Cordova Parkway

Highway Capacity Manual
2010 Edition
One-Sided Weave - Level Terrain
Cumulative Conditions
Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	3	3	3	3	3	3	3	3
Existing Dnstrm Frwy Lanes	3	3	3	3	3	3	3	3
Upstream Ramp Lanes	1	1	1	1	1	1	1	1
Downstream Ramp Lanes	2	2	2	2	2	2	2	2
N - Number of Lanes	4	4	4	4	4	4	4	4
N_{WL} - Number of Lanes in Weaving Section	2	2	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	3,173	3,571	3,213	3,445	3,575	3,249	3,823	3,860
PHF	0.96	0.96	0.96	0.96	0.93	0.93	0.93	0.93
Entering Ramp Volume (vehicles)	2,283	2,376	2,306	2,369	1,814	1,725	2,263	2,302
Exiting Ramp Volume (vehicles)	1,512	1,644	1,800	1,867	1,595	1,479	2,225	2,173
Truck Percentage	6%	6%	6%	6%	6%	6%	6%	6%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L_S - Weaving Length (ft)	5,823	5,823	5,823	5,823	5,823	5,823	5,823	5,823
ID (Interchange Density within 3 miles)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	3,944	4,304	3,719	3,947	3,794	3,496	3,861	3,990
c_{IFL}	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
f_{HV}	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Upstream Freeway Volume (pc/h)	3,417	3,846	3,461	3,710	3,968	3,607	4,244	4,285
Entering Ramp Volume (pc/h)	2,459	2,559	2,483	2,551	2,013	1,915	2,512	2,555
Exiting Ramp Volume (pc/h))	1,628	1,770	1,938	2,010	1,770	1,642	2,470	2,412
Downstream Freeway Volume (pc/h)	4,248	4,635	4,006	4,251	4,211	3,880	4,286	4,429
v_{FF}	2,471	2,783	2,332	2,519	2,794	2,535	2,692	2,774
v_{RF}	1,778	1,852	1,674	1,732	1,418	1,346	1,594	1,654
v_{FR}	947	1,063	1,129	1,191	1,174	1,072	1,552	1,511
v_{RR}	681	707	810	819	596	569	919	901
v_W	2,725	2,915	2,802	2,923	2,592	2,418	3,146	3,165
v_{NW}	3,152	3,491	3,142	3,338	3,390	3,104	3,611	3,675
v	5,877	6,406	5,944	6,262	5,982	5,522	6,757	6,840
VR	0.464	0.455	0.471	0.467	0.433	0.438	0.466	0.463
LC_{RF}	1	1	1	1	1	1	1	1
LC_{FR}	0	0	0	0	0	0	0	0
LC_{MIN}	1,778	1,852	1,674	1,732	1,418	1,346	1,594	1,654
L_{MAX}	7,405	7,306	7,494	7,442	7,057	7,109	7,427	7,394
Weaving Operations?	YES	YES	YES	YES	YES	YES	YES	YES
Capacity Controlled by Density (pc/h)	9,116	9,146	9,089	9,105	9,222	9,206	9,109	9,119
Capacity Controllled by Maximum Weaving Flow Rate (pc/h)	5,176	5,274	5,091	5,140	5,539	5,481	5,155	5,187
Capacity (pc/h)	5,176	5,274	5,091	5,140	5,539	5,481	5,155	5,187
Volume-to-Capacity Ratio	1.14	1.21	1.17	1.22	1.08	1.01	1.31	1.32
LC_W	2,419	2,493	2,315	2,374	2,059	1,987	2,235	2,296
I_{NW}	918	1,016	915	972	987	904	1,051	1,070
LC_{NW1}	3,035	3,105	3,033	3,073	3,084	3,025	3,130	3,143
LC_{NW2}	2,392	2,467	2,390	2,433	2,445	2,381	2,494	2,509
LC_{NW3}	3,413	3,383	3,414	3,396	3,392	3,418	3,373	3,367
LC_{NW}	3,035	3,105	3,033	3,073	3,084	3,025	3,130	3,143
LC_{ALL}	5,454	5,598	5,348	5,447	5,143	5,012	5,365	5,439
W - Weaving Intensity	0.215	0.219	0.211	0.214	0.205	0.201	0.212	0.214
S_W	60.3	60.1	60.4	60.3	60.6	60.8	60.4	60.3
S_{NW}	50.1	49.0	50.8	50.0	52.6	53.7	50.4	49.9
S	54.4	53.5	54.9	54.3	55.8	56.6	54.6	54.2
D	27.0	29.9	27.1	28.8	26.8	24.4	30.9	31.5
LOS	F	F	F	F	F	F	F	F

US 50 Westbound Weave - Rancho Cordova Parkway to Sunrise Boulevard

Highway Capacity Manual
2010 Edition
One-Sided Weave - Level Terrain
Cumulative Conditions

Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	3	3	3	3	3	3	3	3
Existing Dnstrm Frwy Lanes	3	3	3	3	3	3	3	3
Upstream Ramp Lanes	1	1	1	1	1	1	1	1
Downstream Ramp Lanes	2	2	2	2	2	2	2	2
N - Number of Lanes	4	4	4	4	4	4	4	4
N_{WL} - Number of Lanes in Weaving Section	2	2	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	3,944	4,304	3,719	3,947	3,794	3,496	3,861	3,990
PHF	0.96	0.96	0.96	0.96	0.93	0.93	0.93	0.93
Entering Ramp Volume (vehicles)	875	897	1,428	1,389	791	747	1,165	1,138
Exiting Ramp Volume (vehicles)	623	611	729	760	627	580	751	729
Truck Percentage	6%	6%	6%	6%	6%	6%	6%	6%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L_S - Weaving Length (ft)	5,850	5,850	5,850	5,850	5,850	5,850	5,850	5,850
ID (Interchange Density within 3 miles)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	4,197	4,590	4,418	4,576	3,957	3,663	4,275	4,399
c_{IFL}	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
f_{HV}	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Upstream Freeway Volume (pc/h)	4,248	4,635	4,006	4,251	4,211	3,880	4,286	4,429
Entering Ramp Volume (pc/h)	942	966	1,538	1,496	878	830	1,293	1,264
Exiting Ramp Volume (pc/h))	671	658	786	818	696	644	834	809
Downstream Freeway Volume (pc/h)	4,520	4,943	4,758	4,929	4,393	4,066	4,746	4,883
v_{FF}	3,699	4,091	3,438	3,646	3,635	3,350	3,646	3,799
v_{RF}	821	853	1,320	1,283	758	716	1,100	1,084
v_{FR}	549	545	568	605	576	531	641	630
v_{RR}	122	114	218	213	120	113	193	180
v_W	1,369	1,398	1,888	1,888	1,334	1,247	1,740	1,714
v_{NW}	3,821	4,204	3,656	3,859	3,755	3,463	3,839	3,979
v	5,191	5,602	5,544	5,747	5,089	4,710	5,579	5,692
VR	0.264	0.249	0.340	0.329	0.262	0.265	0.312	0.301
LC_{RF}	1	1	1	1	1	1	1	1
LC_{FR}	0	0	0	0	0	0	0	0
LC_{MIN}	821	853	1,320	1,283	758	716	1,100	1,084
L_{MAX}	5,199	5,048	6,022	5,892	5,181	5,209	5,712	5,595
Weaving Operations?	NO	NO	YES	YES	NO	NO	NO	NO
Capacity Controlled by Density (pc/h)			9,547	9,587				
Capacity Controllled by Maximum Weaving Flow Rate (pc/h)			7,049	7,305				
Capacity (pc/h)			7,049	7,305				
Volume-to-Capacity Ratio			0.79	0.79				
LC_W			1,963	1,926				
I_{NW}			1,069	1,129				
LC_{NW1}			3,153	3,195				
LC_{NW2}			2,504	2,550				
LC_{NW3}			3,384	3,365				
LC_{NW}			3,153	3,195				
LC_{ALL}			5,116	5,121				
W - Weaving Intensity			0.203	0.203				
S_W			60.7	60.7				
S_{NW}			53.8	53.9				
S			56.0	55.9				
D			24.7	25.7				
LOS			C	C				

US 50 Westbound Ramp Addition - Rancho Cordova Parkway

Highway Capacity Manual
2010 Edition
Lane Addition - Level Terrain
Cumulative Conditions

Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	3	3			3	3	3	3
Existing Dnstrm Frwy Lanes	4	4			4	4	4	4
Ramp Lanes	1	1			1	1	1	1
Upstream Freeway Volume (vehicles)	3,944	4,304			3,794	3,496	3,861	3,990
PHF	0.96	0.96			0.93	0.93	0.93	0.93
Entering Ramp Volume (vehicles)	875	897			791	747	1,165	1,138
Truck Percentage	6%	6%			6%	6%	6%	6%
RV Percentage	0%	0%			0%	0%	0%	0%
Driver Population Factor	1.000	1.000			1.000	1.000	1.000	1.000
S_{FR} - Ramp Free-flow Speed (mph)	40	40			40	40	40	40
Freeway Free-flow Speed (mph)	70	70			70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	4,819	5,201			4,585	4,243	5,026	5,128
f_{HV}	0.97	0.97			0.97	0.97	0.97	0.97
v_F - Upstream Freeway Volume (pc/h)	4,248	4,635			4,211	3,880	4,286	4,429
v_R - Entering Ramp Volume (pc/h)	942	966			878	830	1,293	1,264
Downstream Freeway Volume (pc/h)	5,191	5,602			5,089	4,710	5,579	5,692
Downstream Capacity (pc/h)	9,600	9,600			9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.54	0.58			0.53	0.49	0.58	0.59
Ramp Capacity (pc/h)	2,000	2,000			2,000	2,000	2,000	2,000
Ramp Volume-to-Capacity Ratio	0.47	0.48			0.44	0.41	0.65	0.63
V/C_{MAX}	0.54	0.58			0.53	0.49	0.65	0.63
LOS	A	A			A	A	B	B

US 50 Westbound Diverge - Sunrise Boulevard

Highway Capacity Manual
2010 Edition
Major Diverge - Level Terrain
Cumulative Conditions

Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	4	4			4	4	4	4
Existing Dnstrm Frwy Lanes	3	3			3	3	3	3
Ramp Lanes	2	2			2	2	2	2
Upstream Freeway Volume (vehicles)	4,819	5,201			4,585	4,243	5,026	5,128
PHF	0.96	0.96			0.93	0.93	0.93	0.93
Exiting Ramp Volume (vehicles)	623	611			627	580	751	729
Truck Percentage	6%	6%			6%	6%	6%	6%
RV Percentage	0%	0%			0%	0%	0%	0%
Driver Population Factor	1.000	1.000			1.000	1.000	1.000	1.000
S_{FR} - Ramp Free-flow Speed (mph)	40	40			40	40	40	40
Freeway Free-flow Speed (mph)	70	70			70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	4,197	4,590			3,957	3,663	4,275	4,399
f_{HV}	0.97	0.97			0.97	0.97	0.97	0.97
v_F - Upstream Freeway Volume (pc/h)	5,191	5,602			5,089	4,710	5,579	5,692
v_R - Exiting Ramp Volume (pc/h)	671	658			696	644	834	809
Downstream Freeway Volume (pc/h)	4,520	4,943			4,393	4,066	4,746	4,883
Upstream Capacity (pc/h)	9,600	9,600			9,600	9,600	9,600	9,600
Upstream Volume-to-Capacity Ratio	0.54	0.58			0.53	0.49	0.58	0.59
Downstream Capacity (pc/h)	7,200	7,200			7,200	7,200	7,200	7,200
Downstream Volume-to-Capacity Ratio	0.63	0.69			0.61	0.56	0.66	0.68
Ramp Capacity (pc/h)	4,000	4,000			4,000	4,000	4,000	4,000
Ramp Volume-to-Capacity Ratio	0.17	0.16			0.17	0.16	0.21	0.20
D_R	22.7	24.5			22.3	20.6	24.4	24.9
LOS	C	C			C	C	C	C

US 50 Westbound Diverge - Sunrise Boulevard						
Highway Capacity Manual 2010 Edition **One-Lane Diverge - 6-Lane Freeway - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	3	3	3	3	3	3
Existing Dnstrm Frwy Lanes	3	3	3	3	3	3
Ramp Lanes	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	6,068	6,121	6,334	4,370	4,481	4,707
PHF	0.96	0.96	0.96	0.93	0.93	0.93
Exiting Ramp Volume (vehicles)	749	729	655	758	780	763
Upstream Ramp Volume (vehicles)	1,550	1,608	1,748	800	868	962
Truck Percentage	6%	6%	6%	6%	6%	6%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_{UP} - Distance to Upstream Entrance Ramp (ft)	13,410	13,410	13,410	13,410	13,410	13,410
L_{UP} - Distance to Downstream Entrance Ramp (ft)	3,620	3,620	3,620	3,620	3,620	3,620
L_D - Deceleration Lane Length (ft)	150	150	150	150	150	150
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	5,319	5,392	5,679	3,612	3,701	3,943
f_{HV}	0.97	0.97	0.97	0.97	0.97	0.97
v_F - Upstream Freeway Volume (pc/h)	6,525	6,582	6,811	4,846	4,969	5,219
v_R - Exiting Ramp Volume (pc/h)	805	784	704	841	865	847
v_U - Upstream Ramp Volume (pc/h)	1,667	1,729	1,880	887	963	1,067
Downstream Freeway Volume (pc/h)	5,719	5,798	6,107	4,005	4,104	4,373
P_{FD} (13-9)	0.560	0.559	0.557	0.600	0.596	0.591
P_{FD} (13-10)	0.499	0.496	0.483	0.566	0.562	0.552
P_{FD}	0.560	0.559	0.557	0.600	0.596	0.591
v_{12}	4,007	4,027	4,108	3,245	3,311	3,429
v_{av34}	1,259	1,277	1,352	801	829	895
v_{12a}	4,007	4,027	4,108	3,245	3,311	3,429
v_{12a}	4,007	4,027	4,108	3,245	3,311	3,429
Upstream Capacity (pc/h)	7,200	7,200	7,200	7,200	7,200	7,200
Upstream Volume-to-Capacity Ratio	0.91	0.91	0.95	0.67	0.69	0.72
Ramp Capacity (pc/h)	2,000	2,000	2,000	2,000	2,000	2,000
Ramp Volume-to-Capacity Ratio	0.40	0.39	0.35	0.42	0.43	0.42
D_R	37.4	37.5	38.2	30.8	31.4	32.4
LOS	E	E	E	D	D	D

US 50 Westbound Ramp Addition - Sunrise Boulevard						
Highway Capacity Manual 2010 Edition **Lane Addition - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	3	3	3	3	3	3
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	5,319	5,392	5,679	3,612	3,701	3,943
PHF	0.96	0.96	0.96	0.93	0.93	0.93
Entering Ramp Volume (vehicles)	2,183	2,186	2,192	1,656	1,685	1,686
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
S_{FR} - Ramp Free-flow Speed (mph)	55	55	55	55	55	55
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	7,502	7,578	7,871	5,268	5,385	5,630
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	5,664	5,741	6,048	3,967	4,064	4,330
v_R - Entering Ramp Volume (pc/h)	2,325	2,328	2,334	1,819	1,850	1,852
Downstream Freeway Volume (pc/h)	7,989	8,069	8,382	5,785	5,914	6,182
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.83	0.84	0.87	0.60	0.62	0.64
Ramp Capacity (pc/h)	2,200	2,200	2,200	2,200	2,200	2,200
Ramp Volume-to-Capacity Ratio	1.06	1.06	1.06	0.83	0.84	0.84
V/C_{MAX}	1.06	1.06	1.06	0.83	0.84	0.84
LOS	**F**	F	F	D	D	D

US 50 Westbound Ramp Addition - Sunrise Boulevard Loop Ramp								
Highway Capacity Manual 2010 Edition **Lane Addition - Level Terrain**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	3	3	3	3	3	3	3	3
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	4,197	4,590	4,418	4,576	3,957	3,663	4,275	4,399
PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Entering Ramp Volume (vehicles)	167	169	169	170	197	106	259	234
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
S_{FR} - Ramp Free-flow Speed (mph)	55	55	55	55	55	55	55	55
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	4,364	4,759	4,586	4,746	4,154	3,769	4,534	4,633
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	4,409	4,822	4,641	4,808	4,158	3,848	4,491	4,622
v_R - Entering Ramp Volume (pc/h)	175	177	177	179	207	111	272	246
Downstream Freeway Volume (pc/h)	4,584	4,999	4,819	4,986	4,365	3,959	4,763	4,867
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.48	0.52	0.50	0.52	0.45	0.41	0.50	0.51
Ramp Capacity (pc/h)	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200
Ramp Volume-to-Capacity Ratio	0.08	0.08	0.08	0.08	0.09	0.05	0.12	0.11
V/C_{MAX}	0.48	0.52	0.50	0.52	0.45	0.41	0.50	0.51
LOS	A	A	A	A	A	A	A	A

US 50 Westbound Ramp Addition - Sunrise Boulevard Slip Ramp								
Highway Capacity Manual 2010 Edition **Lane Addition - Level Terrain**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	4	4	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	5	5	5	5	5	5	5	5
Ramp Lanes	1	1	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	4,364	4,759	4,586	4,746	4,154	3,769	4,534	4,633
PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Entering Ramp Volume (vehicles)	2,334	2,345	2,323	2,354	1,673	1,746	1,524	1,613
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
S_{FR} - Ramp Free-flow Speed (mph)	55	55	55	55	55	55	55	55
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	6,697	7,103	6,909	7,100	5,828	5,515	6,058	6,245
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	4,584	4,999	4,819	4,986	4,365	3,959	4,763	4,867
v_R - Entering Ramp Volume (pc/h)	2,452	2,463	2,441	2,473	1,758	1,835	1,601	1,694
Downstream Freeway Volume (pc/h)	7,036	7,463	7,259	7,459	6,122	5,794	6,364	6,561
Downstream Capacity (pc/h)	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Downstream Volume-to-Capacity Ratio	0.59	0.62	0.60	0.62	0.51	0.48	0.53	0.55
Ramp Capacity (pc/h)	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200
Ramp Volume-to-Capacity Ratio	1.11	1.12	1.11	1.12	0.80	0.83	0.73	0.77
V/C_{MAX}	1.11	1.12	1.11	1.12	0.80	0.83	0.73	0.77
LOS	F	F	F	F	C	D	C	C

US 50 Westbound Diverge - Zinfandel Drive						
Highway Capacity Manual 2010 Edition **One-Lane Diverge - 8-Lane Freeway - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	7,502	7,540	7,846	4,762	4,902	5,134
PHF	0.96	0.96	0.96	0.93	0.93	0.93
Exiting Ramp Volume (vehicles)	1,034	1,060	1,088	608	764	759
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40
L_D - Deceleration Lane Length (ft)	175	175	175	175	175	175
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	6,468	6,480	6,758	4,154	4,138	4,375
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	7,975	8,015	8,341	5,224	5,377	5,632
v_R - Exiting Ramp Volume (pc/h)	1,099	1,127	1,157	667	838	833
Downstream Freeway Volume (pc/h)	6,876	6,889	7,185	4,557	4,540	4,800
P_{FD}	0.436	0.436	0.436	0.436	0.436	0.436
v_{12}	4,097	4,130	4,289	2,654	2,817	2,925
v_{av34}	1,939	1,943	2,026	1,285	1,280	1,353
v_{12a}	4,097	4,130	4,289	2,654	2,817	2,925
v_{12a}	4,097	4,130	4,289	2,654	2,817	2,925
Upstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600
Upstream Volume-to-Capacity Ratio	0.83	0.83	0.87	0.54	0.56	0.59
Ramp Capacity (pc/h)	2,000	2,000	2,000	2,000	2,000	2,000
Ramp Volume-to-Capacity Ratio	0.55	0.56	0.58	0.33	0.42	0.42
D_R	37.9	38.2	39.6	25.5	26.9	27.8
LOS	E	E	E	C	C	C

US 50 Westbound Diverge - Zinfandel Drive								
Highway Capacity Manual 2010 Edition **One-Lane Diverge - 8-Lane Freeway - Level Terrain**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	5	5	5	5	5	5	5	5
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	8,392	8,891	8,587	8,801	4,914	4,555	5,211	5,378
PHF	0.96	0.96	0.96	0.96	0.93	0.93	0.93	0.93
Exiting Ramp Volume (vehicles)	1,478	1,488	1,384	1,393	1,124	1,097	1,183	1,200
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40	40	40
L_D - Deceleration Lane Length (ft)	175	175	175	175	175	175	175	175
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	6,914	7,404	7,203	7,408	3,790	3,457	4,028	4,178
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	8,922	9,453	9,128	9,356	5,391	4,997	5,716	5,900
v_R - Exiting Ramp Volume (pc/h)	1,571	1,582	1,471	1,481	1,233	1,204	1,297	1,317
Downstream Freeway Volume (pc/h)	7,351	7,871	7,657	7,876	4,158	3,793	4,419	4,583
P_{FD}	0.436	0.436	0.436	0.436	0.436	0.436	0.436	0.436
v_{12}	4,776	5,013	4,810	4,914	3,046	2,858	3,224	3,315
v_{av34}	2,073	2,220	2,159	2,221	1,173	1,070	1,246	1,293
v_{12a}	4,776	5,013	4,810	4,914	3,046	2,858	3,224	3,315
v_{12a}	4,776	5,013	4,810	4,914	3,046	2,858	3,224	3,315
Upstream Capacity (pc/h)	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Upstream Volume-to-Capacity Ratio	0.74	0.79	0.76	0.78	0.45	0.42	0.48	0.49
Ramp Capacity (pc/h)	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Ramp Volume-to-Capacity Ratio	0.79	0.79	0.74	0.74	0.62	0.60	0.65	0.66
D_R	43.7	45.8	44.0	44.9	28.9	27.3	30.4	31.2
LOS	E	E	E	E	D	C	D	D

US 50 Westbound Ramp Addition - Zinfandel Boulevard Loop Ramp						
Highway Capacity Manual 2010 Edition **Lane Addition - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	5	5	5	5	5	5
Ramp Lanes	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	6,468	6,480	6,758	4,154	4,138	4,375
PHF	0.96	0.96	0.96	0.93	0.93	0.93
Entering Ramp Volume (vehicles)	585	599	532	1,197	1,194	1,118
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
S_{FR} - Ramp Free-flow Speed (mph)	25	25	25	25	25	25
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	7,053	7,079	7,291	5,351	5,332	5,493
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	6,876	6,889	7,185	4,557	4,540	4,800
v_R - Entering Ramp Volume (pc/h)	622	637	566	1,313	1,310	1,227
Downstream Freeway Volume (pc/h)	7,498	7,525	7,751	5,870	5,849	6,026
Downstream Capacity (pc/h)	12,000	12,000	12,000	12,000	12,000	12,000
Downstream Volume-to-Capacity Ratio	0.62	0.63	0.65	0.49	0.49	0.50
Ramp Capacity (pc/h)	1,900	1,900	1,900	1,900	1,900	1,900
Ramp Volume-to-Capacity Ratio	0.33	0.34	0.30	0.69	0.69	0.65
V/C_{MAX}	0.62	0.63	0.65	0.69	0.69	0.65
LOS	B	B	B	B	B	B

US 50 Westbound Ramp Addition - Zinfandel Boulevard Loop Ramp

Highway Capacity Manual
2010 Edition
Lane Addition - Level Terrain
Cumulative Conditions

Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	4	4	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	5	5	5	5	5	5	5	5
Ramp Lanes	1	1	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	6,914	7,404	7,203	7,408	3,790	3,457	4,028	4,178
PHF	0.96	0.96	0.96	0.96	0.93	0.93	0.93	0.93
Entering Ramp Volume (vehicles)	780	689	909	803	1,314	1,178	1,443	1,295
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
S_{FR} - Ramp Free-flow Speed (mph)	25	25	25	25	25	25	25	25
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	7,694	8,092	8,111	8,211	5,104	4,636	5,471	5,473
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	7,351	7,871	7,657	7,876	4,158	3,793	4,419	4,583
v_R - Entering Ramp Volume (pc/h)	829	732	966	854	1,442	1,292	1,583	1,420
Downstream Freeway Volume (pc/h)	8,180	8,603	8,623	8,730	5,600	5,085	6,002	6,004
Downstream Capacity (pc/h)	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Downstream Volume-to-Capacity Ratio	0.68	0.72	0.72	0.73	0.47	0.42	0.50	0.50
Ramp Capacity (pc/h)	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900
Ramp Volume-to-Capacity Ratio	0.44	0.39	0.51	0.45	0.76	0.68	0.83	0.75
V/C_{MAX}	0.68	0.72	0.72	0.73	0.76	0.68	0.83	0.75
LOS	B	C	C	C	C	B	D	C

US 50 Westbound Merge - Zinfandel Drive Slip Ramp

Highway Capacity Manual
2010 Edition
One-Lane Merge - 10-Lane Freeway - Level Terrain

Existing Conditions

Input Data

Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	5	5	5	5	5	5
Existing Dnstrm Frwy Lanes	5	5	5	5	5	5
Ramp Lanes	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	7,053	7,079	7,291	5,351	5,332	5,493
PHF	0.96	0.96	0.96	0.93	0.93	0.93
Entering Ramp Volume (vehicles)	442	437	410	561	533	550
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	850	850	850	850	850	850
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	7,495	7,515	7,701	5,912	5,865	6,044
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	7,498	7,525	7,751	5,870	5,849	6,026
v_5 - Upstream Freeway Lane 5 Volume (pc/h)	2,024	2,145	2,209	1,409	1,404	1,446
v_R - Entering Ramp Volume (pc/h)	470	464	436	615	585	604
Downstream Freeway Volume (pc/h)	7,968	7,989	8,187	6,486	6,435	6,630
v_F / S_{FR}	137	135	139	112	111	114
P_{FM}	0.159	0.160	0.163	0.141	0.145	0.142
v_{12}	871	860	905	628	643	652
v_{av34}	2,301	2,260	2,319	1,916	1,901	1,964
v_{12a}	871	860	905	628	643	652
v_{12a}	2,189	2,152	2,217	1,785	1,778	1,832
v_{R12}	2,659	2,616	2,653	2,400	2,363	2,436
Downstream Capacity (pc/h)	12,000	12,000	12,000	12,000	12,000	12,000
Downstream Volume-to-Capacity Ratio	0.66	0.67	0.68	0.54	0.54	0.55
Ramp Capacity (pc/h)	2,000	2,000	2,000	2,000	2,000	2,000
Ramp Volume-to-Capacity Ratio	0.23	0.23	0.22	0.31	0.29	0.30
D_R	20.7	20.3	20.6	18.6	18.3	18.9
LOS	C	C	C	B	B	B

US 50 Westbound Merge - Zinfandel Drive Slip Ramp

Highway Capacity Manual
2010 Edition

One-Lane Merge - 10-Lane Freeway - Level Terrain

Cumulative Conditions

Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	5	5	5	5	5	5	5	5
Existing Dnstrm Frwy Lanes	5	5	5	5	5	5	5	5
Ramp Lanes	1	1	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	7,694	8,092	8,111	8,211	5,104	4,636	5,471	5,473
PHF	0.96	0.96	0.96	0.96	0.93	0.93	0.93	0.93
Entering Ramp Volume (vehicles)	1,349	1,219	1,544	1,349	723	708	663	663
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	850	850	850	850	850	850	850	850
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	9,044	9,312	9,655	9,561	5,828	5,343	6,135	6,136
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	8,180	8,603	8,623	8,730	5,600	5,085	6,002	6,004
v_5 - Upstream Freeway Lane 5 Volume (pc/h)	2,331	2,500	2,500	2,500	1,344	1,119	1,441	1,441
v_R - Entering Ramp Volume (pc/h)	1,434	1,296	1,641	1,434	794	777	727	727
Downstream Freeway Volume (pc/h)	9,614	9,899	10,264	10,164	6,393	5,862	6,730	6,731
v_F / S_{FR}	146	153	153	156	106	99	114	114
P_{FM}	0.038	0.056	0.013	0.039	0.119	0.121	0.127	0.127
v_{12}	225	340	78	240	505	479	579	579
v_{av34}	2,812	2,881	3,023	2,995	1,875	1,744	1,992	1,992
v_{12a}	449	703	723	830	505	479	579	579
v_{12a}	2,339	2,441	2,449	2,492	1,702	1,587	1,825	1,825
v_{R12}	3,774	3,737	4,090	3,926	2,496	2,363	2,552	2,553
Downstream Capacity (pc/h)	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Downstream Volume-to-Capacity Ratio	0.80	0.82	0.86	0.85	0.53	0.49	0.56	0.56
Ramp Capacity (pc/h)	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Ramp Volume-to-Capacity Ratio	0.72	0.65	0.82	0.72	0.40	0.39	0.36	0.36
D_R	28.9	28.7	31.3	30.1	19.2	18.2	19.7	19.7
LOS	D	D	D	D	B	B	B	B

US 50 Westbound Ramp Drop - Mather Field Road						
Highway Capacity Manual 2010 Edition **Lane drop - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	5	5	5	5	5	5
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	7,548	7,551	7,829	5,765	5,710	5,928
PHF	0.96	0.96	0.96	0.95	0.95	0.95
Exiting Ramp Volume (vehicles)	1,093	1,110	1,496	556	575	740
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	6,455	6,441	6,333	5,209	5,135	5,188
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	8,004	8,007	8,302	6,195	6,136	6,370
v_R - Exiting Ramp Volume (pc/h)	1,159	1,177	1,586	597	618	795
Downstream Freeway Volume (pc/h)	6,845	6,830	6,716	5,598	5,518	5,575
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.71	0.71	0.70	0.58	0.57	0.58
Ramp Capacity (pc/h)	2,000	2,000	2,000	2,000	2,000	2,000
Ramp Volume-to-Capacity Ratio	0.58	0.59	0.79	0.30	0.31	0.40
V/C_{MAX}	0.71	0.71	0.79	0.58	0.57	0.58
LOS	C	C	C	A	A	A

US 50 Westbound Ramp Drop - Mather Field Road								
Highway Capacity Manual 2010 Edition **Lane drop - Level Terrain**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	5	5	5	5	5	5	5	5
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	8,942	9,330	9,480	9,493	7,154	6,703	7,384	7,454
PHF	0.96	0.96	0.96	0.96	0.95	0.95	0.95	0.95
Exiting Ramp Volume (vehicles)	1,372	1,768	1,350	1,581	809	848	826	1,025
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	7,570	7,561	8,131	7,912	6,345	5,855	6,558	6,430
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	9,482	9,894	10,053	10,067	7,688	7,202	7,935	8,010
v_R - Exiting Ramp Volume (pc/h)	1,455	1,875	1,431	1,677	870	911	887	1,101
Downstream Freeway Volume (pc/h)	8,027	8,018	8,622	8,390	6,818	6,291	7,047	6,909
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.84	0.84	0.90	0.87	0.71	0.66	0.73	0.72
Ramp Capacity (pc/h)	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Ramp Volume-to-Capacity Ratio	0.73	0.94	0.72	0.84	0.43	0.46	0.44	0.55
V/C_{MAX}	0.84	0.94	0.90	0.87	0.71	0.66	0.73	0.72
LOS	D	E	D	D	C	B	C	C

US 50 Westbound Merge - Mather Field Road Loop Ramp						
Highway Capacity Manual 2010 Edition **One-Lane Merge - 8-Lane Freeway - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	6,455	6,441	6,333	5,209	5,135	5,188
PHF	0.96	0.96	0.96	0.95	0.95	0.95
Entering Ramp Volume (vehicles)	515	511	385	861	889	843
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	2,450	2,450	2,450	2,450	2,450	2,450
S_{FR} - Ramp Free-flow Speed (mph)	25	25	25	25	25	25
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	6,970	6,952	6,718	6,070	6,024	6,031
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	6,845	6,830	6,716	5,598	5,518	5,575
v_R - Entering Ramp Volume (pc/h)	546	542	408	925	956	906
Downstream Freeway Volume (pc/h)	7,391	7,372	7,124	6,523	6,474	6,481
v_F / S_{FR}	274	273	269	224	221	223
P_{FM}	0.150	0.150	0.167	0.102	0.098	0.105
v_{12}	1,024	1,025	1,120	572	543	583
v_{av34}	2,911	2,903	2,798	2,513	2,488	2,496
v_{12a}	1,445	1,430	1,316	572	543	583
v_{12a}	2,738	2,732	2,686	2,239	2,207	2,230
v_{R12}	3,284	3,274	3,095	3,164	3,163	3,136
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.77	0.77	0.74	0.68	0.67	0.68
Ramp Capacity (pc/h)	1,900	1,900	1,900	1,900	1,900	1,900
Ramp Volume-to-Capacity Ratio	0.29	0.29	0.21	0.49	0.50	0.48
D_R	15.5	15.4	14.1	14.4	14.3	14.2
LOS	B	B	B	B	B	B

US 50 Westbound Merge - Mather Field Road Loop Ramp

Highway Capacity Manual
2010 Edition
One-Lane Merge - 8-Lane Freeway - Level Terrain

Cumulative Conditions

Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	4	4	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	7,570	7,561	8,131	7,912	6,345	5,855	6,558	6,430
PHF	0.96	0.96	0.96	0.96	0.95	0.95	0.95	0.95
Entering Ramp Volume (vehicles)	578	439	626	499	1,189	1,185	1,192	1,193
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	2,450	2,450	2,450	2,450	2,450	2,450	2,450	2,450
S_{FR} - Ramp Free-flow Speed (mph)	25	25	25	25	25	25	25	25
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	8,148	8,001	8,757	8,411	7,533	7,040	7,750	7,622
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	8,027	8,018	8,622	8,390	6,818	6,291	7,047	6,909
v_R - Entering Ramp Volume (pc/h)	613	466	664	529	1,277	1,273	1,281	1,282
Downstream Freeway Volume (pc/h)	8,640	8,484	9,286	8,920	8,095	7,565	8,328	8,191
v_F / S_{FR}	321	321	345	336	273	252	282	276
P_{FM}	0.141	0.160	0.135	0.152	0.058	0.059	0.058	0.058
v_{12}	1,133	1,280	1,162	1,272	396	369	407	398
v_{av34}	3,447	3,369	3,730	3,559	3,211	2,961	3,320	3,256
v_{12a}	2,627	2,618	3,222	2,990	1,418	891	1,647	1,509
v_{12a}	3,211	3,207	3,449	3,356	2,727	2,517	2,819	2,764
v_{R12}	3,824	3,673	4,113	3,885	4,005	3,790	4,100	4,045
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.90	0.88	0.97	0.93	0.84	0.79	0.87	0.85
Ramp Capacity (pc/h)	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900
Ramp Volume-to-Capacity Ratio	0.32	0.25	0.35	0.28	0.67	0.67	0.67	0.67
D_R	19.7	18.5	21.9	20.2	20.8	19.1	21.5	21.1
LOS	B	B	C	C	C	B	C	C

US 50 Westbound Merge - Mather Field Road Slip Ramp						
Highway Capacity Manual 2010 Edition **One-Lane Merge - 8-Lane Freeway - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	6,970	6,952	6,718	6,070	6,024	6,031
PHF	0.96	0.96	0.96	0.95	0.95	0.95
Entering Ramp Volume (vehicles)	387	390	519	380	370	363
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	2,500	2,500	2,500	2,500	2,500	2,500
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	7,357	7,342	7,237	6,450	6,394	6,394
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	7,391	7,372	7,124	6,523	6,474	6,481
v_R - Entering Ramp Volume (pc/h)	410	414	550	408	397	391
Downstream Freeway Volume (pc/h)	7,802	7,786	7,674	6,931	6,871	6,871
v_F / S_{FR}	185	184	178	163	162	162
P_{FM}	0.167	0.166	0.149	0.167	0.168	0.169
v_{12}	1,231	1,224	1,062	1,088	1,089	1,095
v_{av34}	3,080	3,074	3,031	2,718	2,693	2,693
v_{12a}	1,991	1,972	1,724	1,123	1,089	1,095
v_{12a}	2,956	2,949	2,850	2,609	2,589	2,592
v_{R12}	3,367	3,363	3,400	3,017	2,987	2,983
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.81	0.81	0.80	0.72	0.72	0.72
Ramp Capacity (pc/h)	2,000	2,000	2,000	2,000	2,000	2,000
Ramp Volume-to-Capacity Ratio	0.21	0.21	0.28	0.20	0.20	0.20
D_R	15.9	15.8	16.1	13.1	12.9	12.9
LOS	B	B	B	B	B	B

US 50 Westbound Ramp Addition - Mather Field Road Slip Ramp

Highway Capacity Manual
2010 Edition
Lane Addition - Level Terrain
Cumulative Conditions

Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	4	4	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	5	5	5	5	5	5	5	5
Ramp Lanes	1	1	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	8,148	8,001	8,757	8,411	7,533	7,040	7,750	7,622
PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Entering Ramp Volume (vehicles)	343	481	303	427	474	467	504	428
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	8,490	8,481	9,060	8,839	8,008	7,507	8,255	8,050
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	8,477	8,324	9,111	8,751	7,838	7,324	8,063	7,930
v_R - Entering Ramp Volume (pc/h)	356	500	315	445	494	486	525	445
Downstream Freeway Volume (pc/h)	8,833	8,824	9,426	9,196	8,331	7,810	8,588	8,375
Downstream Capacity (pc/h)	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Downstream Volume-to-Capacity Ratio	0.74	0.74	0.79	0.77	0.69	0.65	0.72	0.70
Ramp Capacity (pc/h)	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Ramp Volume-to-Capacity Ratio	0.18	0.25	0.16	0.22	0.25	0.24	0.26	0.22
V/C_{MAX}	0.74	0.74	0.79	0.77	0.69	0.65	0.72	0.70
LOS	C	C	C	C	B	B	C	B

US 50 Westbound Diverge - Bradshaw Road

Highway Capacity Manual
2010 Edition
Two-Lane Diverge - 8-Lane Freeway - Level Terrain

Existing Conditions

Input Data

Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4
Ramp Lanes	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	7,859	7,857	7,810	6,939	6,869	6,892
PHF	0.95	0.95	0.95	0.99	0.99	0.99
Exiting Ramp Volume (vehicles)	1,236	1,277	1,583	1,327	1,266	1,510
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_D - Deceleration Lane Length (ft)	1,765	1,765	1,765	1,765	1,765	1,765
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	6,623	6,581	6,227	5,612	5,603	5,383
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	8,407	8,405	8,355	7,146	7,075	7,098
v_R - Exiting Ramp Volume (pc/h)	1,322	1,366	1,694	1,367	1,304	1,555
Downstream Freeway Volume (pc/h)	7,085	7,040	6,661	5,780	5,771	5,544
P_{FD}	0.260	0.260	0.260	0.260	0.260	0.260
v_{12}	3,164	3,196	3,426	2,869	2,804	2,996
v_{av34}	2,622	2,605	2,465	2,138	2,135	2,051
v_{12a}	3,164	3,196	3,426	2,869	2,804	2,996
v_{12a}	3,363	3,362	3,426	2,869	2,830	2,996
Upstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600
Upstream Volume-to-Capacity Ratio	0.88	0.88	0.87	0.74	0.74	0.74
Ramp Capacity (pc/h)	4,000	4,000	4,000	4,000	4,000	4,000
Ramp Volume-to-Capacity Ratio	0.33	0.34	0.42	0.34	0.33	0.39
D_R	17.3	17.3	17.8	13.0	12.7	14.1
LOS	B	B	B	B	B	B

US 50 Westbound Diverge - Bradshaw Road

Highway Capacity Manual
2010 Edition
Two-Lane Diverge - 8-Lane Freeway - Level Terrain

Cumulative Conditions

Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	5	5	5	5	5	5	5	5
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4	4	4
Ramp Lanes	2	2	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	8,996	9,065	9,560	9,406	8,442	7,995	8,696	8,544
PHF	0.95	0.95	0.95	0.95	0.99	0.99	0.99	0.99
Exiting Ramp Volume (vehicles)	1,376	1,788	1,533	1,692	1,733	1,724	1,756	1,809
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L_D - Deceleration Lane Length (ft)	1,765	1,765	1,765	1,765	1,765	1,765	1,765	1,765
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	7,620	7,277	8,027	7,714	6,709	6,271	6,940	6,735
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	9,624	9,698	10,228	10,063	8,694	8,234	8,956	8,800
v_R - Exiting Ramp Volume (pc/h)	1,472	1,913	1,640	1,810	1,784	1,776	1,808	1,863
Downstream Freeway Volume (pc/h)	8,152	7,785	8,587	8,252	6,909	6,458	7,147	6,936
P_{FD}	0.260	0.260	0.260	0.260	0.260	0.260	0.260	0.260
v_{12}	3,591	3,937	3,873	3,956	3,581	3,455	3,667	3,667
v_{av34}	3,016	2,880	3,177	3,053	2,556	2,389	2,644	2,566
v_{12a}	4,224	4,298	4,828	4,663	3,581	3,455	3,667	3,667
v_{12a}	3,849	4,298	4,091	4,025	3,581	3,455	3,667	3,667
Upstream Capacity (pc/h)	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Upstream Volume-to-Capacity Ratio	0.80	0.81	0.85	0.84	0.72	0.69	0.75	0.73
Ramp Capacity (pc/h)	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Ramp Volume-to-Capacity Ratio	0.37	0.48	0.41	0.45	0.45	0.44	0.45	0.47
D_R	21.5	25.3	23.5	23.0	19.2	18.1	19.9	19.9
LOS	C	C	C	C	B	B	B	B

US 50 Westbound Merge - Bradshaw Road Loop Ramp						
Highway Capacity Manual 2010 Edition **One-Lane Merge - 8-Lane Freeway - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	6,623	6,581	6,227	5,612	5,603	5,383
PHF	0.95	0.95	0.95	0.99	0.99	0.99
Entering Ramp Volume (vehicles)	914	932	1,236	910	959	1,523
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	815	815	815	815	815	815
S_{FR} - Ramp Free-flow Speed (mph)	25	25	25	25	25	25
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	7,537	7,512	7,463	6,522	6,562	6,906
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	7,085	7,040	6,661	5,780	5,771	5,544
v_R - Entering Ramp Volume (pc/h)	978	997	1,322	937	987	1,569
Downstream Freeway Volume (pc/h)	8,063	8,036	7,983	6,717	6,758	7,112
v_F / S_{FR}	283	282	266	231	231	222
P_{FM}	0.096	0.093	0.053	0.101	0.094	0.022
v_{12}	677	656	350	582	545	120
v_{av34}	3,204	3,192	3,156	2,599	2,613	2,712
v_{12a}	1,685	1,640	1,261	582	545	144
v_{12a}	2,834	2,816	2,665	2,312	2,308	2,217
v_{R12}	3,812	3,812	3,987	3,249	3,295	3,786
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.84	0.84	0.83	0.70	0.70	0.74
Ramp Capacity (pc/h)	1,900	1,900	1,900	1,900	1,900	1,900
Ramp Volume-to-Capacity Ratio	0.51	0.52	0.70	0.49	0.52	0.83
D_R	29.6	29.6	30.9	25.3	25.6	29.2
LOS	D	D	D	C	C	D

US 50 Westbound Merge - Bradshaw Road Loop Ramp

Highway Capacity Manual
2010 Edition
One-Lane Merge - 8-Lane Freeway - Level Terrain

Cumulative Conditions

Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	4	4	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	7,620	7,277	8,027	7,714	6,709	6,271	6,940	6,735
PHF	0.95	0.95	0.95	0.95	0.99	0.99	0.99	0.99
Entering Ramp Volume (vehicles)	1,091	1,313	999	1,318	1,023	1,667	927	1,593
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	815	815	815	815	815	815	815	815
S_{FR} - Ramp Free-flow Speed (mph)	25	25	25	25	25	25	25	25
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	8,711	8,590	9,027	9,032	7,732	7,937	7,867	8,328
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	8,152	7,785	8,587	8,252	6,909	6,458	7,147	6,936
v_R - Entering Ramp Volume (pc/h)	1,167	1,404	1,069	1,410	1,053	1,717	955	1,641
Downstream Freeway Volume (pc/h)	9,318	9,189	9,657	9,662	7,963	8,175	8,102	8,577
v_F / S_{FR}	326	311	343	330	276	258	286	277
P_{FM}	0.072	0.042	0.084	0.042	0.086	0.003	0.098	0.013
v_{12}	587	329	723	343	595	21	704	88
v_{av34}	3,783	3,728	3,932	3,955	3,157	3,219	3,222	3,424
v_{12a}	2,752	2,385	3,187	2,852	1,509	1,058	1,747	1,536
v_{12a}	3,261	3,114	3,435	3,301	2,764	2,583	2,859	2,775
v_{R12}	4,427	4,518	4,504	4,711	3,817	4,300	3,813	4,415
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.97	0.96	1.01	1.01	0.83	0.85	0.84	0.89
Ramp Capacity (pc/h)	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900
Ramp Volume-to-Capacity Ratio	0.61	0.74	0.56	0.74	0.55	0.90	0.50	0.86
D_R	34.4	35.0	35.0	36.5	29.7	33.1	29.7	34.0
LOS	D	D	F	**F**	D	D	D	D

US 50 Westbound Merge - Bradshaw Road Slip Ramp						
Highway Capacity Manual 2010 Edition **One-Lane Merge - 8-Lane Freeway - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	7,537	7,512	7,463	6,522	6,562	6,906
PHF	0.95	0.95	0.95	0.99	0.99	0.99
Entering Ramp Volume (vehicles)	338	334	365	590	633	669
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	705	705	705	705	705	705
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	7,875	7,846	7,828	7,112	7,195	7,575
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	8,063	8,036	7,983	6,717	6,758	7,112
v_R - Entering Ramp Volume (pc/h)	362	357	390	608	652	689
Downstream Freeway Volume (pc/h)	8,425	8,394	8,374	7,324	7,410	7,801
v_F / S_{FR}	202	201	200	168	169	178
P_{FM}	0.173	0.173	0.169	0.142	0.136	0.132
v_{12}	1,392	1,391	1,349	953	921	937
v_{av34}	3,336	3,322	3,317	2,882	2,918	3,088
v_{12a}	2,663	2,636	2,583	1,317	1,358	1,712
v_{12a}	3,225	3,215	3,193	2,687	2,703	2,845
v_{R12}	3,587	3,572	3,584	3,294	3,355	3,534
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.88	0.87	0.87	0.76	0.77	0.81
Ramp Capacity (pc/h)	2,000	2,000	2,000	2,000	2,000	2,000
Ramp Volume-to-Capacity Ratio	0.18	0.18	0.20	0.30	0.33	0.34
D_R	28.9	28.7	28.8	26.5	26.9	28.3
LOS	D	D	D	C	C	D

US 50 Westbound Merge - Bradshaw Road Slip Ramp

Highway Capacity Manual
2010 Edition
One-Lane Merge - 8-Lane Freeway - Level Terrain

Cumulative Conditions

Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	4	4	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	8,711	8,590	9,027	9,032	7,732	7,937	7,867	8,328
PHF	0.95	0.95	0.95	0.95	0.99	0.99	0.99	0.99
Entering Ramp Volume (vehicles)	385	387	385	391	836	894	851	816
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	705	705	705	705	705	705	705	705
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	9,096	8,977	9,412	9,423	8,568	8,831	8,718	9,144
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	9,318	9,189	9,657	9,662	7,963	8,175	8,102	8,577
v_R - Entering Ramp Volume (pc/h)	412	414	412	418	861	921	876	840
Downstream Freeway Volume (pc/h)	9,731	9,603	10,069	10,081	8,824	9,095	8,978	9,417
v_F / S_{FR}	233	230	241	242	199	204	203	214
P_{FM}	0.166	0.166	0.166	0.165	0.110	0.103	0.108	0.113
v_{12}	1,550	1,526	1,606	1,599	877	840	877	967
v_{av34}	3,884	3,832	4,025	4,032	3,543	3,667	3,612	3,805
v_{12a}	3,918	3,789	4,257	4,262	2,563	2,775	2,702	3,177
v_{12a}	3,727	3,676	3,863	3,865	3,185	3,270	3,241	3,431
v_{R12}	4,139	4,090	4,275	4,283	4,046	4,190	4,117	4,271
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	1.01	1.00	1.05	1.05	0.92	0.95	0.94	0.98
Ramp Capacity (pc/h)	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Ramp Volume-to-Capacity Ratio	0.21	0.21	0.21	0.21	0.43	0.46	0.44	0.42
D_R	33.2	32.8	34.2	34.3	32.2	33.3	32.8	34.0
LOS	F	F	F	F	D	D	D	D

US 50 Westbound Diverge - Watt Avenue						
Highway Capacity Manual 2010 Edition **Major Diverge - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	5	5	5	5	5	5
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4
Ramp Lanes	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	7,550	7,522	7,424	6,466	6,556	6,913
PHF	0.90	0.90	0.90	0.96	0.96	0.96
Exiting Ramp Volume (vehicles)	1,373	1,357	1,257	1,188	1,209	1,181
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
S_{FR} - Ramp Free-flow Speed (mph)	55	55	55	55	55	55
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	6,177	6,164	6,167	5,278	5,348	5,732
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	8,537	8,504	8,394	6,884	6,980	7,359
v_R - Exiting Ramp Volume (pc/h)	1,552	1,535	1,421	1,265	1,287	1,257
Downstream Freeway Volume (pc/h)	6,984	6,970	6,973	5,619	5,693	6,102
Upstream Capacity (pc/h)	12,000	12,000	12,000	12,000	12,000	12,000
Upstream Volume-to-Capacity Ratio	0.71	0.71	0.70	0.57	0.58	0.61
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.73	0.73	0.73	0.59	0.59	0.64
Ramp Capacity (pc/h)	4,400	4,400	4,400	4,400	4,400	4,400
Ramp Volume-to-Capacity Ratio	0.35	0.35	0.32	0.29	0.29	0.29
D_R	29.9	29.8	29.4	24.1	24.4	25.8
LOS	D	D	D	C	C	C

US 50 Westbound Diverge - Watt Avenue

Highway Capacity Manual
2010 Edition
Major Diverge - Level Terrain
Cumulative Conditions

Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	5	5	5	5	5	5	5	5
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4	4	4
Ramp Lanes	2	2	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	8,662	8,415	9,001	8,854	7,703	7,847	7,871	8,099
PHF	0.90	0.90	0.90	0.90	0.96	0.96	0.96	0.96
Exiting Ramp Volume (vehicles)	1,577	1,381	1,568	1,364	1,167	1,054	1,112	991
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
S_{FR} - Ramp Free-flow Speed (mph)	55	55	55	55	55	55	55	55
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	7,085	7,034	7,433	7,490	6,537	6,794	6,758	7,108
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	9,794	9,515	10,178	10,011	8,201	8,354	8,379	8,622
v_R - Exiting Ramp Volume (pc/h)	1,783	1,562	1,773	1,542	1,242	1,122	1,184	1,055
Downstream Freeway Volume (pc/h)	8,011	7,953	8,404	8,469	6,959	7,232	7,195	7,568
Upstream Capacity (pc/h)	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Upstream Volume-to-Capacity Ratio	0.82	0.79	0.85	0.83	0.68	0.70	0.70	0.72
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.83	0.83	0.88	0.88	0.72	0.75	0.75	0.79
Ramp Capacity (pc/h)	4,400	4,400	4,400	4,400	4,400	4,400	4,400	4,400
Ramp Volume-to-Capacity Ratio	0.41	0.35	0.40	0.35	0.28	0.25	0.27	0.24
D_R	34.3	33.3	35.6	35.0	28.7	29.2	29.3	30.2
LOS	D	D	E	E	D	D	D	D

US 50 Westbound Merge - Northbound Watt Avenue						
Highway Capacity Manual 2010 Edition **One-Lane Merge - 8-Lane Freeway - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	6,177	6,164	6,167	5,278	5,348	5,732
PHF	0.90	0.90	0.90	0.96	0.96	0.96
Entering Ramp Volume (vehicles)	820	803	788	943	936	900
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	865	865	865	865	865	865
S_{FR} - Ramp Free-flow Speed (mph)	55	55	55	55	55	55
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	6,997	6,968	6,955	6,221	6,284	6,632
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	6,984	6,970	6,973	5,619	5,693	6,102
v_R - Entering Ramp Volume (pc/h)	927	908	891	1,004	996	958
Downstream Freeway Volume (pc/h)	7,911	7,878	7,864	6,623	6,690	7,060
v_F / S_{FR}	127	127	127	102	104	111
P_{FM}	0.102	0.104	0.106	0.092	0.093	0.098
v_{12}	712	727	742	519	531	598
v_{av34}	3,136	3,122	3,116	2,550	2,581	2,752
v_{12a}	1,584	1,570	1,573	519	531	702
v_{12a}	2,794	2,788	2,789	2,248	2,277	2,441
v_{R12}	3,721	3,696	3,680	3,251	3,274	3,399
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.82	0.82	0.82	0.69	0.70	0.74
Ramp Capacity (pc/h)	2,200	2,200	2,200	2,200	2,200	2,200
Ramp Volume-to-Capacity Ratio	0.42	0.41	0.41	0.46	0.45	0.44
D_R	28.6	28.5	28.3	25.0	25.1	26.1
LOS	D	D	D	C	C	C

US 50 Westbound Merge - Northbound Watt Avenue

Highway Capacity Manual
2010 Edition
One-Lane Merge - 8-Lane Freeway - Level Terrain

Cumulative Conditions

Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	4	4	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	7,085	7,034	7,433	7,490	6,537	6,794	6,758	7,108
PHF	0.90	0.90	0.90	0.90	0.96	0.96	0.96	0.96
Entering Ramp Volume (vehicles)	806	738	774	726	1,104	1,050	1,125	1,100
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	865	865	865	865	865	865	865	865
S_{FR} - Ramp Free-flow Speed (mph)	55	55	55	55	55	55	55	55
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	7,891	7,772	8,207	8,217	7,641	7,844	7,883	8,208
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	8,011	7,953	8,404	8,469	6,959	7,232	7,195	7,568
v_R - Entering Ramp Volume (pc/h)	912	834	875	821	1,176	1,118	1,197	1,171
Downstream Freeway Volume (pc/h)	8,923	8,787	9,279	9,290	8,134	8,351	8,392	8,738
v_F / S_{FR}	146	145	153	154	127	131	131	138
P_{FM}	0.104	0.114	0.108	0.115	0.071	0.078	0.068	0.071
v_{12}	832	903	911	976	493	564	490	541
v_{av34}	3,590	3,525	3,747	3,747	3,233	3,334	3,352	3,513
v_{12a}	2,611	2,553	3,004	3,069	1,559	1,832	1,795	2,168
v_{12a}	3,204	3,181	3,362	3,388	2,783	2,893	2,878	3,027
v_{R12}	4,116	4,015	4,237	4,209	3,959	4,011	4,075	4,198
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.93	0.92	0.97	0.97	0.85	0.87	0.87	0.91
Ramp Capacity (pc/h)	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200
Ramp Volume-to-Capacity Ratio	0.41	0.38	0.40	0.37	0.53	0.51	0.54	0.53
D_R	31.7	31.0	32.7	32.5	30.4	30.8	31.3	32.3
LOS	D	D	D	D	D	D	D	D

US 50 Westbound Weave - Watt Avenue to Howe Avenue

Highway Capacity Manual
2010 Edition
One-Sided Weave - Level Terrain

Existing Conditions

Input Data

Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4
Upstream Ramp Lanes	1	1	1	1	1	1
Downstream Ramp Lanes	2	2	2	2	2	2
N - Number of Lanes	5	5	5	5	5	5
N_{WL} - Number of Lanes in Weaving Section	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	6,997	6,968	6,955	6,221	6,284	6,632
PHF	0.90	0.90	0.90	0.96	0.96	0.96
Entering Ramp Volume (vehicles)	1,232	1,211	1,091	1,317	1,313	1,196
Exiting Ramp Volume (vehicles)	1,531	1,549	1,349	1,419	1,467	1,313
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_S - Weaving Length (ft)	5,485	5,485	5,485	5,485	5,485	5,485
ID (Interchange Density within 3 miles)	0.67	0.67	0.67	0.67	0.67	0.67
Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	6,698	6,630	6,697	6,119	6,130	6,514
c_{IFL}	2,400	2,400	2,400	2,400	2,400	2,400
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
Upstream Freeway Volume (pc/h)	7,911	7,878	7,864	6,623	6,690	7,060
Entering Ramp Volume (pc/h)	1,393	1,370	1,234	1,402	1,398	1,273
Exiting Ramp Volume (pc/h))	1,731	1,751	1,526	1,511	1,561	1,398
Downstream Freeway Volume (pc/h)	7,573	7,497	7,572	6,514	6,526	6,935
v_{FF}	6,439	6,387	6,545	5,376	5,398	5,876
v_{RF}	1,134	1,110	1,027	1,138	1,128	1,059
v_{FR}	1,472	1,492	1,319	1,247	1,291	1,184
v_{RR}	259	259	207	264	270	214
v_W	2,606	2,602	2,346	2,385	2,420	2,244
v_{NW}	6,699	6,646	6,752	5,640	5,668	6,089
v	9,304	9,248	9,098	8,025	8,088	8,333
VR	0.280	0.281	0.258	0.297	0.299	0.269
LC_{RF}	1	1	1	1	1	1
LC_{FR}	0	0	0	0	0	0
LC_{MIN}	1,134	1,110	1,027	1,138	1,128	1,059
L_{MAX}	5,371	5,385	5,136	5,554	5,575	5,257
Weaving Operations?	NO	NO	NO	YES	YES	NO
Capacity Controlled by Density (pc/h)				11,974	11,966	
Capacity Controllled by Maximum Weaving Flow Rate (pc/h)				8,076	8,022	
Capacity (pc/h)				8,076	8,022	
Volume-to-Capacity Ratio				0.99	1.01	
LC_W				2,195	2,185	
I_{NW}				2,062	2,073	
LC_{NW1}				3,172	3,177	
LC_{NW2}				2,947	2,953	
LC_{NW3}				2,908	2,911	
LC_{NW}				2,947	2,953	
LC_{ALL}				5,141	5,138	
W - Weaving Intensity				0.215	0.215	
S_W				60.3	60.3	
S_{NW}				54.1	54.1	
S				55.8	55.8	
D				28.8	29.0	
LOS				D	F	

US 50 Westbound Weave - Watt Avenue to Howe Avenue								
Highway Capacity Manual 2010 Edition **One-Sided Weave - Level Terrain**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus PROJECT	CEQA Cumulative	CEQA Cumulative Plus PROJECT	MTP Cumulative	MTP Cumulative Plus PROJECT	CEQA Cumulative	CEQA Cumulative Plus PROJECT
Existing Upstrm Frwy Lanes	4	4	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4	4	4
Upstream Ramp Lanes	1	1	1	1	1	1	1	1
Downstream Ramp Lanes	2	2	2	2	2	2	2	2
N - Number of Lanes	5	5	5	5	5	5	5	5
N_{WL} - Number of Lanes in Weaving Section	2	2	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	7,891	7,772	8,207	8,217	7,641	7,844	7,883	8,208
PHF	0.90	0.90	0.90	0.90	0.96	0.96	0.96	0.96
Entering Ramp Volume (vehicles)	1,224	845	1,134	919	1,201	1,098	1,062	1,006
Exiting Ramp Volume (vehicles)	1,806	1,520	1,879	1,709	1,677	1,694	1,687	1,695
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L_S - Weaving Length (ft)	5,485	5,485	5,485	5,485	5,485	5,485	5,485	5,485
ID (Interchange Density within 3 miles)	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	7,310	7,097	7,462	7,426	7,166	7,247	7,258	7,520
c_{IFL}	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Upstream Freeway Volume (pc/h)	8,923	8,787	9,279	9,290	8,134	8,351	8,392	8,738
Entering Ramp Volume (pc/h)	1,384	956	1,282	1,039	1,279	1,169	1,131	1,071
Exiting Ramp Volume (pc/h))	2,042	1,718	2,125	1,933	1,785	1,804	1,796	1,804
Downstream Freeway Volume (pc/h)	8,265	8,025	8,437	8,397	7,628	7,716	7,727	8,005
v_{FF}	7,155	7,237	7,413	7,552	6,592	6,768	6,809	7,131
v_{RF}	1,110	787	1,024	845	1,036	947	918	874
v_{FR}	1,767	1,550	1,867	1,738	1,542	1,582	1,583	1,607
v_{RR}	274	169	258	194	243	222	213	197
v_W	2,877	2,337	2,891	2,583	2,579	2,530	2,501	2,481
v_{NW}	7,429	7,406	7,671	7,746	6,835	6,990	7,023	7,328
v	10,307	9,743	10,561	10,329	9,413	9,519	9,523	9,810
VR	0.279	0.240	0.274	0.250	0.274	0.266	0.263	0.253
LC_{RF}	1	1	1	1	1	1	1	1
LC_{FR}	0	0	0	0	0	0	0	0
LC_{MIN}	1,110	787	1,024	845	1,036	947	918	874
L_{MAX}	5,362	4,948	5,303	5,054	5,306	5,219	5,186	5,085
Weaving Operations?	NO	NO	NO	NO	NO	NO	NO	NO
Capacity Controlled by Density (pc/h)								
Capacity Controllled by Maximum Weaving Flow Rate (pc/h)								
Capacity (pc/h)								
Volume-to-Capacity Ratio								
LC_W								
I_{NW}								
LC_{NW1}								
LC_{NW2}								
LC_{NW3}								
LC_{NW}								
LC_{ALL}								
W - Weaving Intensity								
S_W								
S_{NW}								
S								
D								
LOS								

US 50 Westbound Ramp Addition - Southbound Watt Avenue						
Highway Capacity Manual 2010 Edition **Lane Addition - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	5	5	5	5	5	5
Ramp Lanes	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	6,997	6,968	6,955	6,221	6,284	6,632
PHF	0.90	0.90	0.90	0.96	0.96	0.96
Entering Ramp Volume (vehicles)	1,232	1,211	1,091	1,317	1,313	1,196
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
S_{FR} - Ramp Free-flow Speed (mph)	25	25	25	25	25	25
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	8,229	8,179	8,047			7,827
f_{HV}	0.98	0.98	0.98			0.98
v_F - Upstream Freeway Volume (pc/h)	7,911	7,878	7,864			7,060
v_R - Entering Ramp Volume (pc/h)	1,393	1,370	1,234			1,273
Downstream Freeway Volume (pc/h)	9,304	9,248	9,098			8,333
Downstream Capacity (pc/h)	12,000	12,000	12,000			12,000
Downstream Volume-to-Capacity Ratio	0.78	0.77	0.76			0.69
Ramp Capacity (pc/h)	1,900	1,900	1,900			1,900
Ramp Volume-to-Capacity Ratio	0.73	0.72	0.65			0.67
V/C_{MAX}	0.78	0.77	0.76			0.69
LOS	C	C	C			B

US 50 Westbound Ramp Addition - Southbound Watt Avenue								
Highway Capacity Manual 2010 Edition **Lane Addition - Level Terrain**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	4	4	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	5	5	5	5	5	5	5	5
Ramp Lanes	1	1	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	7,891	7,772	8,207	8,217	7,641	7,844	7,883	8,208
PHF	0.90	0.90	0.90	0.90	0.96	0.96	0.96	0.96
Entering Ramp Volume (vehicles)	1,224	845	1,134	919	1,201	1,098	1,062	1,006
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
S_{FR} - Ramp Free-flow Speed (mph)	25	25	25	25	25	25	25	25
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	9,116	8,617	9,341	9,136	8,842	8,942	8,946	9,214
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	8,923	8,787	9,279	9,290	8,134	8,351	8,392	8,738
v_R - Entering Ramp Volume (pc/h)	1,384	956	1,282	1,039	1,279	1,169	1,131	1,071
Downstream Freeway Volume (pc/h)	10,307	9,743	10,561	10,329	9,413	9,519	9,523	9,810
Downstream Capacity (pc/h)	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Downstream Volume-to-Capacity Ratio	0.86	0.81	0.88	0.86	0.78	0.79	0.79	0.82
Ramp Capacity (pc/h)	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900
Ramp Volume-to-Capacity Ratio	0.73	0.50	0.67	0.55	0.67	0.62	0.60	0.56
V/C_{MAX}	0.86	0.81	0.88	0.86	0.78	0.79	0.79	0.82
LOS	D	D	D	D	C	C	C	D

US 50 Westbound Diverge - Howe Avenue						
Highway Capacity Manual 2010 Edition **Major Diverge - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	5	5	5	5	5	5
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4
Ramp Lanes	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	8,229	8,179	8,047	7,538	7,597	7,827
PHF	0.90	0.90	0.90	0.96	0.96	0.96
Exiting Ramp Volume (vehicles)	1,531	1,549	1,349	1,419	1,467	1,313
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
S_{FR} - Ramp Free-flow Speed (mph)	55	55	55	55	55	55
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	6,698	6,630	6,697			6,514
f_{HV}	0.98	0.98	0.98			0.98
v_F - Upstream Freeway Volume (pc/h)	9,304	9,248	9,098			8,333
v_R - Exiting Ramp Volume (pc/h)	1,731	1,751	1,526			1,398
Downstream Freeway Volume (pc/h)	7,573	7,497	7,572			6,935
Upstream Capacity (pc/h)	12,000	12,000	12,000			12,000
Upstream Volume-to-Capacity Ratio	0.78	0.77	0.76			0.69
Downstream Capacity (pc/h)	9,600	9,600	9,600			9,600
Downstream Volume-to-Capacity Ratio	0.79	0.78	0.79			0.72
Ramp Capacity (pc/h)	4,400	4,400	4,400			4,400
Ramp Volume-to-Capacity Ratio	0.39	0.40	0.35			0.32
D_R	32.6	32.4	31.8			29.2
LOS	D	D	D			D

US 50 Westbound Diverge - Howe Avenue

Highway Capacity Manual
2010 Edition
Major Diverge - Level Terrain
Cumulative Conditions

Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	5	5	5	5	5	5	5	5
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4	4	4
Ramp Lanes	2	2	2	2	2	2	2	2
Upstream Freeway Volume (vehicles)	9,116	8,617	9,341	9,136	8,842	8,942	8,946	9,214
PHF	0.90	0.90	0.90	0.90	0.96	0.96	0.96	0.96
Exiting Ramp Volume (vehicles)	1,806	1,520	1,879	1,709	1,677	1,694	1,687	1,695
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
S_{FR} - Ramp Free-flow Speed (mph)	55	55	55	55	55	55	55	55
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	7,310	7,097	7,462	7,426	7,166	7,247	7,258	7,520
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	10,307	9,743	10,561	10,329	9,413	9,519	9,523	9,810
v_R - Exiting Ramp Volume (pc/h)	2,042	1,718	2,125	1,933	1,785	1,804	1,796	1,804
Downstream Freeway Volume (pc/h)	8,265	8,025	8,437	8,397	7,628	7,716	7,727	8,005
Upstream Capacity (pc/h)	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Upstream Volume-to-Capacity Ratio	0.86	0.81	0.88	0.86	0.78	0.79	0.79	0.82
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.86	0.84	0.88	0.87	0.79	0.80	0.80	0.83
Ramp Capacity (pc/h)	4,400	4,400	4,400	4,400	4,400	4,400	4,400	4,400
Ramp Volume-to-Capacity Ratio	0.46	0.39	0.48	0.44	0.41	0.41	0.41	0.41
D_R	36.1	34.1	37.0	36.2	32.9	33.3	33.3	34.3
LOS	E	D	E	E	D	D	D	D

US 50 Westbound Merge - Howe Avenue Loop Ramp						
Highway Capacity Manual 2010 Edition **One-Lane Merge - 8-Lane Freeway - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	6,698	6,630	6,697	6,119	6,130	6,514
PHF	0.90	0.90	0.90	0.96	0.96	0.96
Entering Ramp Volume (vehicles)	654	665	689	602	621	647
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	850	850	850	850	850	850
S_{FR} - Ramp Free-flow Speed (mph)	25	25	25	25	25	25
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	7,352	7,295	7,386	6,721	6,751	7,161
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	7,573	7,497	7,572	6,514	6,526	6,935
v_R - Entering Ramp Volume (pc/h)	739	752	779	641	661	689
Downstream Freeway Volume (pc/h)	8,313	8,249	8,351	7,155	7,187	7,624
v_F / S_{FR}	303	300	303	261	261	277
P_{FM}	0.125	0.124	0.120	0.138	0.135	0.132
v_{12}	949	928	912	897	882	913
v_{av34}	3,312	3,284	3,330	2,809	2,822	3,011
v_{12a}	2,173	2,097	2,172	1,114	1,126	1,535
v_{12a}	3,029	2,999	3,029	2,606	2,610	2,774
v_{R12}	3,769	3,751	3,808	3,247	3,271	3,463
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.87	0.86	0.87	0.75	0.75	0.79
Ramp Capacity (pc/h)	1,900	1,900	1,900	1,900	1,900	1,900
Ramp Volume-to-Capacity Ratio	0.39	0.40	0.41	0.34	0.35	0.36
D_R	29.2	29.1	29.5	25.2	25.4	26.8
LOS	D	D	D	C	C	C

US 50 Westbound Merge - Howe Avenue Loop Ramp

Highway Capacity Manual
2010 Edition
One-Lane Merge - 8-Lane Freeway - Level Terrain

Cumulative Conditions

Input Data

Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	4	4	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	7,310	7,097	7,462	7,426	7,166	7,247	7,258	7,520
PHF	0.90	0.90	0.90	0.90	0.96	0.96	0.96	0.96
Entering Ramp Volume (vehicles)	582	668	613	607	503	519	572	563
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	850	850	850	850	850	850	850	850
S_{FR} - Ramp Free-flow Speed (mph)	25	25	25	25	25	25	25	25
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	7,892	7,765	8,074	8,033	7,669	7,767	7,830	8,082
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	8,265	8,025	8,437	8,397	7,628	7,716	7,727	8,005
v_R - Entering Ramp Volume (pc/h)	658	755	693	686	535	553	609	599
Downstream Freeway Volume (pc/h)	8,923	8,780	9,129	9,083	8,164	8,268	8,336	8,604
v_F / S_{FR}	331	321	337	336	305	309	309	320
P_{FM}	0.136	0.123	0.131	0.132	0.151	0.149	0.142	0.143
v_{12}	1,121	990	1,107	1,109	1,151	1,148	1,095	1,144
v_{av34}	3,572	3,517	3,665	3,644	3,239	3,284	3,316	3,431
v_{12a}	2,865	2,625	3,037	2,997	2,228	2,316	2,327	2,605
v_{12a}	3,306	3,210	3,375	3,359	3,051	3,086	3,091	3,202
v_{R12}	3,964	3,965	4,067	4,045	3,587	3,639	3,700	3,801
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.93	0.91	0.95	0.95	0.85	0.86	0.87	0.90
Ramp Capacity (pc/h)	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900
Ramp Volume-to-Capacity Ratio	0.35	0.40	0.36	0.36	0.28	0.29	0.32	0.32
D_R	30.8	30.7	31.6	31.4	27.9	28.3	28.7	29.5
LOS	D	D	D	D	C	D	D	D

US 50 Westbound Merge - Howe Avenue Loop Ramp						
Highway Capacity Manual 2010 Edition **One-Lane Merge - 8-Lane Freeway - Level Terrain**						
Existing Conditions						
Input Data						
Peak Hour:	A.M. Peak Hour			P.M. Peak Hour		
Alternative:	Existing	Existing Plus Jackson Township	Existing Plus PROJECT	Existing	Existing Plus Jackson Township	Existing Plus PROJECT
Existing Upstrm Frwy Lanes	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	7,352	7,295	7,386	6,721	6,751	7,161
PHF	0.90	0.90	0.90	0.96	0.96	0.96
Entering Ramp Volume (vehicles)	574	575	688	574	569	484
Truck Percentage	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	1,850	1,850	1,850	1,850	1,850	1,850
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70
Calculations						
Downstream Freeway Volume (vehicles)	7,926	7,871	8,074	7,295	7,320	7,645
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	8,313	8,249	8,351	7,155	7,187	7,624
v_R - Entering Ramp Volume (pc/h)	649	650	778	611	605	515
Downstream Freeway Volume (pc/h)	8,962	8,899	9,129	7,766	7,792	8,139
v_F / S_{FR}	208	206	209	179	180	191
P_{FM}	0.137	0.137	0.121	0.141	0.142	0.153
v_{12}	1,136	1,126	1,007	1,012	1,021	1,170
v_{av34}	3,588	3,561	3,672	3,072	3,083	3,227
v_{12a}	2,913	2,849	2,951	1,755	1,787	2,224
v_{12a}	3,325	3,300	3,340	2,862	2,875	3,049
v_{R12}	3,974	3,950	4,119	3,473	3,480	3,565
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	0.93	0.93	0.95	0.81	0.81	0.85
Ramp Capacity (pc/h)	2,000	2,000	2,000	2,000	2,000	2,000
Ramp Volume-to-Capacity Ratio	0.32	0.33	0.39	0.31	0.30	0.26
D_R	24.6	24.4	25.6	20.7	20.7	21.4
LOS	C	C	C	C	C	C

US 50 Westbound Merge - Howe Avenue Loop Ramp								
Highway Capacity Manual 2010 Edition **One-Lane Merge - 8-Lane Freeway - Level Terrain**								
Cumulative Conditions								
Input Data								
Peak Hour:	A.M. Peak Hour				P.M. Peak Hour			
Alternative:	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS	MTP Cumulative	MTP Cumulative Plus FOUR PROJECTS	CEQA Cumulative	CEQA Cumulative Plus FOUR PROJECTS
Existing Upstrm Frwy Lanes	4	4	4	4	4	4	4	4
Existing Dnstrm Frwy Lanes	4	4	4	4	4	4	4	4
Ramp Lanes	1	1	1	1	1	1	1	1
Upstream Freeway Volume (vehicles)	7,892	7,765	8,074	8,033	7,669	7,767	7,830	8,082
PHF	0.90	0.90	0.90	0.90	0.96	0.96	0.96	0.96
Entering Ramp Volume (vehicles)	732	781	668	807	763	689	699	646
Truck Percentage	4%	4%	4%	4%	4%	4%	4%	4%
RV Percentage	0%	0%	0%	0%	0%	0%	0%	0%
Driver Population Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L_A - Acceleration Lane Length (ft)	1,850	1,850	1,850	1,850	1,850	1,850	1,850	1,850
S_{FR} - Ramp Free-flow Speed (mph)	40	40	40	40	40	40	40	40
Freeway Free-flow Speed (mph)	70	70	70	70	70	70	70	70
Calculations								
Downstream Freeway Volume (vehicles)	8,623	8,546	8,742	8,839	8,431	8,456	8,529	8,729
f_{HV}	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
v_F - Upstream Freeway Volume (pc/h)	8,923	8,780	9,129	9,083	8,164	8,268	8,336	8,604
v_R - Entering Ramp Volume (pc/h)	827	883	755	912	812	734	744	688
Downstream Freeway Volume (pc/h)	9,750	9,663	9,884	9,995	8,976	9,002	9,080	9,293
v_F / S_{FR}	223	220	228	227	204	207	208	215
P_{FM}	0.114	0.107	0.123	0.104	0.116	0.126	0.125	0.132
v_{12}	1,021	944	1,127	943	950	1,042	1,041	1,134
v_{av34}	3,951	3,918	4,001	4,070	3,607	3,613	3,648	3,735
v_{12a}	3,523	3,380	3,729	3,683	2,764	2,868	2,936	3,204
v_{12a}	3,569	3,512	3,652	3,633	3,266	3,307	3,334	3,442
v_{R12}	4,396	4,395	4,407	4,545	4,077	4,041	4,078	4,130
Downstream Capacity (pc/h)	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Volume-to-Capacity Ratio	1.02	1.01	1.03	1.04	0.93	0.94	0.95	0.97
Ramp Capacity (pc/h)	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Ramp Volume-to-Capacity Ratio	0.41	0.44	0.38	0.46	0.41	0.37	0.37	0.34
D_R	27.8	27.7	27.9	28.9	25.3	25.1	25.3	25.8
LOS	F	F	F	**F**	C	C	C	C

Appendix E

CEQA Cumulative

(Jackson Township Proposed Project)

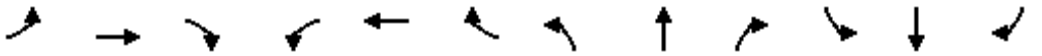
Synchro Reports

CEQA Cumulative

Plus All Projects

(Proposed Project)

AM

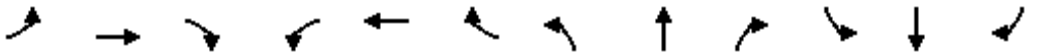


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	162	0	353	130	419	1195	0	1859	777	0	1868	502
Future Volume (vph)	162	0	353	130	419	1195	0	1859	777	0	1868	502
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00		0.88	0.86	0.81	0.91		0.91	1.00		0.86	1.00
Frt	1.00		0.85	1.00	0.91	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00	1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)	1752		2760	2985	2700	1413		4988	1553		6285	1553
Flt Permitted	0.95		1.00	0.95	1.00	1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)	1752		2760	2985	2700	1413		4988	1553		6285	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	162	0	353	130	419	1195	0	1859	777	0	1868	502
RTOR Reduction (vph)	0	0	308	0	45	45	0	0	0	0	0	179
Lane Group Flow (vph)	162	0	45	117	985	552	0	1859	777	0	1868	323
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot		Perm	Split	NA	Perm		NA	Free		NA	Perm
Protected Phases	4			8	8			2			6	
Permitted Phases			4			8			Free			6
Actuated Green, G (s)	13.8		13.8	40.0	40.0	40.0		42.0	107.8		42.0	42.0
Effective Green, g (s)	13.8		13.8	40.0	40.0	40.0		42.0	107.8		42.0	42.0
Actuated g/C Ratio	0.13		0.13	0.37	0.37	0.37		0.39	1.00		0.39	0.39
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0		4.0			4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	224		353	1107	1001	524		1943	1553		2448	605
v/s Ratio Prot	c0.09			0.04	0.36			c0.37			0.30	
v/s Ratio Perm			0.02			c0.39			0.50			0.21
v/c Ratio	0.72		0.13	0.11	1.11dr	1.05		0.96	0.50		0.76	0.53
Uniform Delay, d1	45.2		41.7	22.2	33.6	33.9		32.0	0.0		28.6	25.3
Progression Factor	1.00		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	11.0		0.2	0.0	24.5	54.3		11.8	1.2		1.5	0.9
Delay (s)	56.1		41.8	22.2	58.1	88.2		43.8	1.2		30.0	26.3
Level of Service	E		D	C	E	F		D	A		C	C
Approach Delay (s)		46.3			66.0			31.2			29.2	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	40.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	107.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	104.2%	ICU Level of Service	G
Analysis Period (min)	15		

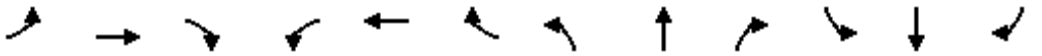
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group



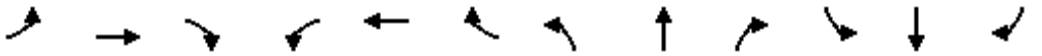
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	568	0	1678	0	0	0	0	2022	654	0	1215	662
Future Volume (vph)	568	0	1678	0	0	0	0	2022	654	0	1215	662
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	4.0		4.0	4.0
Lane Util. Factor	0.97		0.88					0.91	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3367		2733					4988	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3367		2733					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	568	0	1678	0	0	0	0	2022	654	0	1215	662
RTOR Reduction (vph)	0	0	13	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	568	0	1665	0	0	0	0	2022	654	0	1215	662
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	59.0		59.0					43.0	110.0		43.0	110.0
Effective Green, g (s)	59.0		59.0					43.0	110.0		43.0	110.0
Actuated g/C Ratio	0.54		0.54					0.39	1.00		0.39	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	1805		1465					1949	1553		1949	1553
v/s Ratio Prot								c0.41			0.24	
v/s Ratio Perm	0.17		c0.61						0.42			0.43
v/c Ratio	0.31		1.14					1.04	0.42		0.62	0.43
Uniform Delay, d1	14.2		25.5					33.5	0.0		27.0	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1		70.5					30.8	0.8		0.6	0.9
Delay (s)	14.3		96.0					64.3	0.8		27.6	0.9
Level of Service	B		F					E	A		C	A
Approach Delay (s)		75.3			0.0			48.8			18.2	
Approach LOS		E			A			D			B	

Intersection Summary			
HCM 2000 Control Delay	49.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	88.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



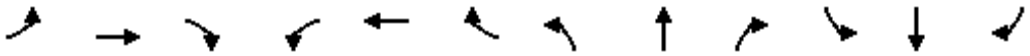
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	156	567	120	91	1052	907	674	1610	84	1209	1695	95
Future Volume (vph)	156	567	120	91	1052	907	674	1610	84	1209	1695	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		0.97	0.95	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	3380		3367	3471	2733	3367	4988	1553	3367	4988	1553
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	3380		3367	3471	2733	3367	4988	1553	3367	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	156	567	120	91	1052	907	674	1610	84	1209	1695	95
RTOR Reduction (vph)	0	14	0	0	0	635	0	0	59	0	0	58
Lane Group Flow (vph)	156	673	0	91	1052	272	674	1610	25	1209	1695	37
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	4.0	30.1		6.9	33.0	33.0	27.0	39.0	39.0	38.0	50.0	50.0
Effective Green, g (s)	4.0	30.1		6.9	33.0	33.0	27.0	39.0	39.0	38.0	50.0	50.0
Actuated g/C Ratio	0.03	0.23		0.05	0.25	0.25	0.21	0.30	0.30	0.29	0.38	0.38
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	103	782		178	881	693	699	1496	465	984	1918	597
v/s Ratio Prot	c0.05	0.20		0.03	c0.30		0.20	c0.32		c0.36	0.34	
v/s Ratio Perm						0.10			0.02			0.02
v/c Ratio	1.51	0.86		0.51	1.19	0.39	0.96	1.08	0.05	1.23	0.88	0.06
Uniform Delay, d1	63.0	47.9		59.9	48.5	40.2	51.0	45.5	32.4	46.0	37.3	25.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	274.9	9.6		2.5	98.5	0.4	25.3	46.8	0.0	111.9	5.2	0.0
Delay (s)	337.9	57.5		62.4	147.0	40.6	76.3	92.3	32.4	157.9	42.5	25.3
Level of Service	F	E		E	F	D	E	F	C	F	D	C
Approach Delay (s)		109.4			96.1			85.6			88.5	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	91.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	112.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	104	275	1259	5	556	27	1249	12	2	20	14	135
Future Volume (vph)	104	275	1259	5	556	27	1249	12	2	20	14	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.97	1.00
Satd. Flow (prot)	1736	3471	1553	1736	3471	1553	1618	1623	1524		1792	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.97	1.00
Satd. Flow (perm)	1736	3471	1553	1736	3471	1553	1618	1623	1524		1792	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	104	275	1259	5	556	27	1249	12	2	20	14	135
RTOR Reduction (vph)	0	0	297	0	0	21	0	0	1	0	0	123
Lane Group Flow (vph)	104	275	962	5	556	6	624	637	1	0	34	12
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4	2	3	8		2	2		6	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	5.0	23.1	55.1	0.8	18.9	18.9	32.0	32.0	32.0		7.0	7.0
Effective Green, g (s)	5.0	23.1	55.1	0.8	18.9	18.9	32.0	32.0	32.0		7.0	7.0
Actuated g/C Ratio	0.06	0.29	0.70	0.01	0.24	0.24	0.41	0.41	0.41		0.09	0.09
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	110	1016	1163	17	831	372	656	658	618		158	139
v/s Ratio Prot	c0.06	0.08	c0.34	0.00	0.16		0.39	c0.39			c0.02	
v/s Ratio Perm			0.28			0.00			0.00			0.01
v/c Ratio	0.95	0.27	0.83	0.29	0.67	0.02	0.95	0.97	0.00		0.22	0.09
Uniform Delay, d1	36.8	21.4	8.5	38.8	27.2	22.9	22.7	23.0	13.9		33.4	33.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	68.0	0.1	5.0	9.4	2.1	0.0	23.7	27.0	0.0		0.7	0.3
Delay (s)	104.8	21.6	13.5	48.2	29.2	22.9	46.4	49.9	13.9		34.1	33.3
Level of Service	F	C	B	D	C	C	D	D	B		C	C
Approach Delay (s)		20.6			29.1			48.1			33.4	
Approach LOS		C			C			D			C	

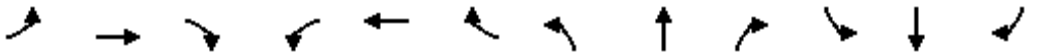
Intersection Summary			
HCM 2000 Control Delay	32.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	78.9	Sum of lost time (s)	20.0
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	190	81	377	325	72	294	171	380	112	184	34
Future Volume (vph)	26	190	81	377	325	72	294	171	380	112	184	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		0.95	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85		0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00		0.98	
Satd. Flow (prot)	1752	3505	1568	1752	3410		1665	1729	1568		3393	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00		0.98	
Satd. Flow (perm)	1752	3505	1568	1752	3410		1665	1729	1568		3393	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	26	190	81	377	325	72	294	171	380	112	184	34
RTOR Reduction (vph)	0	0	68	0	20	0	0	0	306	0	10	0
Lane Group Flow (vph)	26	190	13	377	377	0	229	236	74	0	320	0
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4						2			
Actuated Green, G (s)	1.8	12.0	12.0	20.0	30.2		14.6	14.6	14.6		12.1	
Effective Green, g (s)	1.8	12.0	12.0	20.0	30.2		14.6	14.6	14.6		12.1	
Actuated g/C Ratio	0.02	0.16	0.16	0.27	0.40		0.20	0.20	0.20		0.16	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	42	563	251	469	1378		325	337	306		549	
v/s Ratio Prot	0.01	c0.05		c0.22	0.11		c0.14	0.14			c0.09	
v/s Ratio Perm			0.01						0.05			
v/c Ratio	0.62	0.34	0.05	0.80	0.27		0.70	0.70	0.24		0.58	
Uniform Delay, d1	36.1	27.8	26.5	25.5	14.9		28.0	28.0	25.4		29.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	24.2	0.4	0.1	9.6	0.1		6.8	6.4	0.4		1.6	
Delay (s)	60.3	28.2	26.6	35.2	15.0		34.8	34.4	25.8		30.5	
Level of Service	E	C	C	D	B		C	C	C		C	
Approach Delay (s)		30.6			24.8			30.7			30.5	
Approach LOS		C			C			C			C	

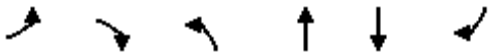
Intersection Summary			
HCM 2000 Control Delay	28.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	74.7	Sum of lost time (s)	20.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	2443	38	54	2492	8	433	42	218	7	16	55
Future Volume (vph)	14	2443	38	54	2492	8	433	42	218	7	16	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	6.4	6.4	3.5	6.4	6.4	4.4	4.4	4.4	3.5	3.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.88	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1703	3406	1524	1703	3406	1524	1752	1845	1568	1752	1630	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1703	3406	1524	1703	3406	1524	1752	1845	1568	1752	1630	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	14	2443	38	54	2492	8	433	42	218	7	16	55
RTOR Reduction (vph)	0	0	16	0	0	3	0	0	65	0	48	0
Lane Group Flow (vph)	14	2443	22	54	2492	5	433	42	153	7	23	0
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			
Actuated Green, G (s)	1.5	82.3	82.3	4.5	85.3	85.3	26.6	34.3	34.3	0.8	8.5	
Effective Green, g (s)	1.5	82.3	82.3	4.5	85.3	85.3	26.6	34.3	34.3	0.8	8.5	
Actuated g/C Ratio	0.01	0.59	0.59	0.03	0.61	0.61	0.19	0.25	0.25	0.01	0.06	
Clearance Time (s)	3.5	6.4	6.4	3.5	6.4	6.4	4.4	4.4	4.4	3.5	3.5	
Vehicle Extension (s)	2.4	4.5	4.5	2.4	4.5	4.5	2.4	2.8	2.8	2.4	2.8	
Lane Grp Cap (vph)	18	2006	897	54	2079	930	333	452	384	10	99	
v/s Ratio Prot	0.01	0.72		c0.03	c0.73		c0.25	0.02		0.00	0.01	
v/s Ratio Perm			0.01			0.00			c0.10			
v/c Ratio	0.78	1.22	0.02	1.00	1.20	0.01	1.30	0.09	0.40	0.70	0.23	
Uniform Delay, d1	68.9	28.7	12.0	67.6	27.2	10.6	56.5	40.7	44.1	69.3	62.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	103.9	102.8	0.0	122.5	94.3	0.0	155.5	0.1	0.6	109.2	1.1	
Delay (s)	172.9	131.5	12.0	190.1	121.5	10.6	212.0	40.8	44.7	178.5	63.6	
Level of Service	F	F	B	F	F	B	F	D	D	F	E	
Approach Delay (s)		129.9			122.6			149.0			73.9	
Approach LOS		F			F			F			E	

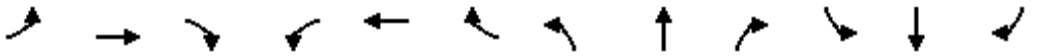
Intersection Summary			
HCM 2000 Control Delay	128.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	139.7	Sum of lost time (s)	17.8
Intersection Capacity Utilization	108.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	781	96	90	1699	1482	684
Future Volume (vph)	781	96	90	1699	1482	684
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	0.97	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3400	1568	3400	3505	3505	1568
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3400	1568	3400	3505	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	781	96	90	1699	1482	684
RTOR Reduction (vph)	0	68	0	0	0	354
Lane Group Flow (vph)	781	28	90	1699	1482	330
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	16.8	16.8	3.1	33.8	26.7	26.7
Effective Green, g (s)	16.8	16.8	3.1	33.8	26.7	26.7
Actuated g/C Ratio	0.29	0.29	0.05	0.58	0.46	0.46
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	974	449	179	2021	1596	714
v/s Ratio Prot	c0.23		0.03	c0.48	c0.42	
v/s Ratio Perm		0.02				0.21
v/c Ratio	0.80	0.06	0.50	0.84	0.93	0.46
Uniform Delay, d1	19.4	15.2	27.0	10.2	15.1	11.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.8	0.1	2.2	3.3	9.8	0.5
Delay (s)	24.2	15.2	29.2	13.5	24.8	11.5
Level of Service	C	B	C	B	C	B
Approach Delay (s)	23.2			14.3	20.6	
Approach LOS	C			B	C	

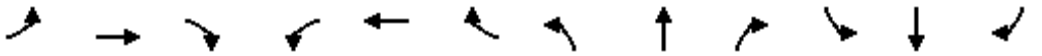
Intersection Summary			
HCM 2000 Control Delay	18.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	58.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



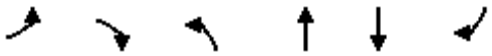
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	645	368	197	641	19	680	48	76	28	144	39
Future Volume (vph)	21	645	368	197	641	19	680	48	76	28	144	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	3.9	3.9	5.5	4.0	4.0	4.3	4.3		5.1	5.1	5.1
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.91		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1568	3400	3505	1568	3367	3152		1752	3505	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	3505	1568	3400	3505	1568	3367	3152		1752	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	21	645	368	197	641	19	680	48	76	28	144	39
RTOR Reduction (vph)	0	0	244	0	0	11	0	56	0	0	0	36
Lane Group Flow (vph)	21	645	124	197	641	8	680	68	0	28	144	3
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	3%	3%	3%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		8	8		4	4	
Permitted Phases			6			2						4
Actuated Green, G (s)	1.3	27.4	27.4	7.0	33.0	33.0	21.1	21.1		6.7	6.7	6.7
Effective Green, g (s)	1.3	27.4	27.4	7.0	33.0	33.0	21.1	21.1		6.7	6.7	6.7
Actuated g/C Ratio	0.02	0.34	0.34	0.09	0.41	0.41	0.26	0.26		0.08	0.08	0.08
Clearance Time (s)	5.5	3.9	3.9	5.5	4.0	4.0	4.3	4.3		5.1	5.1	5.1
Vehicle Extension (s)	1.0	4.9	4.9	1.0	4.1	4.1	2.0	2.0		1.0	1.0	1.0
Lane Grp Cap (vph)	28	1185	530	293	1427	638	877	821		144	289	129
v/s Ratio Prot	0.01	c0.18		c0.06	0.18		c0.20	0.02		0.02	c0.04	
v/s Ratio Perm			0.08			0.00						0.00
v/c Ratio	0.75	0.54	0.23	0.67	0.45	0.01	0.78	0.08		0.19	0.50	0.03
Uniform Delay, d1	39.7	21.7	19.3	35.9	17.4	14.3	27.8	22.6		34.6	35.5	34.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	65.7	0.9	0.5	4.7	0.3	0.0	4.0	0.0		0.2	0.5	0.0
Delay (s)	105.4	22.6	19.7	40.6	17.7	14.3	31.7	22.7		34.9	36.0	34.2
Level of Service	F	C	B	D	B	B	C	C		C	D	C
Approach Delay (s)		23.3			22.9			30.3			35.5	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	26.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	81.0	Sum of lost time (s)	22.9
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	674	0	1756	0	0	0	0	1890	1447	0	1480	252
Future Volume (vph)	674	0	1756	0	0	0	0	1890	1447	0	1480	252
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4		6.4					5.1	4.0		4.6	4.0
Lane Util. Factor	0.97		0.88					0.91	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3367		2733					4988	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3367		2733					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	674	0	1756	0	0	0	0	1890	1447	0	1480	252
RTOR Reduction (vph)	0	0	8	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	674	0	1748	0	0	0	0	1890	1447	0	1480	252
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	71.6		71.6					46.9	130.0		47.4	130.0
Effective Green, g (s)	71.6		71.6					46.9	130.0		47.4	130.0
Actuated g/C Ratio	0.55		0.55					0.36	1.00		0.36	1.00
Clearance Time (s)	6.4		6.4					5.1			4.6	
Vehicle Extension (s)	1.0		1.0					1.0			1.0	
Lane Grp Cap (vph)	1854		1505					1799	1553		1818	1553
v/s Ratio Prot								c0.38			0.30	
v/s Ratio Perm	0.20		c0.64						0.93			0.16
v/c Ratio	0.36		1.16					1.05	0.93		0.81	0.16
Uniform Delay, d1	16.4		29.2					41.5	0.0		37.3	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0		80.4					35.9	11.5		2.8	0.2
Delay (s)	16.4		109.6					77.5	11.5		40.1	0.2
Level of Service	B		F					E	B		D	A
Approach Delay (s)		83.8			0.0			48.9			34.3	
Approach LOS		F			A			D			C	

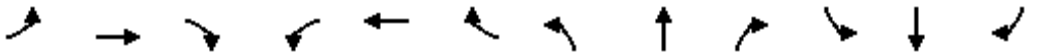
Intersection Summary			
HCM 2000 Control Delay	56.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	99.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1037	29	55	945	335	1033
Future Volume (vph)	1037	29	55	945	335	1033
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1752	1568	1752	1845	3505	1568
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1752	1568	1752	1845	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1037	29	55	945	335	1033
RTOR Reduction (vph)	0	9	0	0	0	638
Lane Group Flow (vph)	1037	20	55	945	335	395
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	64.0	64.0	5.0	58.0	49.0	49.0
Effective Green, g (s)	64.0	64.0	5.0	58.0	49.0	49.0
Actuated g/C Ratio	0.49	0.49	0.04	0.45	0.38	0.38
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	862	771	67	823	1321	591
v/s Ratio Prot	c0.59		0.03	c0.51	0.10	
v/s Ratio Perm		0.01				0.25
v/c Ratio	1.20	0.03	0.82	1.15	0.25	0.67
Uniform Delay, d1	33.0	17.0	62.1	36.0	27.9	33.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	102.4	0.0	52.9	80.7	0.1	2.9
Delay (s)	135.4	17.0	115.0	116.7	28.0	36.6
Level of Service	F	B	F	F	C	D
Approach Delay (s)	132.2			116.6	34.5	
Approach LOS	F			F	C	

Intersection Summary			
HCM 2000 Control Delay	88.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	113.9%	ICU Level of Service	H
Analysis Period (min)	15		

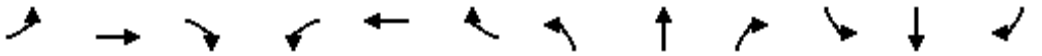
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	363	2	13	8	1	1	34	626	2	0	233	189
Future Volume (vph)	363	2	13	8	1	1	34	626	2	0	233	189
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	0.95			0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.93		1.00	1.00			1.00	0.85
Flt Protected	0.95	0.95	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1665	1670	1568	1752	1706		1752	3503			3505	1568
Flt Permitted	0.95	0.95	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (perm)	1665	1670	1568	1752	1706		1752	3503			3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	363	2	13	8	1	1	34	626	2	0	233	189
RTOR Reduction (vph)	0	0	10	0	1	0	0	0	0	0	0	124
Lane Group Flow (vph)	181	184	3	8	1	0	34	628	0	0	233	65
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	10.3	10.3	10.3	0.8	0.8		0.6	19.0			14.4	14.4
Effective Green, g (s)	10.3	10.3	10.3	0.8	0.8		0.6	19.0			14.4	14.4
Actuated g/C Ratio	0.24	0.24	0.24	0.02	0.02		0.01	0.45			0.34	0.34
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	407	408	383	33	32		24	1580			1198	536
v/s Ratio Prot	0.11	c0.11		c0.00	0.00		0.02	c0.18			0.07	
v/s Ratio Perm			0.00									0.04
v/c Ratio	0.44	0.45	0.01	0.24	0.03		1.42	0.40			0.19	0.12
Uniform Delay, d1	13.5	13.5	12.0	20.4	20.3		20.8	7.7			9.8	9.5
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.8	0.8	0.0	3.8	0.4		331.7	0.2			0.1	0.1
Delay (s)	14.3	14.3	12.0	24.1	20.7		352.4	7.9			9.8	9.6
Level of Service	B	B	B	C	C		F	A			A	A
Approach Delay (s)		14.2			23.5			25.6			9.7	
Approach LOS		B			C			C			A	

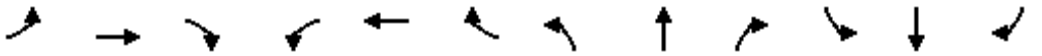
Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	42.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	47.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



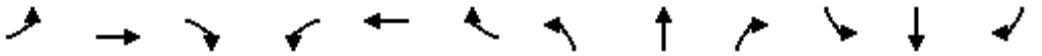
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	1174	0	403	0	1201	482	0	1042	367
Future Volume (vph)	0	0	0	1174	0	403	0	1201	482	0	1042	367
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.9	4.9			4.8	4.0		4.8	4.0
Lane Util. Factor				0.95	0.95			0.91	1.00		0.91	1.00
Frt				1.00	0.92			1.00	0.85		1.00	0.85
Flt Protected				0.95	0.98			1.00	1.00		1.00	1.00
Satd. Flow (prot)				1649	1562			4988	1553		4988	1553
Flt Permitted				0.95	0.98			1.00	1.00		1.00	1.00
Satd. Flow (perm)				1649	1562			4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	1174	0	403	0	1201	482	0	1042	367
RTOR Reduction (vph)	0	0	0	0	15	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	810	752	0	0	1201	482	0	1042	367
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type				Perm	NA			NA	Free		NA	Free
Protected Phases					8			2			6	
Permitted Phases				8					Free			Free
Actuated Green, G (s)				30.2	30.2			16.1	56.0		16.1	56.0
Effective Green, g (s)				30.2	30.2			16.1	56.0		16.1	56.0
Actuated g/C Ratio				0.54	0.54			0.29	1.00		0.29	1.00
Clearance Time (s)				4.9	4.9			4.8			4.8	
Vehicle Extension (s)				1.0	1.0			1.0			1.0	
Lane Grp Cap (vph)				889	842			1434	1553		1434	1553
v/s Ratio Prot								c0.24			0.21	
v/s Ratio Perm				c0.49	0.48				0.31			0.24
v/c Ratio				0.91	0.89			0.84	0.31		0.73	0.24
Uniform Delay, d1				11.7	11.5			18.7	0.0		18.0	0.0
Progression Factor				1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2				13.1	11.5			4.2	0.5		1.6	0.4
Delay (s)				24.8	23.0			23.0	0.5		19.5	0.4
Level of Service				C	C			C	A		B	A
Approach Delay (s)		0.0			23.9			16.5			14.6	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	56.0	Sum of lost time (s)	9.7
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



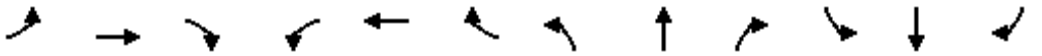
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	378	0	1095	0	0	0	0	1356	603	0	1817	350
Future Volume (vph)	378	0	1095	0	0	0	0	1356	603	0	1817	350
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	5.1					4.9	4.0		4.8	4.0
Lane Util. Factor	0.95	0.91	0.95					0.91	1.00		0.91	1.00
Frt	1.00	0.86	0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	1649	1425	1475					4988	1553		4988	1553
Flt Permitted	0.95	1.00	1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	1649	1425	1475					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	378	0	1095	0	0	0	0	1356	603	0	1817	350
RTOR Reduction (vph)	0	21	21	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	340	543	548	0	0	0	0	1356	603	0	1817	350
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA	Perm					NA	Free		NA	Free
Protected Phases		4						2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	23.6	23.6	23.6					23.9	57.5		24.0	57.5
Effective Green, g (s)	23.6	23.6	23.6					23.9	57.5		24.0	57.5
Actuated g/C Ratio	0.41	0.41	0.41					0.42	1.00		0.42	1.00
Clearance Time (s)	5.1	5.1	5.1					4.9			4.8	
Vehicle Extension (s)	1.0	1.0	1.0					1.0			1.0	
Lane Grp Cap (vph)	676	584	605					2073	1553		2081	1553
v/s Ratio Prot								0.27			c0.36	
v/s Ratio Perm	0.21	0.38	0.37						0.39			0.23
v/c Ratio	0.50	0.93	0.91					0.65	0.39		0.87	0.23
Uniform Delay, d1	12.6	16.2	15.9					13.5	0.0		15.4	0.0
Progression Factor	1.00	1.00	1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.2	21.4	16.9					0.6	0.7		4.2	0.3
Delay (s)	12.8	37.6	32.8					14.1	0.7		19.6	0.3
Level of Service	B	D	C					B	A		B	A
Approach Delay (s)		30.0			0.0			10.0			16.5	
Approach LOS		C			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	17.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	57.5	Sum of lost time (s)	10.0
Intersection Capacity Utilization	88.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



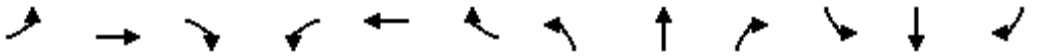
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	1345	0	190	0	835	945	0	982	1393
Future Volume (vph)	0	0	0	1345	0	190	0	835	945	0	982	1393
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.8		6.8		4.6	4.0		4.6	4.0
Lane Util. Factor				0.97		1.00		0.91	1.00		0.91	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3400		1568		5036	1568		5036	1568
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3400		1568		5036	1568		5036	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	1345	0	190	0	835	945	0	982	1393
RTOR Reduction (vph)	0	0	0	0	0	15	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	1345	0	175	0	835	945	0	982	1393
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				Perm		Perm		NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases				8		8			Free			Free
Actuated Green, G (s)				22.3		22.3		13.7	47.4		13.7	47.4
Effective Green, g (s)				22.3		22.3		13.7	47.4		13.7	47.4
Actuated g/C Ratio				0.47		0.47		0.29	1.00		0.29	1.00
Clearance Time (s)				6.8		6.8		4.6			4.6	
Vehicle Extension (s)				1.0		1.0		1.0			1.0	
Lane Grp Cap (vph)				1599		737		1455	1568		1455	1568
v/s Ratio Prot								0.17			0.19	
v/s Ratio Perm				0.40		0.11			0.60			c0.89
v/c Ratio				0.84		0.24		0.57	0.60		0.67	0.89
Uniform Delay, d1				11.0		7.5		14.4	0.0		14.9	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				4.0		0.1		0.3	1.7		1.0	7.9
Delay (s)				15.0		7.5		14.7	1.7		15.9	7.9
Level of Service				B		A		B	A		B	A
Approach Delay (s)		0.0			14.1			7.8			11.2	
Approach LOS		A			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	47.4	Sum of lost time (s)	11.4
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



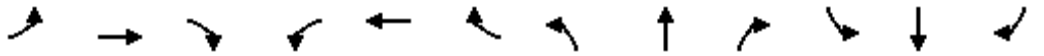
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	172	876	1627	0	0	98	0	3304	9	0	2153	185
Future Volume (vph)	172	876	1627	0	0	98	0	3304	9	0	2153	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0		4.0			4.0	4.0
Lane Util. Factor	0.91	0.86	0.91			0.88		0.86			0.91	1.00
Frt	1.00	0.93	0.85			0.85		1.00			1.00	0.85
Flt Protected	0.95	1.00	1.00			1.00		1.00			1.00	1.00
Satd. Flow (prot)	1595	2944	1427			2733		6343			5036	1568
Flt Permitted	0.95	1.00	1.00			1.00		1.00			1.00	1.00
Satd. Flow (perm)	1595	2944	1427			2733		6343			5036	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	172	876	1627	0	0	98	0	3304	9	0	2153	185
RTOR Reduction (vph)	0	1	20	0	0	95	0	0	0	0	0	45
Lane Group Flow (vph)	155	1706	793	0	0	3	0	3313	0	0	2153	140
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Turn Type	Split	NA	Perm			Prot		NA			NA	custom
Protected Phases	4	4				1		2			6	
Permitted Phases			4									2
Actuated Green, G (s)	68.0	68.0	68.0			4.0		66.0			74.0	66.0
Effective Green, g (s)	68.0	68.0	68.0			4.0		66.0			74.0	66.0
Actuated g/C Ratio	0.45	0.45	0.45			0.03		0.44			0.49	0.44
Clearance Time (s)	4.0	4.0	4.0			4.0		4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	723	1334	646			72		2790			2484	689
v/s Ratio Prot	0.10	c0.58				0.00		c0.52			c0.43	
v/s Ratio Perm			0.56									0.09
v/c Ratio	0.21	1.28	1.23			0.04		1.19			0.87	0.20
Uniform Delay, d1	24.8	41.0	41.0			71.1		42.0			33.6	25.8
Progression Factor	1.00	1.00	1.00			1.00		1.00			1.00	1.00
Incremental Delay, d2	0.1	131.4	115.9			0.2		88.3			3.5	0.1
Delay (s)	25.0	172.4	156.9			71.3		130.3			37.1	26.0
Level of Service	C	F	F			E		F			D	C
Approach Delay (s)		159.1			71.3			130.3			36.2	
Approach LOS		F			E			F			D	

Intersection Summary			
HCM 2000 Control Delay	112.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	115.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	226	0	499	0	2853	253	0	1894	2225
Future Volume (vph)	0	0	0	226	0	499	0	2853	253	0	1894	2225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.5		3.5		4.8	4.0		5.1	4.0
Lane Util. Factor				0.97		0.88		0.91	1.00		0.91	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3303		2682		4988	1553		4988	1553
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3303		2682		4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	226	0	499	0	2853	253	0	1894	2225
RTOR Reduction (vph)	0	0	0	0	0	34	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	226	0	465	0	2853	253	0	1894	2225
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	4%	4%	4%	4%	4%	4%
Turn Type				Perm		Perm		NA	Free		NA	Free
Protected Phases								6			2	
Permitted Phases				8		8			Free			Free
Actuated Green, G (s)				10.3		10.3		35.4	54.0		35.1	54.0
Effective Green, g (s)				10.3		10.3		35.4	54.0		35.1	54.0
Actuated g/C Ratio				0.19		0.19		0.66	1.00		0.65	1.00
Clearance Time (s)				3.5		3.5		4.8			5.1	
Vehicle Extension (s)				1.0		1.0		1.0			1.0	
Lane Grp Cap (vph)				630		511		3269	1553		3242	1553
v/s Ratio Prot								0.57			0.38	
v/s Ratio Perm				0.07		0.17			0.16			c1.43
v/c Ratio				0.36		0.91		0.87	0.16		0.58	1.43
Uniform Delay, d1				19.0		21.4		7.5	0.0		5.3	27.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				0.1		20.0		2.8	0.2		0.2	198.5
Delay (s)				19.1		41.4		10.2	0.2		5.5	225.5
Level of Service				B		D		B	A		A	F
Approach Delay (s)		0.0			34.4			9.4			124.3	
Approach LOS		A			C			A			F	

Intersection Summary			
HCM 2000 Control Delay	71.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.70		
Actuated Cycle Length (s)	54.0	Sum of lost time (s)	8.6
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



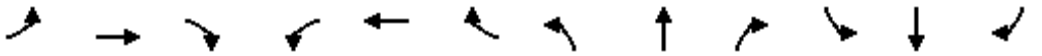
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	962	0	716	0	0	0	0	2152	422	0	1767	350
Future Volume (vph)	962	0	716	0	0	0	0	2152	422	0	1767	350
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		3.5					4.8	4.0		5.1	4.0
Lane Util. Factor	0.94		0.88					0.86	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	4894		2733					6285	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	4894		2733					6285	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	962	0	716	0	0	0	0	2152	422	0	1767	350
RTOR Reduction (vph)	0	0	32	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	962	0	684	0	0	0	0	2152	422	0	1767	350
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								6			2	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	13.7		13.7					22.2	44.2		21.9	44.2
Effective Green, g (s)	13.7		13.7					22.2	44.2		21.9	44.2
Actuated g/C Ratio	0.31		0.31					0.50	1.00		0.50	1.00
Clearance Time (s)	3.5		3.5					4.8			5.1	
Vehicle Extension (s)	1.0		1.0					1.0			1.0	
Lane Grp Cap (vph)	1516		847					3156	1553		2471	1553
v/s Ratio Prot								0.34			c0.35	
v/s Ratio Perm	0.20		c0.25						0.27			0.23
v/c Ratio	0.63		0.81					0.68	0.27		0.72	0.23
Uniform Delay, d1	13.1		14.0					8.3	0.0		8.7	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.6		5.4					0.5	0.4		0.8	0.3
Delay (s)	13.7		19.4					8.8	0.4		9.5	0.3
Level of Service	B		B					A	A		A	A
Approach Delay (s)		16.2			0.0			7.4			8.0	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	44.2	Sum of lost time (s)	8.6
Intersection Capacity Utilization	66.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



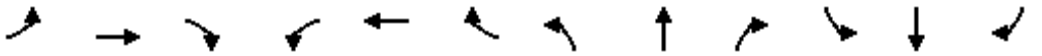
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	480	459	2361	162	68	1111
Future Volume (vph)	480	459	2361	162	68	1111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.0	5.0	5.5	5.0
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3400	1568	4988	1553	3367	3471
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3400	1568	4988	1553	3367	3471
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	480	459	2361	162	68	1111
RTOR Reduction (vph)	0	282	0	47	0	0
Lane Group Flow (vph)	480	177	2361	115	68	1111
Heavy Vehicles (%)	3%	3%	4%	4%	4%	4%
Turn Type	Prot	Prot	NA	Perm	Prot	NA
Protected Phases	4	4	6		5	2
Permitted Phases				6		
Actuated Green, G (s)	13.0	13.0	42.1	42.1	4.2	51.8
Effective Green, g (s)	13.0	13.0	42.1	42.1	4.2	51.8
Actuated g/C Ratio	0.17	0.17	0.56	0.56	0.06	0.69
Clearance Time (s)	5.5	5.5	5.0	5.0	5.5	5.0
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lane Grp Cap (vph)	586	270	2788	868	187	2387
v/s Ratio Prot	c0.14	0.11	c0.47		0.02	c0.32
v/s Ratio Perm				0.07		
v/c Ratio	0.82	0.66	0.85	0.13	0.36	0.47
Uniform Delay, d1	30.0	29.1	13.9	7.9	34.3	5.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.3	4.3	2.5	0.0	0.4	0.1
Delay (s)	38.3	33.4	16.4	7.9	34.7	5.4
Level of Service	D	C	B	A	C	A
Approach Delay (s)	35.9		15.8			7.1
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	75.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	82.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



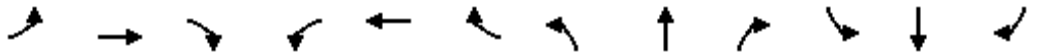
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1198	679	7	0	1154	15	8	30	5	7	6	547
Future Volume (vph)	1198	679	7	0	1154	15	8	30	5	7	6	547
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.9	6.9		6.0			6.1			6.2	5.5
Lane Util. Factor	1.00	0.95	1.00		0.95			1.00			1.00	1.00
Frt	1.00	1.00	0.85		1.00			0.98			1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00			0.99			0.97	1.00
Satd. Flow (prot)	1703	3406	1524		3431			1799			1779	1553
Flt Permitted	0.95	1.00	1.00		1.00			0.99			0.97	1.00
Satd. Flow (perm)	1703	3406	1524		3431			1799			1779	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1198	679	7	0	1154	15	8	30	5	7	6	547
RTOR Reduction (vph)	0	0	1	0	1	0	0	3	0	0	0	37
Lane Group Flow (vph)	1198	679	6	0	1168	0	0	40	0	0	13	510
Heavy Vehicles (%)	6%	6%	6%	5%	5%	5%	3%	3%	3%	4%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	pm+ov
Protected Phases	1	6		5	2		8	8		4	4	1
Permitted Phases			6									4
Actuated Green, G (s)	62.6	106.0	106.0		38.8			3.0			2.1	64.7
Effective Green, g (s)	62.6	106.0	106.0		38.8			3.0			2.1	64.7
Actuated g/C Ratio	0.48	0.81	0.81		0.30			0.02			0.02	0.50
Clearance Time (s)	5.5	6.9	6.9		6.0			6.1			6.2	5.5
Vehicle Extension (s)	1.0	1.0	1.0		1.0			1.0			1.0	1.0
Lane Grp Cap (vph)	818	2770	1239		1021			41			28	771
v/s Ratio Prot	c0.70	0.20			c0.34			c0.02			0.01	c0.32
v/s Ratio Perm			0.00									0.01
v/c Ratio	1.46	0.25	0.00		1.14			0.98			0.46	0.66
Uniform Delay, d1	33.9	2.8	2.3		45.8			63.6			63.5	24.6
Progression Factor	1.00	1.00	1.00		1.00			1.00			1.00	1.00
Incremental Delay, d2	215.8	0.0	0.0		76.7			130.1			4.4	1.7
Delay (s)	249.6	2.8	2.3		122.5			193.8			67.9	26.3
Level of Service	F	A	A		F			F			E	C
Approach Delay (s)		159.8			122.5			193.8			27.2	
Approach LOS		F			F			F			C	

Intersection Summary			
HCM 2000 Control Delay	127.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	130.3	Sum of lost time (s)	24.7
Intersection Capacity Utilization	122.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	277	55	172	877	433	3310	0	0	4871	99
Future Volume (vph)	0	0	277	55	172	877	433	3310	0	0	4871	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.6		6.2	6.2	4.6	5.0			5.3	5.3
Lane Util. Factor			1.00		1.00	0.88	0.97	0.91			0.86	1.00
Frt			0.86		1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected			1.00		0.99	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)			1596		1771	2682	3303	4893			6166	1524
Flt Permitted			1.00		0.99	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)			1596		1771	2682	3303	4893			6166	1524
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	277	55	172	877	433	3310	0	0	4871	99
RTOR Reduction (vph)	0	0	173	0	0	40	0	0	0	0	0	25
Lane Group Flow (vph)	0	0	104	0	227	837	433	3310	0	0	4871	74
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type			Over	Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases			1	4	4		1	6			2	
Permitted Phases						4						2
Actuated Green, G (s)			20.0		29.8	29.8	20.0	109.0			84.1	84.1
Effective Green, g (s)			20.0		29.8	29.8	20.0	109.0			84.1	84.1
Actuated g/C Ratio			0.13		0.20	0.20	0.13	0.73			0.56	0.56
Clearance Time (s)			4.6		6.2	6.2	4.6	5.0			5.3	5.3
Vehicle Extension (s)			3.0		3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)			212		351	532	440	3555			3457	854
v/s Ratio Prot			0.06		0.13		0.13	c0.68			c0.79	
v/s Ratio Perm						c0.31						0.05
v/c Ratio			0.49		0.65	1.57	0.98	0.93			1.41	0.09
Uniform Delay, d1			60.3		55.3	60.1	64.8	17.3			33.0	15.2
Progression Factor			1.00		1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2			1.8		4.1	266.9	38.4	5.2			185.8	0.0
Delay (s)			62.0		59.3	327.0	103.3	22.5			218.8	15.3
Level of Service			E		E	F	F	C			F	B
Approach Delay (s)		62.0			272.0			31.9			214.7	
Approach LOS		E			F			C			F	

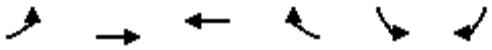
Intersection Summary			
HCM 2000 Control Delay	149.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.1
Intersection Capacity Utilization	113.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2030	0	161	0	0	0	0	1848	49	0	1747	1023
Future Volume (vph)	2030	0	161	0	0	0	0	1848	49	0	1747	1023
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0			4.0	4.0
Lane Util. Factor	0.94		0.88					0.91			0.91	1.00
Frt	1.00		0.85					1.00			1.00	0.85
Flt Protected	0.95		1.00					1.00			1.00	1.00
Satd. Flow (prot)	4942		2760					5016			5036	1568
Flt Permitted	0.95		1.00					1.00			1.00	1.00
Satd. Flow (perm)	4942		2760					5016			5036	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2030	0	161	0	0	0	0	1848	49	0	1747	1023
RTOR Reduction (vph)	0	0	11	0	0	0	0	5	0	0	0	0
Lane Group Flow (vph)	2030	0	150	0	0	0	0	1892	0	0	1747	1023
Turn Type	Prot		Perm					NA			NA	Free
Protected Phases	4							2			6	
Permitted Phases			4									Free
Actuated Green, G (s)	24.0		24.0					23.0			23.0	55.0
Effective Green, g (s)	24.0		24.0					23.0			23.0	55.0
Actuated g/C Ratio	0.44		0.44					0.42			0.42	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	2156		1204					2097			2105	1568
v/s Ratio Prot	c0.41							c0.38			0.35	
v/s Ratio Perm			0.05									0.65
v/c Ratio	0.94		0.12					0.90			0.83	0.65
Uniform Delay, d1	14.8		9.2					14.9			14.3	0.0
Progression Factor	1.00		1.00					1.00			1.00	1.00
Incremental Delay, d2	9.0		0.0					5.9			2.9	2.1
Delay (s)	23.9		9.3					20.8			17.1	2.1
Level of Service	C		A					C			B	A
Approach Delay (s)		22.8			0.0			20.8			11.6	
Approach LOS		C			A			C			B	

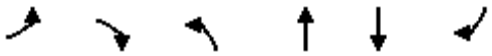
Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1082	1558	1605	213	15	750
Future Volume (vph)	1082	1558	1605	213	15	750
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	0.88
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3242	3343	3343	1495	3400	2760
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3242	3343	3343	1495	3400	2760
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1082	1558	1605	213	15	750
RTOR Reduction (vph)	0	0	0	42	0	701
Lane Group Flow (vph)	1082	1558	1605	171	15	49
Heavy Vehicles (%)	8%	8%	8%	8%	3%	3%
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	48.0	121.1	69.1	69.1	9.0	9.0
Effective Green, g (s)	48.0	121.1	69.1	69.1	9.0	9.0
Actuated g/C Ratio	0.35	0.88	0.50	0.50	0.07	0.07
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1126	2931	1672	748	221	179
v/s Ratio Prot	c0.33	0.47	c0.48		0.00	
v/s Ratio Perm				0.11		c0.02
v/c Ratio	0.96	0.53	0.96	0.23	0.07	0.27
Uniform Delay, d1	44.1	2.0	33.2	19.5	60.6	61.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	18.1	0.2	13.5	0.2	0.1	0.8
Delay (s)	62.3	2.1	46.7	19.6	60.7	62.3
Level of Service	E	A	D	B	E	E
Approach Delay (s)		26.8	43.5		62.2	
Approach LOS		C	D		E	

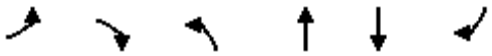
Intersection Summary			
HCM 2000 Control Delay	37.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	138.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	601	13	90	2072	1327	1012
Future Volume (vph)	601	13	90	2072	1327	1012
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3400	1568	1752	3505	3505	1568
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3400	1568	1752	3505	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	601	13	90	2072	1327	1012
RTOR Reduction (vph)	0	9	0	0	0	66
Lane Group Flow (vph)	601	4	90	2072	1327	946
Turn Type	Prot	pm+ov	Prot	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4				6
Actuated Green, G (s)	16.5	21.3	4.8	45.9	37.1	53.6
Effective Green, g (s)	16.5	21.3	4.8	45.9	37.1	53.6
Actuated g/C Ratio	0.23	0.30	0.07	0.65	0.53	0.76
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	796	563	119	2285	1847	1282
v/s Ratio Prot	0.18	0.00	0.05	c0.59	0.38	c0.17
v/s Ratio Perm		0.00				0.43
v/c Ratio	0.76	0.01	0.76	0.91	0.72	0.74
Uniform Delay, d1	25.1	17.2	32.2	10.4	12.7	4.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.1	0.0	23.6	5.7	1.4	2.3
Delay (s)	29.2	17.2	55.8	16.1	14.0	6.8
Level of Service	C	B	E	B	B	A
Approach Delay (s)	28.9			17.8	10.9	
Approach LOS	C			B	B	

Intersection Summary			
HCM 2000 Control Delay	16.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	70.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		

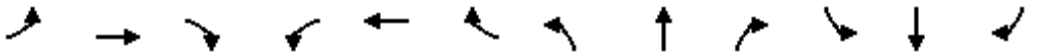
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	439	615	1016	1711	1127	213
Future Volume (vph)	439	615	1016	1711	1127	213
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.97	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1752	1568	3400	3505	3505	1568
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1752	1568	3400	3505	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	439	615	1016	1711	1127	213
RTOR Reduction (vph)	0	401	0	0	0	144
Lane Group Flow (vph)	439	214	1016	1711	1127	69
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	22.0	22.0	27.0	60.0	29.0	29.0
Effective Green, g (s)	22.0	22.0	27.0	60.0	29.0	29.0
Actuated g/C Ratio	0.24	0.24	0.30	0.67	0.32	0.32
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	428	383	1020	2336	1129	505
v/s Ratio Prot	c0.25		c0.30	0.49	c0.32	
v/s Ratio Perm		0.14				0.04
v/c Ratio	1.03	0.56	1.00	0.73	1.00	0.14
Uniform Delay, d1	34.0	29.7	31.4	9.8	30.5	21.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	50.2	1.8	27.0	1.2	26.2	0.1
Delay (s)	84.2	31.5	58.5	11.0	56.6	21.7
Level of Service	F	C	E	B	E	C
Approach Delay (s)	53.5			28.7	51.1	
Approach LOS	D			C	D	

Intersection Summary			
HCM 2000 Control Delay	39.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.5%	ICU Level of Service	F
Analysis Period (min)	15		

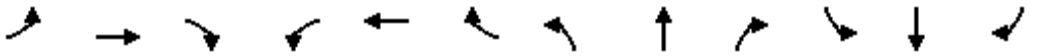
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	651	0	929	0	0	0	0	3847	650	0	1790	1584
Future Volume (vph)	651	0	929	0	0	0	0	3847	650	0	1790	1584
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	4.0		4.0	4.0
Lane Util. Factor	0.97		0.88					0.86	1.00		0.86	0.86
Frt	1.00		0.85					1.00	0.85		0.95	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3400		2760					6346	1568		4540	1348
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3400		2760					6346	1568		4540	1348
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	651	0	929	0	0	0	0	3847	650	0	1790	1584
RTOR Reduction (vph)	0	0	24	0	0	0	0	0	0	0	80	0
Lane Group Flow (vph)	651	0	905	0	0	0	0	3847	650	0	2502	792
Turn Type	Prot		Perm					NA	Free		NA	Free
Protected Phases	4							2			6	
Permitted Phases			4						Free			Free
Actuated Green, G (s)	31.0		31.0					61.0	100.0		61.0	100.0
Effective Green, g (s)	31.0		31.0					61.0	100.0		61.0	100.0
Actuated g/C Ratio	0.31		0.31					0.61	1.00		0.61	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	1054		855					3871	1568		2769	1348
v/s Ratio Prot	0.19							c0.61			0.55	
v/s Ratio Perm			c0.33						0.41			0.59
v/c Ratio	0.62		1.06					0.99	0.41		0.90	0.59
Uniform Delay, d1	29.4		34.5					19.3	0.0		16.9	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	1.1		47.4					13.0	0.8		4.6	1.9
Delay (s)	30.5		81.9					32.3	0.8		21.6	1.9
Level of Service	C		F					C	A		C	A
Approach Delay (s)		60.7			0.0			27.7			17.0	
Approach LOS		E			A			C			B	

Intersection Summary			
HCM 2000 Control Delay	29.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	507	0	1211	0	2001	2493	0	4213	1039
Future Volume (vph)	0	0	0	507	0	1211	0	2001	2493	0	4213	1039
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0		4.0		4.0	4.0		4.0	4.0
Lane Util. Factor				0.97		0.76		0.86	0.86		0.81	0.81
Frt				1.00		0.85		0.94	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3400		3575		4485	1348		5953	1270
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3400		3575		4485	1348		5953	1270
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	507	0	1211	0	2001	2493	0	4213	1039
RTOR Reduction (vph)	0	0	0	0	0	27	0	86	0	0	2	0
Lane Group Flow (vph)	0	0	0	507	0	1184	0	3162	1246	0	4325	925
Turn Type				Prot		Perm		NA	Free		NA	Free
Protected Phases				8				2			6	
Permitted Phases						8			Free			Free
Actuated Green, G (s)				37.0		37.0		85.0	130.0		85.0	130.0
Effective Green, g (s)				37.0		37.0		85.0	130.0		85.0	130.0
Actuated g/C Ratio				0.28		0.28		0.65	1.00		0.65	1.00
Clearance Time (s)				4.0		4.0		4.0			4.0	
Vehicle Extension (s)				3.0		3.0		3.0			3.0	
Lane Grp Cap (vph)				967		1017		2932	1348		3892	1270
v/s Ratio Prot				0.15				0.70			c0.73	
v/s Ratio Perm						c0.33			0.92			0.73
v/c Ratio				0.52		1.16		1.18dr	0.92		1.11	0.73
Uniform Delay, d1				39.1		46.5		22.5	0.0		22.5	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				0.5		84.8		42.3	12.0		54.3	3.7
Delay (s)				39.6		131.3		64.8	12.0		76.8	3.7
Level of Service				D		F		E	B		E	A
Approach Delay (s)		0.0			104.2			50.2			63.9	
Approach LOS		A			F			D			E	

Intersection Summary			
HCM 2000 Control Delay	64.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

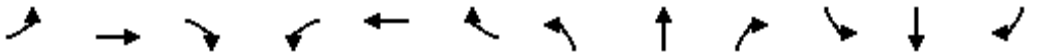
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	776	492	384	929	490	309
Future Volume (vph)	776	492	384	929	490	309
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3154	1411	1577	3154	3060	1411
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3154	1411	1577	3154	3060	1411
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	776	492	384	929	490	309
RTOR Reduction (vph)	0	254	0	0	0	239
Lane Group Flow (vph)	776	238	384	929	490	70
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	20.0	20.0	19.6	43.6	15.1	15.1
Effective Green, g (s)	20.0	20.0	19.6	43.6	15.1	15.1
Actuated g/C Ratio	0.30	0.30	0.29	0.65	0.23	0.23
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	945	423	463	2061	692	319
v/s Ratio Prot	c0.25		c0.24	0.29	c0.16	
v/s Ratio Perm		0.17				0.05
v/c Ratio	0.82	0.56	0.83	0.45	0.71	0.22
Uniform Delay, d1	21.7	19.7	22.0	5.7	23.8	21.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.8	1.7	11.7	0.2	3.3	0.3
Delay (s)	27.5	21.4	33.7	5.8	27.1	21.4
Level of Service	C	C	C	A	C	C
Approach Delay (s)	25.1			14.0	24.9	
Approach LOS	C			B	C	

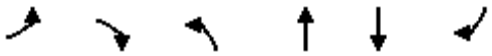
Intersection Summary			
HCM 2000 Control Delay	20.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	66.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	219	478	0	1	471	241	1	1	0	61	2	455
Future Volume (vph)	219	478	0	1	471	241	1	1	0	61	2	455
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00		0.95	0.95	1.00
Frt	1.00	1.00		1.00	0.95			1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98		0.95	0.96	1.00
Satd. Flow (prot)	1736	3471		1736	3295			1800		1665	1674	1568
Flt Permitted	0.95	1.00		0.95	1.00			0.98		0.95	0.96	1.00
Satd. Flow (perm)	1736	3471		1736	3295			1800		1665	1674	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	219	478	0	1	471	241	1	1	0	61	2	455
RTOR Reduction (vph)	0	0	0	0	76	0	0	0	0	0	0	388
Lane Group Flow (vph)	219	478	0	1	636	0	0	2	0	32	31	67
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases												6
Actuated Green, G (s)	10.8	28.9		0.7	18.8			5.7		8.9	8.9	8.9
Effective Green, g (s)	10.8	28.9		0.7	18.8			5.7		8.9	8.9	8.9
Actuated g/C Ratio	0.18	0.48		0.01	0.31			0.09		0.15	0.15	0.15
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	311	1666		20	1029			170		246	247	231
v/s Ratio Prot	c0.13	0.14		0.00	c0.19			c0.00		0.02	0.02	
v/s Ratio Perm												c0.04
v/c Ratio	0.70	0.29		0.05	0.62			0.01		0.13	0.13	0.29
Uniform Delay, d1	23.2	9.4		29.4	17.6			24.7		22.3	22.3	22.8
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2	7.1	0.1		1.0	1.1			0.0		0.2	0.2	0.7
Delay (s)	30.3	9.5		30.5	18.8			24.7		22.5	22.5	23.5
Level of Service	C	A		C	B			C		C	C	C
Approach Delay (s)		16.0			18.8			24.7			23.4	
Approach LOS		B			B			C			C	

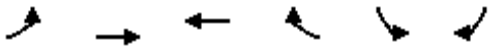
Intersection Summary			
HCM 2000 Control Delay	19.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	60.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	491	27	21	1793	1644	421
Future Volume (vph)	491	27	21	1793	1644	421
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1568	1752	3505	3398	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1752	1568	1752	3505	3398	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	491	27	21	1793	1644	421
RTOR Reduction (vph)	0	18	0	0	18	0
Lane Group Flow (vph)	491	9	21	1793	2047	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	33.0	33.0	1.5	76.6	71.1	
Effective Green, g (s)	33.0	33.0	1.5	76.6	71.1	
Actuated g/C Ratio	0.28	0.28	0.01	0.65	0.60	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	491	440	22	2283	2054	
v/s Ratio Prot	c0.28		0.01	c0.51	c0.60	
v/s Ratio Perm		0.01				
v/c Ratio	1.00	0.02	0.95	0.79	1.00	
Uniform Delay, d1	42.3	30.6	58.0	14.6	23.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	40.6	0.0	169.9	1.8	18.9	
Delay (s)	82.9	30.6	227.9	16.5	42.0	
Level of Service	F	C	F	B	D	
Approach Delay (s)	80.2			18.9	42.0	
Approach LOS	F			B	D	

Intersection Summary			
HCM 2000 Control Delay	37.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	117.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	601	1365	2134	1713	0
Future Volume (vph)	0	601	1365	2134	1713	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95	0.95	1.00	0.97	
Frt		1.00	1.00	0.85	1.00	
Flt Protected		1.00	1.00	1.00	0.95	
Satd. Flow (prot)		3505	3505	1568	3400	
Flt Permitted		1.00	1.00	1.00	0.95	
Satd. Flow (perm)		3505	3505	1568	3400	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	601	1365	2134	1713	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	601	1365	2134	1713	0
Turn Type	Prot	NA	NA	custom	Prot	
Protected Phases	4	5	5	2	6	
Permitted Phases						
Actuated Green, G (s)		46.0	46.0	130.0	76.0	
Effective Green, g (s)		46.0	46.0	130.0	76.0	
Actuated g/C Ratio		0.35	0.35	1.00	0.58	
Clearance Time (s)		4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1240	1240	1568	1987	
v/s Ratio Prot		0.17	0.39	c1.36	0.50	
v/s Ratio Perm						
v/c Ratio		0.48	1.10	1.36	0.86	
Uniform Delay, d1		32.8	42.0	65.0	22.6	
Progression Factor		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.3	57.8	166.7	4.1	
Delay (s)		33.1	99.8	231.7	26.7	
Level of Service		C	F	F	C	
Approach Delay (s)		33.1	180.2		26.7	
Approach LOS		C	F		C	

Intersection Summary			
HCM 2000 Control Delay	119.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.50		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	135.5%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0
Turn Type			Prot		Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases						2
Actuated Green, G (s)						
Effective Green, g (s)						
Actuated g/C Ratio						
Clearance Time (s)						
Vehicle Extension (s)						
Lane Grp Cap (vph)						
v/s Ratio Prot						
v/s Ratio Perm						
v/c Ratio						
Uniform Delay, d1						
Progression Factor						
Incremental Delay, d2						
Delay (s)						
Level of Service						
Approach Delay (s)	0.0			0.0	0.0	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	0.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.00		
Actuated Cycle Length (s)	24.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		

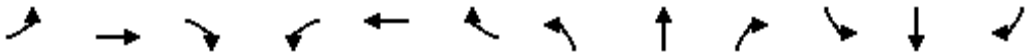
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	2225	0	1653	0
Future Volume (vph)	0	0	2225	0	1653	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	4.0	4.0	
Lane Util. Factor			0.95	0.95	0.97	
Frt			1.00	1.00	1.00	
Flt Protected			0.95	0.95	0.95	
Satd. Flow (prot)			1665	1665	3400	
Flt Permitted			0.95	0.95	0.95	
Satd. Flow (perm)			1665	1665	3400	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	2225	0	1653	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	1112	1113	1653	0
Turn Type			Split	NA	Prot	
Protected Phases			4	4	2	
Permitted Phases						
Actuated Green, G (s)			81.0	81.0	61.0	
Effective Green, g (s)			81.0	81.0	61.0	
Actuated g/C Ratio			0.54	0.54	0.41	
Clearance Time (s)			4.0	4.0	4.0	
Vehicle Extension (s)			3.0	3.0	3.0	
Lane Grp Cap (vph)			899	899	1382	
v/s Ratio Prot			0.67	c0.67	c0.49	
v/s Ratio Perm						
v/c Ratio			1.24	1.24	1.20	
Uniform Delay, d1			34.5	34.5	44.5	
Progression Factor			1.00	1.00	1.00	
Incremental Delay, d2			116.2	116.7	95.6	
Delay (s)			150.7	151.2	140.1	
Level of Service			F	F	F	
Approach Delay (s)	0.0			150.9	140.1	
Approach LOS	A			F	F	

Intersection Summary			
HCM 2000 Control Delay	146.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	115.5%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	407	0	0	0	0	1653	2097	0	2225	0
Future Volume (vph)	0	0	407	0	0	0	0	1653	2097	0	2225	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0					4.0	4.0		4.0	
Lane Util. Factor		0.95	0.95					0.91	0.91		0.95	
Frt		0.85	0.85					0.95	0.85		1.00	
Flt Protected		1.00	1.00					1.00	1.00		1.00	
Satd. Flow (prot)		1490	1490					3177	1427		3505	
Flt Permitted		1.00	1.00					1.00	1.00		1.00	
Satd. Flow (perm)		1490	1490					3177	1427		3505	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	407	0	0	0	0	1653	2097	0	2225	0
RTOR Reduction (vph)	0	32	0	0	0	0	0	35	182	0	0	0
Lane Group Flow (vph)	0	172	203	0	0	0	0	2541	992	0	2225	0
Turn Type		NA	Free					NA	Perm	Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases			Free						2			
Actuated Green, G (s)		16.0	143.6					119.6	119.6		119.6	
Effective Green, g (s)		16.0	143.6					119.6	119.6		119.6	
Actuated g/C Ratio		0.11	1.00					0.83	0.83		0.83	
Clearance Time (s)		4.0						4.0	4.0		4.0	
Vehicle Extension (s)		3.0						3.0	3.0		3.0	
Lane Grp Cap (vph)		166	1490					2646	1188		2919	
v/s Ratio Prot		c0.12						c0.80			0.63	
v/s Ratio Perm			0.14						0.70			
v/c Ratio		1.04	0.14					0.96	0.83		0.76	
Uniform Delay, d1		63.8	0.0					10.0	6.6		5.5	
Progression Factor		1.00	1.00					1.00	1.00		1.00	
Incremental Delay, d2		79.7	0.2					9.9	5.2		1.2	
Delay (s)		143.5	0.2					19.9	11.8		6.7	
Level of Service		F	A					B	B		A	
Approach Delay (s)		72.0			0.0			17.4			6.7	
Approach LOS		E			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	17.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	143.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	115.5%	ICU Level of Service	H
Analysis Period (min)	15		

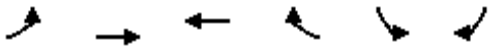
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	367	312	3652	168	6	2771
Future Volume (vph)	367	312	3652	168	6	2771
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.91
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3400	1568	5036	1568	3400	5036
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3400	1568	5036	1568	3400	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	367	312	3652	168	6	2771
RTOR Reduction (vph)	0	33	0	25	0	0
Lane Group Flow (vph)	367	279	3652	143	6	2771
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Actuated Green, G (s)	25.0	25.0	113.8	113.8	0.8	118.6
Effective Green, g (s)	25.0	25.0	113.8	113.8	0.8	118.6
Actuated g/C Ratio	0.16	0.16	0.75	0.75	0.01	0.78
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	560	258	3780	1177	17	3939
v/s Ratio Prot	0.11		c0.73		0.00	c0.55
v/s Ratio Perm		c0.18		0.09		
v/c Ratio	0.66	1.08	0.97	0.12	0.35	0.70
Uniform Delay, d1	59.3	63.3	17.2	5.2	75.1	8.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.8	79.9	8.3	0.0	12.2	0.6
Delay (s)	62.0	143.2	25.4	5.2	87.3	8.6
Level of Service	E	F	C	A	F	A
Approach Delay (s)	99.3		24.5			8.7
Approach LOS	F		C			A

Intersection Summary			
HCM 2000 Control Delay	25.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	151.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	241	1374	2082	86	131	426
Future Volume (vph)	241	1374	2082	86	131	426
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1752	3505	3505	1568	1752	1568
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1752	3505	3505	1568	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	241	1374	2082	86	131	426
RTOR Reduction (vph)	0	0	0	26	0	183
Lane Group Flow (vph)	241	1374	2082	60	131	243
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	14.0	76.0	58.0	58.0	16.0	16.0
Effective Green, g (s)	14.0	76.0	58.0	58.0	16.0	16.0
Actuated g/C Ratio	0.14	0.76	0.58	0.58	0.16	0.16
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	245	2663	2032	909	280	250
v/s Ratio Prot	c0.14	0.39	c0.59		0.07	
v/s Ratio Perm				0.04		c0.15
v/c Ratio	0.98	0.52	1.02	0.07	0.47	0.97
Uniform Delay, d1	42.9	4.7	21.0	9.2	38.1	41.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	52.6	0.2	26.5	0.0	1.2	48.7
Delay (s)	95.4	4.9	47.5	9.2	39.4	90.5
Level of Service	F	A	D	A	D	F
Approach Delay (s)		18.4	46.0		78.5	
Approach LOS		B	D		E	

Intersection Summary			
HCM 2000 Control Delay	39.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		

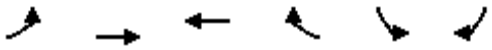
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	606	84	221	1219	131	63
Future Volume (vph)	606	84	221	1219	131	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	0.97	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3505	1568	3400	3505	1752	1568
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3505	1568	3400	3505	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	606	84	221	1219	131	63
RTOR Reduction (vph)	0	53	0	0	0	50
Lane Group Flow (vph)	606	31	221	1219	131	14
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	14.3	14.3	4.5	22.8	8.4	8.4
Effective Green, g (s)	14.3	14.3	4.5	22.8	8.4	8.4
Actuated g/C Ratio	0.36	0.36	0.11	0.58	0.21	0.21
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1278	572	390	2038	375	336
v/s Ratio Prot	0.17		0.07	c0.35	c0.07	
v/s Ratio Perm		0.02				0.01
v/c Ratio	0.47	0.05	0.57	0.60	0.35	0.04
Uniform Delay, d1	9.6	8.1	16.4	5.3	13.1	12.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.0	1.9	0.5	0.6	0.0
Delay (s)	9.8	8.1	18.3	5.7	13.6	12.3
Level of Service	A	A	B	A	B	B
Approach Delay (s)	9.6			7.7	13.2	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	39.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)	15		

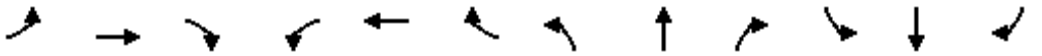
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	154	213	453	18	55	380
Future Volume (vph)	154	213	453	18	55	380
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	
Frt		1.00	0.99		0.88	
Flt Protected		0.98	1.00		0.99	
Satd. Flow (prot)		1807	1835		1617	
Flt Permitted		0.66	1.00		0.99	
Satd. Flow (perm)		1209	1835		1617	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	154	213	453	18	55	380
RTOR Reduction (vph)	0	0	3	0	221	0
Lane Group Flow (vph)	0	367	468	0	214	0
Turn Type	Perm	NA	NA		Prot	
Protected Phases		4	8		6	
Permitted Phases	4					
Actuated Green, G (s)		15.5	15.5		9.3	
Effective Green, g (s)		15.5	15.5		9.3	
Actuated g/C Ratio		0.47	0.47		0.28	
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		571	867		458	
v/s Ratio Prot			0.25		c0.13	
v/s Ratio Perm		c0.30				
v/c Ratio		0.64	0.54		0.47	
Uniform Delay, d1		6.6	6.1		9.7	
Progression Factor		1.00	1.00		1.00	
Incremental Delay, d2		2.5	0.7		0.8	
Delay (s)		9.0	6.8		10.5	
Level of Service		A	A		B	
Approach Delay (s)		9.0	6.8		10.5	
Approach LOS		A	A		B	

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	32.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		

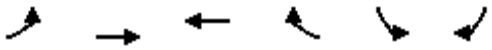
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	343	69	251	67	95	111	612	1617	185	261	1725	294
Future Volume (vph)	343	69	251	67	95	111	612	1617	185	261	1725	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1845	1568	3400	3505	1568	3400	3505	1568	3400	3505	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1752	1845	1568	3400	3505	1568	3400	3505	1568	3400	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	343	69	251	67	95	111	612	1617	185	261	1725	294
RTOR Reduction (vph)	0	0	191	0	0	103	0	0	45	0	0	68
Lane Group Flow (vph)	343	69	60	67	95	8	612	1617	140	261	1725	226
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	26.0	31.3	31.3	4.8	10.1	10.1	24.0	78.3	78.3	13.7	68.0	68.0
Effective Green, g (s)	26.0	31.3	31.3	4.8	10.1	10.1	24.0	78.3	78.3	13.7	68.0	68.0
Actuated g/C Ratio	0.18	0.22	0.22	0.03	0.07	0.07	0.17	0.54	0.54	0.10	0.47	0.47
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	316	400	340	113	245	109	566	1904	852	323	1653	739
v/s Ratio Prot	c0.20	0.04		0.02	c0.03		c0.18	0.46		0.08	c0.49	
v/s Ratio Perm			0.04			0.00			0.09			0.14
v/c Ratio	1.09	0.17	0.18	0.59	0.39	0.07	1.08	0.85	0.16	0.81	1.04	0.31
Uniform Delay, d1	59.0	45.9	45.9	68.7	64.0	62.6	60.0	27.9	16.5	63.9	38.0	23.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	75.4	0.2	0.2	8.1	1.0	0.3	61.7	3.8	0.1	13.8	34.4	0.2
Delay (s)	134.4	46.1	46.2	76.8	65.1	62.9	121.7	31.7	16.6	77.7	72.5	23.7
Level of Service	F	D	D	E	E	E	F	C	B	E	E	C
Approach Delay (s)		91.8			67.1			53.3			66.8	
Approach LOS		F			E			D			E	

Intersection Summary			
HCM 2000 Control Delay	64.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	144.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	100.8%	ICU Level of Service	G
Analysis Period (min)	15		

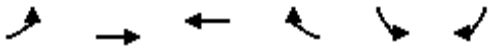
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	461	839	1305	361	29	136
Future Volume (vph)	461	839	1305	361	29	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.97		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3400	3505	3391		1752	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3400	3505	3391		1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	461	839	1305	361	29	136
RTOR Reduction (vph)	0	0	27	0	0	122
Lane Group Flow (vph)	461	839	1639	0	29	14
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	12.0	55.0	39.0		7.1	7.1
Effective Green, g (s)	12.0	55.0	39.0		7.1	7.1
Actuated g/C Ratio	0.17	0.78	0.56		0.10	0.10
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	582	2750	1886		177	158
v/s Ratio Prot	c0.14	0.24	c0.48		c0.02	
v/s Ratio Perm						0.01
v/c Ratio	0.79	0.31	0.87		0.16	0.09
Uniform Delay, d1	27.9	2.1	13.4		28.8	28.6
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	7.3	0.1	4.6		0.4	0.2
Delay (s)	35.1	2.2	17.9		29.2	28.8
Level of Service	D	A	B		C	C
Approach Delay (s)		13.9	17.9		28.9	
Approach LOS		B	B		C	

Intersection Summary			
HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	70.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	158	896	1498	893	315	81
Future Volume (vph)	158	896	1498	893	315	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1752	3505	3505	1568	1752	1568
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1752	3505	3505	1568	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	158	896	1498	893	315	81
RTOR Reduction (vph)	0	0	0	441	0	62
Lane Group Flow (vph)	158	896	1498	452	315	19
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	7.0	40.1	29.1	29.1	14.9	14.9
Effective Green, g (s)	7.0	40.1	29.1	29.1	14.9	14.9
Actuated g/C Ratio	0.11	0.64	0.46	0.46	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	194	2230	1618	724	414	370
v/s Ratio Prot	c0.09	0.26	c0.43		c0.18	
v/s Ratio Perm				0.29		0.01
v/c Ratio	0.81	0.40	0.93	0.62	0.76	0.05
Uniform Delay, d1	27.4	5.6	15.9	12.8	22.4	18.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	22.4	0.1	9.4	1.7	8.0	0.1
Delay (s)	49.7	5.7	25.4	14.5	30.4	18.6
Level of Service	D	A	C	B	C	B
Approach Delay (s)		12.3	21.3		28.0	
Approach LOS		B	C		C	

Intersection Summary			
HCM 2000 Control Delay	19.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	63.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		

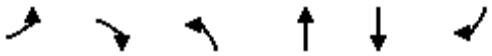
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2694	24	19	2522	91	63
Future Volume (vph)	2694	24	19	2522	91	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3500		1752	3505	1752	1568
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3500		1752	3505	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2694	24	19	2522	91	63
RTOR Reduction (vph)	0	0	0	0	0	57
Lane Group Flow (vph)	2718	0	19	2522	91	6
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases						2
Actuated Green, G (s)	115.4		3.4	122.8	12.5	12.5
Effective Green, g (s)	115.4		3.4	122.8	12.5	12.5
Actuated g/C Ratio	0.81		0.02	0.86	0.09	0.09
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2818		41	3003	152	136
v/s Ratio Prot	c0.78		0.01	c0.72	c0.05	
v/s Ratio Perm						0.00
v/c Ratio	0.96		0.46	0.84	0.60	0.05
Uniform Delay, d1	12.2		69.0	5.2	63.0	59.9
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	10.0		8.1	2.2	6.2	0.1
Delay (s)	22.1		77.1	7.5	69.2	60.1
Level of Service	C		E	A	E	E
Approach Delay (s)	22.1			8.0	65.5	
Approach LOS	C			A	E	

Intersection Summary			
HCM 2000 Control Delay	16.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	143.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	33	37	66	1891	1588	88
Future Volume (vph)	33	37	66	1891	1588	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1568	1752	1845	3477	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1752	1568	1752	1845	3477	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	33	37	66	1891	1588	88
RTOR Reduction (vph)	0	35	0	0	2	0
Lane Group Flow (vph)	33	2	66	1891	1674	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	6.9	6.9	8.6	128.1	115.5	
Effective Green, g (s)	6.9	6.9	8.6	128.1	115.5	
Actuated g/C Ratio	0.05	0.05	0.06	0.90	0.81	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	84	75	105	1652	2808	
v/s Ratio Prot	c0.02		0.04	c1.03	0.48	
v/s Ratio Perm		0.00				
v/c Ratio	0.39	0.02	0.63	1.14	0.60	
Uniform Delay, d1	66.0	64.8	65.6	7.5	5.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.0	0.1	11.2	72.8	0.3	
Delay (s)	69.0	65.0	76.8	80.3	5.4	
Level of Service	E	E	E	F	A	
Approach Delay (s)	66.9			80.1	5.4	
Approach LOS	E			F	A	

Intersection Summary			
HCM 2000 Control Delay	46.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	143.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	109.5%	ICU Level of Service	H
Analysis Period (min)	15		

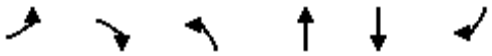
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	38	452	2265	36	151	2089
Future Volume (vph)	38	452	2265	36	151	2089
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.91		0.97	0.91
Frt	1.00	0.85	1.00		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	1568	5024		3400	5036
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	1568	5024		3400	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	38	452	2265	36	151	2089
RTOR Reduction (vph)	0	204	2	0	0	0
Lane Group Flow (vph)	38	248	2299	0	151	2089
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Actuated Green, G (s)	14.0	14.0	42.0		8.8	54.8
Effective Green, g (s)	14.0	14.0	42.0		8.8	54.8
Actuated g/C Ratio	0.18	0.18	0.55		0.11	0.71
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	319	285	2747		389	3593
v/s Ratio Prot	0.02		c0.46		0.04	c0.41
v/s Ratio Perm		c0.16				
v/c Ratio	0.12	0.87	0.84		0.39	0.58
Uniform Delay, d1	26.2	30.5	14.5		31.5	5.4
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.2	24.0	2.4		0.6	0.2
Delay (s)	26.4	54.5	16.9		32.1	5.6
Level of Service	C	D	B		C	A
Approach Delay (s)	52.3		16.9			7.4
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	76.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	540	12	224	1446	858	607
Future Volume (vph)	540	12	224	1446	858	607
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	0.94	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1568	1752	3505	3287	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1752	1568	1752	3505	3287	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	540	12	224	1446	858	607
RTOR Reduction (vph)	0	4	0	0	160	0
Lane Group Flow (vph)	540	8	224	1446	1305	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	24.0	24.0	11.0	48.0	33.0	
Effective Green, g (s)	24.0	24.0	11.0	48.0	33.0	
Actuated g/C Ratio	0.30	0.30	0.14	0.60	0.41	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	525	470	240	2103	1355	
v/s Ratio Prot	c0.31		c0.13	0.41	c0.40	
v/s Ratio Perm		0.00				
v/c Ratio	1.03	0.02	0.93	0.69	0.96	
Uniform Delay, d1	28.0	19.7	34.1	10.9	22.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	46.8	0.0	40.0	1.0	16.4	
Delay (s)	74.8	19.7	74.1	11.8	39.3	
Level of Service	E	B	E	B	D	
Approach Delay (s)	73.6			20.2	39.3	
Approach LOS	E			C	D	

Intersection Summary			
HCM 2000 Control Delay	35.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	103	3033	16	169	1293
Future Volume (vph)	0	103	3033	16	169	1293
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	0.91		1.00	0.91
Frt		0.85	1.00		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		1568	5032		1752	5036
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		1568	5032		1752	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	103	3033	16	169	1293
RTOR Reduction (vph)	0	97	0	0	0	0
Lane Group Flow (vph)	0	6	3049	0	169	1293
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		6		5	2
Permitted Phases		8				
Actuated Green, G (s)		4.7	56.0		9.0	69.0
Effective Green, g (s)		4.7	56.0		9.0	69.0
Actuated g/C Ratio		0.06	0.69		0.11	0.84
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		90	3449		192	4253
v/s Ratio Prot			c0.61		c0.10	0.26
v/s Ratio Perm		c0.00				
v/c Ratio		0.07	0.88		0.88	0.30
Uniform Delay, d1		36.4	10.3		35.8	1.3
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.3	3.0		34.1	0.0
Delay (s)		36.7	13.3		69.9	1.4
Level of Service		D	B		E	A
Approach Delay (s)	36.7		13.3			9.3
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	12.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	81.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	63	0	3015	146	84	1582
Future Volume (vph)	63	0	3015	146	84	1582
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0	4.0
Lane Util. Factor	1.00		0.91		1.00	0.91
Frt	1.00		0.99		1.00	1.00
Flt Protected	0.95		1.00		0.95	1.00
Satd. Flow (prot)	1752		5001		1752	5036
Flt Permitted	0.95		1.00		0.95	1.00
Satd. Flow (perm)	1752		5001		1752	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	63	0	3015	146	84	1582
RTOR Reduction (vph)	0	0	4	0	0	0
Lane Group Flow (vph)	63	0	3157	0	84	1582
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Actuated Green, G (s)	7.4		64.2		5.0	73.2
Effective Green, g (s)	7.4		64.2		5.0	73.2
Actuated g/C Ratio	0.08		0.72		0.06	0.83
Clearance Time (s)	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	146		3623		98	4160
v/s Ratio Prot	c0.04		c0.63		c0.05	0.31
v/s Ratio Perm						
v/c Ratio	0.43		0.87		0.86	0.38
Uniform Delay, d1	38.6		9.1		41.4	2.0
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	2.0		2.6		48.0	0.1
Delay (s)	40.6		11.7		89.4	2.0
Level of Service	D		B		F	A
Approach Delay (s)	40.6		11.7			6.4
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	10.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	88.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.6%	ICU Level of Service	D
Analysis Period (min)	15		

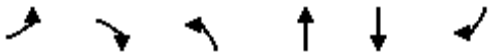
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	356	423	2840	459	697	733
Future Volume (vph)	356	423	2840	459	697	733
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.91		1.00	0.91
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	1568	4931		1752	5036
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	1568	4931		1752	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	356	423	2840	459	697	733
RTOR Reduction (vph)	0	114	15	0	0	0
Lane Group Flow (vph)	356	309	3284	0	697	733
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		3				
Actuated Green, G (s)	22.0	22.0	73.0		43.0	120.0
Effective Green, g (s)	22.0	22.0	73.0		43.0	120.0
Actuated g/C Ratio	0.15	0.15	0.49		0.29	0.80
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	256	229	2399		502	4028
v/s Ratio Prot	c0.20		c0.67		c0.40	0.15
v/s Ratio Perm		0.20				
v/c Ratio	1.39	1.35	1.37		1.39	0.18
Uniform Delay, d1	64.0	64.0	38.5		53.5	3.5
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	198.0	182.6	168.8		186.8	0.0
Delay (s)	262.0	246.6	207.3		240.3	3.5
Level of Service	F	F	F		F	A
Approach Delay (s)	253.7		207.3			118.9
Approach LOS	F		F			F

Intersection Summary			
HCM 2000 Control Delay	190.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.38		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	133.4%	ICU Level of Service	H
Analysis Period (min)	15		

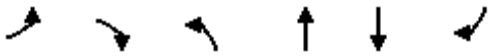
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	118	104	83	2976	915	82
Future Volume (vph)	118	104	83	2976	915	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1568	1752	5036	4974	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1752	1568	1752	5036	4974	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	118	104	83	2976	915	82
RTOR Reduction (vph)	0	90	0	0	13	0
Lane Group Flow (vph)	118	14	83	2976	984	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	7.9	7.9	4.3	43.0	34.7	
Effective Green, g (s)	7.9	7.9	4.3	43.0	34.7	
Actuated g/C Ratio	0.13	0.13	0.07	0.73	0.59	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	234	210	127	3676	2930	
v/s Ratio Prot	c0.07		0.05	c0.59	0.20	
v/s Ratio Perm		0.01				
v/c Ratio	0.50	0.07	0.65	0.81	0.34	
Uniform Delay, d1	23.7	22.3	26.6	5.2	6.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.7	0.1	11.5	1.4	0.1	
Delay (s)	25.4	22.4	38.0	6.6	6.3	
Level of Service	C	C	D	A	A	
Approach Delay (s)	24.0			7.5	6.3	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	8.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	58.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.7%	ICU Level of Service	C
Analysis Period (min)	15		

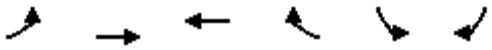
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	127	203	617	1701	1253	346
Future Volume (vph)	127	203	617	1701	1253	346
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1568	1752	3505	3391	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1752	1568	1752	3505	3391	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	127	203	617	1701	1253	346
RTOR Reduction (vph)	0	166	0	0	18	0
Lane Group Flow (vph)	127	37	617	1701	1581	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	13.6	13.6	49.0	117.0	64.0	
Effective Green, g (s)	13.6	13.6	49.0	117.0	64.0	
Actuated g/C Ratio	0.10	0.10	0.35	0.84	0.46	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	171	153	619	2958	1565	
v/s Ratio Prot	c0.07		c0.35	0.49	c0.47	
v/s Ratio Perm		0.02				
v/c Ratio	0.74	0.24	1.00	0.58	1.01	
Uniform Delay, d1	60.8	57.7	44.7	3.3	37.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	15.9	0.8	35.1	0.3	25.3	
Delay (s)	76.7	58.6	79.8	3.5	62.6	
Level of Service	E	E	E	A	E	
Approach Delay (s)	65.6			23.8	62.6	
Approach LOS	E			C	E	

Intersection Summary			
HCM 2000 Control Delay	41.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	138.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.9%	ICU Level of Service	F
Analysis Period (min)	15		

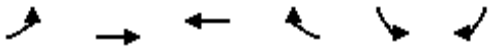
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	996	1289	2654	95	78	589
Future Volume (vph)	996	1289	2654	95	78	589
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	0.95	0.91		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3400	3505	5010		1752	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3400	3505	5010		1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	996	1289	2654	95	78	589
RTOR Reduction (vph)	0	0	3	0	0	314
Lane Group Flow (vph)	996	1289	2746	0	78	275
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	39.0	117.0	74.0		25.0	25.0
Effective Green, g (s)	39.0	117.0	74.0		25.0	25.0
Actuated g/C Ratio	0.26	0.78	0.49		0.17	0.17
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	884	2733	2471		292	261
v/s Ratio Prot	c0.29	0.37	c0.55		0.04	
v/s Ratio Perm						c0.18
v/c Ratio	1.13	0.47	1.11		0.27	1.05
Uniform Delay, d1	55.5	5.7	38.0		54.5	62.5
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	71.5	0.1	56.6		0.5	70.3
Delay (s)	127.0	5.9	94.6		55.0	132.8
Level of Service	F	A	F		E	F
Approach Delay (s)		58.7	94.6		123.7	
Approach LOS		E	F		F	

Intersection Summary			
HCM 2000 Control Delay	83.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.5%	ICU Level of Service	F
Analysis Period (min)	15		

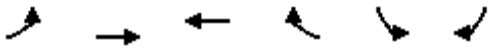
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	371	997	2520	31	179	208
Future Volume (vph)	371	997	2520	31	179	208
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3400	3505	3505	1568	3400	1568
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3400	3505	3505	1568	3400	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	371	997	2520	31	179	208
RTOR Reduction (vph)	0	0	0	5	0	129
Lane Group Flow (vph)	371	997	2520	26	179	79
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	15.0	127.0	108.0	108.0	12.8	12.8
Effective Green, g (s)	15.0	127.0	108.0	108.0	12.8	12.8
Actuated g/C Ratio	0.10	0.86	0.73	0.73	0.09	0.09
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	345	3011	2561	1145	294	135
v/s Ratio Prot	c0.11	0.28	c0.72		c0.05	
v/s Ratio Perm				0.02		0.05
v/c Ratio	1.08	0.33	0.98	0.02	0.61	0.59
Uniform Delay, d1	66.4	2.0	19.1	5.4	65.1	65.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	70.0	0.1	14.1	0.0	3.5	6.4
Delay (s)	136.4	2.1	33.2	5.5	68.6	71.3
Level of Service	F	A	C	A	E	E
Approach Delay (s)		38.5	32.9		70.1	
Approach LOS		D	C		E	

Intersection Summary			
HCM 2000 Control Delay	38.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	147.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	89	1085	2296	3	6	139
Future Volume (vph)	89	1085	2296	3	6	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3504		1752	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3504		1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	89	1085	2296	3	6	139
RTOR Reduction (vph)	0	0	0	0	0	82
Lane Group Flow (vph)	89	1085	2299	0	6	57
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	6.0	84.7	74.7		9.3	9.3
Effective Green, g (s)	6.0	84.7	74.7		9.3	9.3
Actuated g/C Ratio	0.06	0.83	0.73		0.09	0.09
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	103	2910	2566		159	142
v/s Ratio Prot	c0.05	0.31	c0.66		0.00	
v/s Ratio Perm						c0.04
v/c Ratio	0.86	0.37	0.90		0.04	0.40
Uniform Delay, d1	47.6	2.1	10.6		42.3	43.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	48.2	0.1	4.5		0.1	1.9
Delay (s)	95.8	2.2	15.2		42.4	45.6
Level of Service	F	A	B		D	D
Approach Delay (s)		9.3	15.2		45.5	
Approach LOS		A	B		D	

Intersection Summary			
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	807	166	325	1257	189	454
Future Volume (vph)	807	166	325	1257	189	454
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3505	1568	3400	3505	3400	1568
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3505	1568	3400	3505	3400	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	807	166	325	1257	189	454
RTOR Reduction (vph)	0	108	0	0	0	284
Lane Group Flow (vph)	807	58	325	1257	189	170
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	16.3	16.3	7.9	28.2	10.1	10.1
Effective Green, g (s)	16.3	16.3	7.9	28.2	10.1	10.1
Actuated g/C Ratio	0.35	0.35	0.17	0.61	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1233	552	580	2134	741	342
v/s Ratio Prot	0.23		0.10	c0.36	0.06	
v/s Ratio Perm		0.04				c0.11
v/c Ratio	0.65	0.11	0.56	0.59	0.26	0.50
Uniform Delay, d1	12.6	10.1	17.6	5.5	15.0	15.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.3	0.1	1.2	0.4	0.2	1.1
Delay (s)	13.9	10.2	18.8	5.9	15.2	17.0
Level of Service	B	B	B	A	B	B
Approach Delay (s)	13.3			8.6	16.5	
Approach LOS	B			A	B	

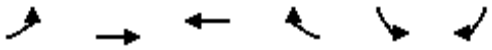
Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	46.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1261	0	310	1581	0	123
Future Volume (vph)	1261	0	310	1581	0	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0		4.0
Lane Util. Factor	0.95		1.00	0.95		1.00
Frt	1.00		1.00	1.00		0.85
Flt Protected	1.00		0.95	1.00		1.00
Satd. Flow (prot)	3505		1752	3505		1568
Flt Permitted	1.00		0.21	1.00		1.00
Satd. Flow (perm)	3505		382	3505		1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1261	0	310	1581	0	123
RTOR Reduction (vph)	0	0	0	0	0	113
Lane Group Flow (vph)	1261	0	310	1581	0	10
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	76.0		76.0	76.0		7.0
Effective Green, g (s)	76.0		76.0	76.0		7.0
Actuated g/C Ratio	0.84		0.84	0.84		0.08
Clearance Time (s)	4.0		4.0	4.0		4.0
Vehicle Extension (s)	3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	2927		319	2927		120
v/s Ratio Prot	0.36			0.45		
v/s Ratio Perm			c0.81			c0.01
v/c Ratio	0.43		0.97	0.54		0.09
Uniform Delay, d1	1.9		6.6	2.3		39.0
Progression Factor	1.00		1.00	1.00		1.00
Incremental Delay, d2	0.1		42.5	0.2		0.3
Delay (s)	2.0		49.1	2.5		39.3
Level of Service	A		D	A		D
Approach Delay (s)	2.0			10.1	39.3	
Approach LOS	A			B	D	

Intersection Summary			
HCM 2000 Control Delay	8.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	91.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	180	919	2179	42	215	167
Future Volume (vph)	180	919	2179	42	215	167
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3495		1752	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3495		1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	180	919	2179	42	215	167
RTOR Reduction (vph)	0	0	1	0	0	123
Lane Group Flow (vph)	180	919	2220	0	215	44
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	10.0	86.0	72.0		15.5	15.5
Effective Green, g (s)	10.0	86.0	72.0		15.5	15.5
Actuated g/C Ratio	0.09	0.79	0.66		0.14	0.14
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	160	2752	2298		248	221
v/s Ratio Prot	c0.10	0.26	c0.64		c0.12	
v/s Ratio Perm						0.03
v/c Ratio	1.12	0.33	0.97		0.87	0.20
Uniform Delay, d1	49.8	3.4	17.6		46.0	41.5
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	108.7	0.1	11.8		25.7	0.4
Delay (s)	158.4	3.5	29.4		71.7	42.0
Level of Service	F	A	C		E	D
Approach Delay (s)		28.9	29.4		58.7	
Approach LOS		C	C		E	

Intersection Summary			
HCM 2000 Control Delay	32.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	109.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	651	170	180	813	860	239	1794	159	468	811	72
Future Volume (veh/h)	53	651	170	180	813	860	239	1794	159	468	811	72
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1827	1827	1827	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	53	651	170	180	813	860	239	1794	159	468	811	72
Adj No. of Lanes	1	2	0	1	1	1	1	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	4	4	4	4	4	4
Cap, veh/h	78	741	193	204	625	531	265	1448	128	331	1737	541
Arrive On Green	0.04	0.27	0.27	0.12	0.34	0.34	0.15	0.31	0.31	0.19	0.35	0.35
Sat Flow, veh/h	1757	2752	718	1740	1827	1553	1740	4667	412	1740	4988	1553
Grp Volume(v), veh/h	53	414	407	180	813	860	239	1276	677	468	811	72
Grp Sat Flow(s),veh/h/ln	1757	1752	1718	1740	1827	1553	1740	1663	1754	1740	1663	1553
Q Serve(g_s), s	4.2	32.1	32.1	14.4	48.5	30.3	19.1	44.0	44.0	27.0	17.9	4.5
Cycle Q Clear(g_c), s	4.2	32.1	32.1	14.4	48.5	30.3	19.1	44.0	44.0	27.0	17.9	4.5
Prop In Lane	1.00		0.42	1.00		1.00	1.00		0.24	1.00		1.00
Lane Grp Cap(c), veh/h	78	472	463	204	625	531	265	1032	544	331	1737	541
V/C Ratio(X)	0.68	0.88	0.88	0.88	1.30	1.62	0.90	1.24	1.24	1.41	0.47	0.13
Avail Cap(c_a), veh/h	198	531	521	245	625	531	380	1032	544	331	1737	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.8	49.6	49.6	61.6	46.6	18.2	59.0	48.9	48.9	57.4	36.0	31.6
Incr Delay (d2), s/veh	10.0	14.2	14.6	26.1	146.7	286.9	18.3	115.1	124.1	202.7	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	17.4	17.1	8.4	49.8	55.2	10.6	36.6	39.9	31.5	8.3	1.9
LnGrp Delay(d),s/veh	76.8	63.8	64.2	87.7	193.4	305.1	77.3	164.0	173.0	260.0	36.2	31.7
LnGrp LOS	E	E	E	F	F	F	E	F	F	F	D	C
Approach Vol, veh/h		874			1853			2192			1351	
Approach Delay, s/veh		64.8			235.0			157.3			113.5	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	31.0	48.0	20.6	42.2	25.6	53.4	10.3	52.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	27.0	44.0	20.0	43.0	31.0	40.0	16.0	47.0
Max Q Clear Time (g_c+I1), s	29.0	46.0	16.4	34.1	21.1	19.9	6.2	50.5
Green Ext Time (p_c), s	0.0	0.0	0.2	4.0	0.5	7.7	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	157.9
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	376	687	25	23	605	602	71	1392	85	287	502	208
Future Volume (veh/h)	376	687	25	23	605	602	71	1392	85	287	502	208
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	376	687	25	23	605	602	71	1392	85	287	502	208
Adj No. of Lanes	1	2	0	1	2	1	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	340	1415	51	29	818	366	109	1308	80	248	1507	674
Arrive On Green	0.19	0.41	0.41	0.02	0.23	0.23	0.03	0.39	0.39	0.07	0.43	0.43
Sat Flow, veh/h	1757	3449	125	1757	3505	1568	3375	3324	202	3375	3471	1553
Grp Volume(v), veh/h	376	349	363	23	605	602	71	725	752	287	502	208
Grp Sat Flow(s),veh/h/ln	1757	1752	1823	1757	1752	1568	1688	1736	1791	1688	1736	1553
Q Serve(g_s), s	29.0	22.0	22.0	2.0	24.0	35.0	3.1	59.0	59.0	11.0	14.3	13.1
Cycle Q Clear(g_c), s	29.0	22.0	22.0	2.0	24.0	35.0	3.1	59.0	59.0	11.0	14.3	13.1
Prop In Lane	1.00		0.07	1.00		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	340	719	748	29	818	366	109	683	705	248	1507	674
V/C Ratio(X)	1.11	0.49	0.49	0.80	0.74	1.65	0.65	1.06	1.07	1.16	0.33	0.31
Avail Cap(c_a), veh/h	340	719	748	70	818	366	135	683	705	248	1507	674
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.5	32.6	32.6	73.5	53.3	57.5	71.7	45.5	45.5	69.5	28.1	27.7
Incr Delay (d2), s/veh	80.8	0.5	0.5	37.4	3.6	302.5	7.4	52.1	53.4	107.2	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.7	10.8	11.2	1.3	12.0	45.9	1.6	38.1	39.6	8.8	6.9	5.6
LnGrp Delay(d),s/veh	141.3	33.1	33.1	110.9	56.9	360.0	79.2	97.6	98.9	176.7	28.2	28.0
LnGrp LOS	F	C	C	F	E	F	E	F	F	F	C	C
Approach Vol, veh/h		1088			1230			1548			997	
Approach Delay, s/veh		70.5			206.2			97.3			70.9	
Approach LOS		E			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	63.0	6.5	65.5	8.9	69.1	33.0	39.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	11.0	59.0	6.0	58.0	6.0	64.0	29.0	35.0
Max Q Clear Time (g_c+I1), s	13.0	61.0	4.0	24.0	5.1	16.3	31.0	37.0
Green Ext Time (p_c), s	0.0	0.0	0.0	15.1	0.0	25.3	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		113.5
HCM 2010 LOS		F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	1397	107	260	1572	145	62	622	181	74	497	3
Future Volume (veh/h)	11	1397	107	260	1572	145	62	622	181	74	497	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1900	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	11	1397	107	260	1572	145	62	622	181	74	497	3
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	18	1369	613	286	1764	161	79	694	310	95	738	4
Arrive On Green	0.01	0.40	0.40	0.17	0.56	0.56	0.05	0.20	0.20	0.05	0.21	0.21
Sat Flow, veh/h	1707	3406	1524	1707	3156	288	1757	3505	1568	1757	3572	22
Grp Volume(v), veh/h	11	1397	107	260	842	875	62	622	181	74	244	256
Grp Sat Flow(s),veh/h/ln	1707	1703	1524	1707	1703	1742	1757	1752	1568	1757	1752	1841
Q Serve(g_s), s	0.6	36.0	4.0	13.4	38.6	39.9	3.1	15.5	9.4	3.7	11.5	11.5
Cycle Q Clear(g_c), s	0.6	36.0	4.0	13.4	38.6	39.9	3.1	15.5	9.4	3.7	11.5	11.5
Prop In Lane	1.00		1.00	1.00		0.17	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	18	1369	613	286	952	973	79	694	310	95	362	380
V/C Ratio(X)	0.60	1.02	0.17	0.91	0.88	0.90	0.78	0.90	0.58	0.78	0.67	0.67
Avail Cap(c_a), veh/h	76	1369	613	286	952	973	118	705	315	98	362	380
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.1	26.8	17.2	36.6	17.2	17.5	42.3	35.0	32.6	41.8	32.7	32.7
Incr Delay (d2), s/veh	27.9	29.5	0.1	30.8	9.9	11.2	17.9	14.1	2.7	31.9	4.8	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	22.4	1.7	8.7	20.6	22.0	1.9	8.9	4.3	2.6	6.0	6.3
LnGrp Delay(d),s/veh	72.0	56.3	17.4	67.4	27.2	28.7	60.2	49.1	35.2	73.7	37.6	37.4
LnGrp LOS	E	F	B	E	C	C	E	D	D	E	D	D
Approach Vol, veh/h		1515			1977			865			574	
Approach Delay, s/veh		53.7			33.1			47.0			42.1	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	21.7	19.0	40.0	8.0	22.5	5.0	54.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	18.0	15.0	36.0	6.0	17.0	4.0	47.0
Max Q Clear Time (g_c+I1), s	5.7	17.5	15.4	38.0	5.1	13.5	2.6	41.9
Green Ext Time (p_c), s	0.0	0.2	0.0	0.0	0.0	2.3	0.0	5.0

Intersection Summary	
HCM 2010 Ctrl Delay	42.9
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	608	264	124	975	125	439	431	103	23	455	33
Future Volume (veh/h)	39	608	264	124	975	125	439	431	103	23	455	33
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	39	608	264	124	975	125	439	431	103	23	455	33
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	50	978	437	156	1060	136	475	1480	662	35	602	269
Arrive On Green	0.03	0.28	0.28	0.09	0.34	0.34	0.27	0.42	0.42	0.02	0.17	0.17
Sat Flow, veh/h	1757	3505	1568	1757	3126	401	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	39	608	264	124	546	554	439	431	103	23	455	33
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1774	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	1.9	12.7	12.3	5.8	25.1	25.2	20.4	6.8	3.4	1.1	10.4	1.5
Cycle Q Clear(g_c), s	1.9	12.7	12.3	5.8	25.1	25.2	20.4	6.8	3.4	1.1	10.4	1.5
Prop In Lane	1.00		1.00	1.00		0.23	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	50	978	437	156	594	601	475	1480	662	35	602	269
V/C Ratio(X)	0.78	0.62	0.60	0.80	0.92	0.92	0.92	0.29	0.16	0.66	0.76	0.12
Avail Cap(c_a), veh/h	84	978	437	209	605	613	502	1480	662	126	710	318
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.5	26.4	26.2	37.5	26.6	26.7	29.8	16.0	15.0	40.9	33.1	29.4
Incr Delay (d2), s/veh	22.5	1.2	2.3	14.2	19.2	19.1	22.5	0.1	0.1	19.4	3.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	6.3	5.6	3.4	15.3	15.5	12.8	3.3	1.5	0.7	5.3	0.7
LnGrp Delay(d),s/veh	63.0	27.6	28.6	51.7	45.9	45.8	52.3	16.1	15.1	60.3	37.0	29.6
LnGrp LOS	E	C	C	D	D	D	D	B	B	E	D	C
Approach Vol, veh/h		911			1224			973			511	
Approach Delay, s/veh		29.4			46.4			32.3			37.6	
Approach LOS		C			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.7	39.4	11.4	27.4	26.7	18.4	6.4	32.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	35.0	10.0	23.0	24.0	17.0	4.0	29.0
Max Q Clear Time (g_c+I1), s	3.1	8.8	7.8	14.7	22.4	12.4	3.9	27.2
Green Ext Time (p_c), s	0.0	7.1	0.1	6.4	0.3	2.0	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	37.1
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	719	87	121	839	239	59	855	208	152	317	22
Future Volume (veh/h)	90	719	87	121	839	239	59	855	208	152	317	22
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	90	719	87	121	839	239	59	855	208	152	317	22
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	114	926	414	149	995	445	74	977	437	178	1186	531
Arrive On Green	0.07	0.26	0.26	0.08	0.28	0.28	0.04	0.28	0.28	0.10	0.34	0.34
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	90	719	87	121	839	239	59	855	208	152	317	22
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1568	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	3.0	11.2	2.6	4.0	13.3	7.6	2.0	13.8	6.5	5.0	3.9	0.6
Cycle Q Clear(g_c), s	3.0	11.2	2.6	4.0	13.3	7.6	2.0	13.8	6.5	5.0	3.9	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	114	926	414	149	995	445	74	977	437	178	1186	531
V/C Ratio(X)	0.79	0.78	0.21	0.81	0.84	0.54	0.80	0.87	0.48	0.85	0.27	0.04
Avail Cap(c_a), veh/h	119	949	425	149	1008	451	178	1008	451	178	1186	531
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.2	20.1	16.9	26.6	19.9	17.9	28.1	20.3	17.7	26.1	14.2	13.1
Incr Delay (d2), s/veh	27.9	4.0	0.2	28.1	6.6	1.2	17.6	8.5	0.8	30.6	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	5.9	1.1	3.1	7.3	3.4	1.3	7.8	2.9	4.0	1.9	0.2
LnGrp Delay(d),s/veh	55.1	24.1	17.2	54.7	26.5	19.1	45.7	28.8	18.5	56.7	14.3	13.1
LnGrp LOS	E	C	B	D	C	B	D	C	B	E	B	B
Approach Vol, veh/h		896			1199			1122			491	
Approach Delay, s/veh		26.6			27.9			27.8			27.4	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	20.5	9.0	19.6	6.5	24.0	7.8	20.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	17.0	5.0	16.0	6.0	17.0	4.0	17.0
Max Q Clear Time (g_c+I1), s	7.0	15.8	6.0	13.2	4.0	5.9	5.0	15.3
Green Ext Time (p_c), s	0.0	0.7	0.0	2.3	0.0	6.4	0.0	1.4

Intersection Summary	
HCM 2010 Ctrl Delay	27.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	347	491	132	253	482	724	72	3426	490	574	2962	531
Future Volume (veh/h)	347	491	132	253	482	724	72	3426	490	574	2962	531
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	347	491	132	253	482	724	72	3426	490	574	2962	531
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	192	885	396	192	885	547	78	2290	713	325	2654	826
Arrive On Green	0.06	0.25	0.25	0.06	0.25	0.25	0.02	0.46	0.46	0.10	0.53	0.53
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	347	491	132	253	482	724	72	3426	490	574	2962	531
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	8.5	18.3	10.3	8.5	17.9	38.0	3.2	69.1	37.5	14.5	80.1	36.6
Cycle Q Clear(g_c), s	8.5	18.3	10.3	8.5	17.9	38.0	3.2	69.1	37.5	14.5	80.1	36.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	192	885	396	192	885	547	78	2290	713	325	2654	826
V/C Ratio(X)	1.80	0.55	0.33	1.31	0.54	1.32	0.92	1.50	0.69	1.77	1.12	0.64
Avail Cap(c_a), veh/h	192	885	396	192	885	547	78	2290	713	325	2654	826
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.0	48.9	45.9	71.0	48.8	49.0	73.4	40.7	32.2	68.0	35.2	25.0
Incr Delay (d2), s/veh	381.1	0.5	0.2	173.4	0.4	158.1	72.9	225.6	2.3	356.6	58.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.2	8.9	4.5	8.6	8.8	46.7	2.3	79.4	16.6	22.8	50.9	16.0
LnGrp Delay(d),s/veh	452.1	49.4	46.1	244.4	49.1	207.1	146.2	266.3	34.5	424.6	93.2	26.3
LnGrp LOS	F	D	D	F	D	F	F	F	C	F	F	C
Approach Vol, veh/h		970			1459			3988			4067	
Approach Delay, s/veh		193.0			161.4			235.6			131.2	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	84.9	14.0	42.6	20.0	73.9	14.0	42.6
Change Period (Y+Rc), s	5.5	4.8	5.5	* 4.6	5.5	* 4.8	5.5	4.6
Max Green Setting (Gmax), s	3.5	79.9	8.5	* 38	14.5	* 69	8.5	37.7
Max Q Clear Time (g_c+I1), s	5.2	82.1	10.5	40.0	16.5	71.1	10.5	20.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1

Intersection Summary		
HCM 2010 Ctrl Delay		180.9
HCM 2010 LOS		F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	2	27	0	87	0	3397	150	18	2712	6
Future Volume (veh/h)	10	0	2	27	0	87	0	3397	150	18	2712	6
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	10	0	2	27	0	87	0	3397	150	18	2712	6
Adj No. of Lanes	0	1	0	1	0	2	1	3	1	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	12	0	2	79	0	141	2	3675	1144	21	4093	9
Arrive On Green	0.01	0.00	0.01	0.04	0.00	0.04	0.00	0.74	0.74	0.01	0.80	0.80
Sat Flow, veh/h	1435	0	287	1757	0	3136	1740	4988	1553	1740	5139	11
Grp Volume(v), veh/h	12	0	0	27	0	87	0	3397	150	18	1754	964
Grp Sat Flow(s),veh/h/ln	1722	0	0	1757	0	1568	1740	1663	1553	1740	1663	1825
Q Serve(g_s), s	0.7	0.0	0.0	1.6	0.0	2.9	0.0	59.9	3.0	1.1	24.2	24.3
Cycle Q Clear(g_c), s	0.7	0.0	0.0	1.6	0.0	2.9	0.0	59.9	3.0	1.1	24.2	24.3
Prop In Lane	0.83		0.17	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	14	0	0	79	0	141	2	3675	1144	21	2649	1454
V/C Ratio(X)	0.83	0.00	0.00	0.34	0.00	0.62	0.00	0.92	0.13	0.86	0.66	0.66
Avail Cap(c_a), veh/h	48	0	0	198	0	353	49	3795	1182	49	2649	1454
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.8	0.0	0.0	49.4	0.0	50.0	0.0	11.6	4.1	52.6	4.7	4.7
Incr Delay (d2), s/veh	33.4	0.0	0.0	1.0	0.0	1.6	0.0	4.9	0.2	29.1	1.1	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	0.8	0.0	1.3	0.0	28.4	1.3	0.7	11.1	12.6
LnGrp Delay(d),s/veh	86.1	0.0	0.0	50.3	0.0	51.7	0.0	16.5	4.3	81.6	5.7	6.6
LnGrp LOS	F			D		D		B	A	F	A	A
Approach Vol, veh/h		12			114			3547			2736	
Approach Delay, s/veh		86.1			51.3			16.0			6.5	
Approach LOS		F			D			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	89.9		6.4	6.4	83.5		10.3
Change Period (Y+Rc), s	* 4.6	5.0		5.5	* 5.1	* 5		5.5
Max Green Setting (Gmax), s	* 3	81.4		3.0	* 3	* 81		12.0
Max Q Clear Time (g_c+I1), s	0.0	26.3		2.7	3.1	61.9		4.9
Green Ext Time (p_c), s	0.0	54.9		0.0	0.0	16.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.7
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	308	23	151	409	890	34	2803	226	507	2340	0
Future Volume (veh/h)	0	308	23	151	409	890	34	2803	226	507	2340	0
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1845	1845	1845	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	0	308	23	151	409	890	34	2803	226	507	2340	0
Adj No. of Lanes	2	2	1	2	2	1	2	3	0	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	2	500	224	132	777	597	60	2371	186	536	3212	0
Arrive On Green	0.00	0.14	0.14	0.04	0.22	0.22	0.02	0.50	0.50	0.16	0.64	0.00
Sat Flow, veh/h	3375	3471	1553	3408	3505	1568	3375	4716	371	3375	5152	0
Grp Volume(v), veh/h	0	308	23	151	409	890	34	1955	1074	507	2340	0
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1704	1752	1568	1688	1663	1762	1688	1663	0
Q Serve(g_s), s	0.0	11.8	1.8	5.5	14.6	31.4	1.4	71.2	71.2	21.1	44.6	0.0
Cycle Q Clear(g_c), s	0.0	11.8	1.8	5.5	14.6	31.4	1.4	71.2	71.2	21.1	44.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		0.00
Lane Grp Cap(c), veh/h	2	500	224	132	777	597	60	1672	886	536	3212	0
V/C Ratio(X)	0.00	0.62	0.10	1.14	0.53	1.49	0.57	1.17	1.21	0.95	0.73	0.00
Avail Cap(c_a), veh/h	72	711	318	132	777	597	100	1672	886	536	3212	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	56.9	52.6	68.1	48.5	43.9	69.0	35.2	35.2	58.9	16.9	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.1	121.0	0.3	229.8	3.1	83.0	106.2	25.6	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.7	0.8	4.8	7.1	61.4	0.7	51.8	60.6	11.8	20.6	0.0
LnGrp Delay(d),s/veh	0.0	57.4	52.7	189.0	48.9	273.7	72.1	118.2	141.4	84.5	17.7	0.0
LnGrp LOS		E	D	F	D	F	E	F	F	F	B	
Approach Vol, veh/h		331			1450			3063			2847	
Approach Delay, s/veh		57.1			201.5			125.8			29.6	
Approach LOS		E			F			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	96.5	0.0	37.1	28.0	76.5	11.0	26.1
Change Period (Y+Rc), s	5.5	5.3	5.5	* 5.7	5.5	* 5.3	5.5	* 5.7
Max Green Setting (Gmax), s	4.2	89.4	3.0	* 31	22.5	* 71	5.5	* 29
Max Q Clear Time (g_c+I1), s	3.4	46.6	0.0	33.4	23.1	73.2	7.5	13.8
Green Ext Time (p_c), s	0.0	36.1	0.0	0.0	0.0	0.0	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	101.5
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	46	103	2891	24	61	2503
Future Volume (veh/h)	46	103	2891	24	61	2503
Number	3	18	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1827	1900	1827	1827
Adj Flow Rate, veh/h	46	103	2891	24	61	2503
Adj No. of Lanes	1	1	3	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	4	4	4	4
Cap, veh/h	103	92	3585	30	77	2804
Arrive On Green	0.06	0.06	0.70	0.70	0.04	0.81
Sat Flow, veh/h	1757	1568	5267	42	1740	3563
Grp Volume(v), veh/h	46	103	1881	1034	61	2503
Grp Sat Flow(s),veh/h/ln	1757	1568	1663	1819	1740	1736
Q Serve(g_s), s	2.0	4.5	29.9	30.1	2.7	38.3
Cycle Q Clear(g_c), s	2.0	4.5	29.9	30.1	2.7	38.3
Prop In Lane	1.00	1.00		0.02	1.00	
Lane Grp Cap(c), veh/h	103	92	2336	1278	77	2804
V/C Ratio(X)	0.45	1.12	0.81	0.81	0.79	0.89
Avail Cap(c_a), veh/h	103	92	2336	1278	361	2937
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.1	36.3	7.9	7.9	36.5	5.1
Incr Delay (d2), s/veh	1.1	131.7	2.0	3.7	6.6	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	5.3	14.0	16.0	1.4	18.8
LnGrp Delay(d),s/veh	36.2	168.0	9.9	11.6	43.0	8.7
LnGrp LOS	D	F	A	B	D	A
Approach Vol, veh/h	149		2915			2564
Approach Delay, s/veh	127.3		10.5			9.5
Approach LOS	F		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		67.0			8.1	58.9		10.0
Change Period (Y+Rc), s		4.8			* 4.7	4.8		5.5
Max Green Setting (Gmax), s		65.2			* 16	53.4		4.5
Max Q Clear Time (g_c+I1), s		40.3			4.7	32.1		6.5
Green Ext Time (p_c), s		22.0			0.0	19.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.1
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	1543	601	101	1965	990	778	1964	67	1065	1570	189
Future Volume (veh/h)	89	1543	601	101	1965	990	778	1964	67	1065	1570	189
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	89	1543	601	101	1965	990	778	1964	67	1065	1570	189
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	4	4	4	4	4	4
Cap, veh/h	68	1334	597	80	1357	607	425	1380	430	569	1586	494
Arrive On Green	0.02	0.39	0.39	0.02	0.40	0.40	0.13	0.28	0.28	0.17	0.32	0.32
Sat Flow, veh/h	3312	3406	1524	3312	3406	1524	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	89	1543	601	101	1965	990	778	1964	67	1065	1570	189
Grp Sat Flow(s),veh/h/ln	1656	1703	1524	1656	1703	1524	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	3.0	56.9	56.9	3.5	57.9	57.9	18.3	40.2	4.7	24.5	45.5	13.7
Cycle Q Clear(g_c), s	3.0	56.9	56.9	3.5	57.9	57.9	18.3	40.2	4.7	24.5	45.5	13.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	68	1334	597	80	1357	607	425	1380	430	569	1586	494
V/C Ratio(X)	1.30	1.16	1.01	1.27	1.45	1.63	1.83	1.42	0.16	1.87	0.99	0.38
Avail Cap(c_a), veh/h	68	1334	597	80	1357	607	425	1380	430	569	1586	494
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.2	44.2	44.2	70.9	43.7	43.7	63.5	52.5	39.7	60.4	49.3	38.5
Incr Delay (d2), s/veh	209.4	79.5	38.7	188.1	205.8	291.3	382.6	194.8	0.1	398.7	20.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	41.4	30.3	3.7	65.9	73.5	31.1	43.3	2.0	42.9	23.9	5.9
LnGrp Delay(d),s/veh	280.5	123.7	82.9	259.0	249.5	335.0	446.1	247.3	39.8	459.1	69.5	38.7
LnGrp LOS	F	F	F	F	F	F	F	F	D	F	E	D
Approach Vol, veh/h		2233			3056			2809			2824	
Approach Delay, s/veh		118.9			277.5			297.4			214.3	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	63.3	23.0	51.0	9.0	62.3	29.0	45.0
Change Period (Y+Rc), s	5.0	* 5.4	* 4.7	4.8	5.5	* 5.4	4.5	4.8
Max Green Setting (Gmax), s	3.0	* 58	* 18	46.2	3.5	* 57	24.5	40.2
Max Q Clear Time (g_c+I1), s	5.0	59.9	20.3	47.5	5.5	58.9	26.5	42.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	233.9
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	508	95	245	718	301	404	2078	347	141	1692	427
Future Volume (veh/h)	107	508	95	245	718	301	404	2078	347	141	1692	427
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1845	1845	1827	1827
Adj Flow Rate, veh/h	107	508	95	245	718	301	404	2078	347	141	1692	427
Adj No. of Lanes	1	1	1	2	2	1	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	3	3	4	4
Cap, veh/h	122	457	388	222	844	378	354	2149	676	149	1588	494
Arrive On Green	0.07	0.25	0.25	0.07	0.24	0.24	0.20	0.43	0.43	0.09	0.32	0.32
Sat Flow, veh/h	1757	1845	1568	3408	3505	1568	1740	4988	1568	1757	4988	1553
Grp Volume(v), veh/h	107	508	95	245	718	301	404	2078	347	141	1692	427
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1752	1568	1740	1663	1568	1757	1663	1553
Q Serve(g_s), s	7.2	29.7	5.8	7.8	23.5	21.6	24.4	48.8	19.4	9.6	38.2	31.0
Cycle Q Clear(g_c), s	7.2	29.7	5.8	7.8	23.5	21.6	24.4	48.8	19.4	9.6	38.2	31.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	122	457	388	222	844	378	354	2149	676	149	1588	494
V/C Ratio(X)	0.88	1.11	0.24	1.11	0.85	0.80	1.14	0.97	0.51	0.94	1.07	0.86
Avail Cap(c_a), veh/h	122	457	388	222	865	387	354	2149	676	149	1588	494
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.4	45.2	36.2	56.1	43.5	42.8	47.8	33.3	25.0	54.6	40.9	38.5
Incr Delay (d2), s/veh	45.9	76.5	0.1	91.7	7.5	10.0	92.2	12.5	0.3	56.4	42.4	14.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	24.8	2.5	6.5	12.2	10.4	20.8	24.8	8.5	7.0	23.7	15.2
LnGrp Delay(d),s/veh	101.3	121.7	36.3	147.8	51.0	52.8	140.0	45.8	25.3	111.0	83.3	52.5
LnGrp LOS	F	F	D	F	D	D	F	D	C	F	F	D
Approach Vol, veh/h		710			1264			2829			2260	
Approach Delay, s/veh		107.2			70.2			56.8			79.2	
Approach LOS		F			E			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.0	43.0	13.8	34.2	15.5	56.5	13.0	35.0
Change Period (Y+Rc), s	* 4.6	4.8	5.5	* 5.3	* 5.3	4.8	* 5.2	* 5.3
Max Green Setting (Gmax), s	* 24	38.2	8.3	* 30	* 10	51.7	* 7.8	* 30
Max Q Clear Time (g_c+I1), s	26.4	40.2	9.2	25.5	11.6	50.8	9.8	31.7
Green Ext Time (p_c), s	0.0	0.0	0.0	1.7	0.0	0.9	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	71.4
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	234	819	95	73	1102	734	274	2094	413	787	941	315
Future Volume (veh/h)	234	819	95	73	1102	734	274	2094	413	787	941	315
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1845	1845	1827	1827
Adj Flow Rate, veh/h	234	819	95	73	1102	734	274	2094	413	787	941	315
Adj No. of Lanes	2	1	1	1	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	3	3	4	4
Cap, veh/h	227	639	544	47	1075	481	323	1729	544	591	2117	659
Arrive On Green	0.07	0.35	0.35	0.03	0.31	0.31	0.10	0.35	0.35	0.17	0.42	0.42
Sat Flow, veh/h	3408	1845	1568	1757	3505	1568	3375	4988	1568	3408	4988	1553
Grp Volume(v), veh/h	234	819	95	73	1102	734	274	2094	413	787	941	315
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1757	1752	1568	1688	1663	1568	1704	1663	1553
Q Serve(g_s), s	10.0	52.0	6.3	4.0	46.0	46.0	12.0	52.0	35.0	26.0	20.1	22.0
Cycle Q Clear(g_c), s	10.0	52.0	6.3	4.0	46.0	46.0	12.0	52.0	35.0	26.0	20.1	22.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	227	639	544	47	1075	481	323	1729	544	591	2117	659
V/C Ratio(X)	1.03	1.28	0.17	1.56	1.03	1.53	0.85	1.21	0.76	1.33	0.44	0.48
Avail Cap(c_a), veh/h	227	639	544	47	1075	481	405	1729	544	591	2117	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.0	49.0	34.1	73.0	52.0	52.0	66.8	49.0	43.5	62.0	30.6	31.2
Incr Delay (d2), s/veh	67.7	138.1	0.2	332.3	34.1	247.3	13.0	100.6	6.2	160.8	0.1	0.5
Initial Q Delay(d3),s/veh	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	51.0	2.8	6.3	27.3	52.9	6.2	40.0	16.1	25.4	9.3	9.5
LnGrp Delay(d),s/veh	137.8	187.1	34.2	405.3	86.1	299.3	79.7	149.6	49.6	222.8	30.8	31.7
LnGrp LOS	F	F	C	F	F	F	E	F	D	F	C	C
Approach Vol, veh/h		1148			1909			2781			2043	
Approach Delay, s/veh		164.4			180.3			127.9			104.9	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.3	67.7	14.0	50.0	30.0	56.0	8.0	56.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	18.0	60.0	10.0	46.0	26.0	52.0	4.0	52.0
Max Q Clear Time (g_c+I1), s	14.0	24.0	12.0	48.0	28.0	54.0	6.0	54.0
Green Ext Time (p_c), s	0.4	33.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	139.9
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1201	470	131	13	840	26	824	2331	129	9	864	607
Future Volume (veh/h)	1201	470	131	13	840	26	824	2331	129	9	864	607
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	1201	470	131	13	840	26	824	2331	129	9	864	607
Adj No. of Lanes	1	2	1	1	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	613	1748	782	15	553	247	430	1707	531	21	1123	350
Arrive On Green	0.35	0.50	0.50	0.01	0.16	0.16	0.13	0.34	0.34	0.01	0.23	0.23
Sat Flow, veh/h	1740	3471	1553	1740	3471	1553	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	1201	470	131	13	840	26	824	2331	129	9	864	607
Grp Sat Flow(s),veh/h/ln	1740	1736	1553	1740	1736	1553	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	52.9	11.7	6.9	1.1	23.9	2.1	19.1	51.4	8.9	0.4	24.4	33.8
Cycle Q Clear(g_c), s	52.9	11.7	6.9	1.1	23.9	2.1	19.1	51.4	8.9	0.4	24.4	33.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	613	1748	782	15	553	247	430	1707	531	21	1123	350
V/C Ratio(X)	1.96	0.27	0.17	0.86	1.52	0.11	1.92	1.37	0.24	0.43	0.77	1.74
Avail Cap(c_a), veh/h	613	1748	782	58	553	247	430	1707	531	67	1123	350
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.6	21.4	20.2	74.3	63.1	54.0	65.5	49.4	35.4	74.3	54.5	58.2
Incr Delay (d2), s/veh	437.3	0.4	0.5	36.8	243.1	0.9	421.9	168.5	1.1	5.0	5.1	342.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	99.9	5.7	3.0	0.7	30.1	1.0	34.1	50.2	4.0	0.2	11.7	47.8
LnGrp Delay(d),s/veh	485.9	21.8	20.7	111.1	306.2	54.8	487.4	217.9	36.5	79.3	59.6	401.0
LnGrp LOS	F	C	C	F	F	D	F	F	D	E	E	F
Approach Vol, veh/h		1802			879			3284			1480	
Approach Delay, s/veh		331.0			295.9			278.4			199.7	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.0	39.0	58.0	29.1	6.4	56.6	6.3	80.8
Change Period (Y+Rc), s	* 4.9	* 5.2	* 5.1	* 5.2	5.5	* 5.2	5.0	* 5.2
Max Green Setting (Gmax), s	* 19	* 34	* 53	* 24	3.0	* 50	5.0	* 72
Max Q Clear Time (g_c+I1), s	21.1	35.8	54.9	25.9	2.4	53.4	3.1	13.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.2

Intersection Summary			
HCM 2010 Ctrl Delay		277.5	
HCM 2010 LOS		F	

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	735	355	105	958	284	508	2780	207	125	989	83
Future Volume (veh/h)	85	735	355	105	958	284	508	2780	207	125	989	83
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	85	735	355	105	958	284	508	2780	207	125	989	83
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	104	818	366	151	867	388	556	2675	833	75	1963	611
Arrive On Green	0.03	0.23	0.23	0.04	0.25	0.25	0.16	0.54	0.54	0.02	0.39	0.39
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	85	735	355	105	958	284	508	2780	207	125	989	83
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	3.3	27.5	30.3	4.1	33.4	22.5	20.0	72.4	9.6	3.0	20.2	4.6
Cycle Q Clear(g_c), s	3.3	27.5	30.3	4.1	33.4	22.5	20.0	72.4	9.6	3.0	20.2	4.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	104	818	366	151	867	388	556	2675	833	75	1963	611
V/C Ratio(X)	0.82	0.90	0.97	0.69	1.10	0.73	0.91	1.04	0.25	1.67	0.50	0.14
Avail Cap(c_a), veh/h	104	818	366	167	867	388	708	2675	833	75	1963	611
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.1	50.2	51.3	63.6	50.8	46.7	55.4	31.3	16.7	66.0	31.0	26.2
Incr Delay (d2), s/veh	36.8	14.7	40.0	8.2	63.4	9.9	12.4	28.7	0.5	351.1	0.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	14.9	17.1	2.1	23.8	10.8	10.3	40.0	4.2	5.1	9.4	2.0
LnGrp Delay(d),s/veh	101.9	64.9	91.3	71.8	114.2	56.5	67.8	60.0	17.2	417.1	31.6	26.5
LnGrp LOS	F	E	F	E	F	E	E	F	B	F	C	C
Approach Vol, veh/h		1175			1347			3495			1197	
Approach Delay, s/veh		75.6			98.8			58.6			71.5	
Approach LOS		E			F			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.8	58.6	9.6	39.0	8.5	77.9	11.5	37.1
Change Period (Y+Rc), s	5.5	* 5.5	5.5	5.6	5.5	* 5.5	5.5	* 5.6
Max Green Setting (Gmax), s	28.3	* 47	4.1	33.4	3.0	* 72	6.6	* 31
Max Q Clear Time (g_c+I1), s	22.0	22.2	5.3	35.4	5.0	74.4	6.1	32.3
Green Ext Time (p_c), s	0.3	24.9	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	71.0
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	123	709	24	162	896	79	262	246	202	52	93	49
Future Volume (veh/h)	123	709	24	162	896	79	262	246	202	52	93	49
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	123	709	24	162	896	79	262	246	202	52	93	49
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	156	1108	38	204	1134	100	314	487	414	64	225	191
Arrive On Green	0.09	0.32	0.32	0.12	0.35	0.35	0.18	0.26	0.26	0.04	0.12	0.12
Sat Flow, veh/h	1757	3459	117	1757	3259	287	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	123	359	374	162	482	493	262	246	202	52	93	49
Grp Sat Flow(s),veh/h/ln	1757	1752	1824	1757	1752	1794	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	4.2	10.7	10.7	5.5	15.1	15.1	8.8	6.9	6.6	1.8	2.8	1.7
Cycle Q Clear(g_c), s	4.2	10.7	10.7	5.5	15.1	15.1	8.8	6.9	6.6	1.8	2.8	1.7
Prop In Lane	1.00		0.06	1.00		0.16	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	156	561	584	204	610	624	314	487	414	64	225	191
V/C Ratio(X)	0.79	0.64	0.64	0.79	0.79	0.79	0.83	0.50	0.49	0.81	0.41	0.26
Avail Cap(c_a), veh/h	173	561	584	288	662	677	404	878	747	173	636	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.2	17.7	17.7	26.2	17.9	17.9	24.1	19.0	18.9	29.1	24.7	24.2
Incr Delay (d2), s/veh	19.5	2.4	2.3	9.6	6.0	5.9	11.3	0.8	0.9	20.8	1.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	5.5	5.7	3.2	8.2	8.4	5.2	3.6	3.0	1.2	1.5	0.8
LnGrp Delay(d),s/veh	46.7	20.1	20.0	35.8	23.9	23.7	35.4	19.8	19.8	49.9	25.9	24.9
LnGrp LOS	D	C	C	D	C	C	D	B	B	D	C	C
Approach Vol, veh/h		856			1137			710			194	
Approach Delay, s/veh		23.9			25.5			25.6			32.1	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	20.1	11.1	23.5	14.9	11.4	9.4	25.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	29.0	10.0	19.0	14.0	21.0	6.0	23.0
Max Q Clear Time (g_c+I1), s	3.8	8.9	7.5	12.7	10.8	4.8	6.2	17.1
Green Ext Time (p_c), s	0.0	2.8	0.1	4.7	0.2	2.6	0.0	4.1

Intersection Summary	
HCM 2010 Ctrl Delay	25.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	1224	722	5	1316	264	607	466	20	127	191	54
Future Volume (veh/h)	82	1224	722	5	1316	264	607	466	20	127	191	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	82	1224	722	5	1316	264	607	466	20	127	191	54
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	48	1079	579	7	1360	269	491	575	489	151	218	185
Arrive On Green	0.03	0.49	0.49	0.00	0.47	0.47	0.28	0.31	0.31	0.09	0.12	0.12
Sat Flow, veh/h	1757	2205	1183	1757	2917	578	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	82	948	998	5	784	796	607	466	20	127	191	54
Grp Sat Flow(s),veh/h/ln	1757	1752	1636	1757	1752	1743	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	4.0	71.8	71.8	0.4	63.4	65.9	41.0	34.1	1.3	10.5	14.9	4.6
Cycle Q Clear(g_c), s	4.0	71.8	71.8	0.4	63.4	65.9	41.0	34.1	1.3	10.5	14.9	4.6
Prop In Lane	1.00		0.72	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	48	858	801	7	817	812	491	575	489	151	218	185
V/C Ratio(X)	1.71	1.11	1.25	0.76	0.96	0.98	1.24	0.81	0.04	0.84	0.88	0.29
Avail Cap(c_a), veh/h	48	858	801	36	824	819	491	575	489	263	251	214
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.4	37.5	37.5	73.0	37.8	38.5	52.9	46.5	35.2	66.1	63.6	59.1
Incr Delay (d2), s/veh	394.1	63.7	121.2	96.5	21.9	26.5	123.1	8.5	0.0	11.9	25.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	49.7	59.2	0.4	35.7	37.6	36.6	18.7	0.6	5.6	9.2	2.0
LnGrp Delay(d),s/veh	465.5	101.1	158.6	169.5	59.7	65.0	176.0	55.0	35.2	78.0	88.6	59.9
LnGrp LOS	F	F	F	F	E	E	F	D	D	E	F	E
Approach Vol, veh/h		2028			1585			1093			372	
Approach Delay, s/veh		144.2			62.7			121.8			80.8	
Approach LOS		F			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.6	49.8	4.6	75.8	45.0	21.4	8.0	72.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	22.0	39.0	3.0	70.0	41.0	20.0	4.0	69.0
Max Q Clear Time (g_c+I1), s	12.5	36.1	2.4	73.8	43.0	16.9	6.0	67.9
Green Ext Time (p_c), s	0.2	1.2	0.0	0.0	0.0	0.4	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	109.3
HCM 2010 LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	176	428	5	75	839	0	10	55	189	11	28	30
Future Volume (veh/h)	176	428	5	75	839	0	10	55	189	11	28	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1900	1845	1900	1900	1845	1900
Adj Flow Rate, veh/h	176	428	5	75	839	0	10	55	189	11	28	30
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	3	3	3	3	3	3
Cap, veh/h	224	2087	24	518	1277	0	97	82	255	126	177	155
Arrive On Green	0.13	0.59	0.59	0.37	0.37	0.00	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1740	3514	41	933	3563	0	27	388	1206	114	836	731
Grp Volume(v), veh/h	176	211	222	75	839	0	254	0	0	69	0	0
Grp Sat Flow(s),veh/h/ln	1740	1736	1820	933	1736	0	1621	0	0	1681	0	0
Q Serve(g_s), s	4.0	2.3	2.3	2.3	8.3	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.0	2.3	2.3	2.3	8.3	0.0	6.0	0.0	0.0	1.4	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.00	0.04		0.74	0.16		0.43
Lane Grp Cap(c), veh/h	224	1031	1081	518	1277	0	434	0	0	457	0	0
V/C Ratio(X)	0.78	0.20	0.21	0.14	0.66	0.00	0.59	0.00	0.00	0.15	0.00	0.00
Avail Cap(c_a), veh/h	338	1265	1326	583	1518	0	562	0	0	582	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.4	3.9	3.9	8.9	10.8	0.0	15.2	0.0	0.0	13.3	0.0	0.0
Incr Delay (d2), s/veh	6.8	0.1	0.1	0.1	0.8	0.0	1.3	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	1.1	1.1	0.6	4.1	0.0	2.8	0.0	0.0	0.7	0.0	0.0
LnGrp Delay(d),s/veh	24.2	4.0	4.0	9.1	11.6	0.0	16.4	0.0	0.0	13.5	0.0	0.0
LnGrp LOS	C	A	A	A	B		B			B		
Approach Vol, veh/h		609			914			254			69	
Approach Delay, s/veh		9.8			11.4			16.4			13.5	
Approach LOS		A			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		12.7		28.5		12.7	9.3	19.1
Change Period (Y+Rc), s		4.0		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		12.0		30.0		12.0	8.0	18.0
Max Q Clear Time (g_c+I1), s		8.0		4.3		3.4	6.0	10.3
Green Ext Time (p_c), s		0.7		10.3		1.3	0.1	4.9

Intersection Summary	
HCM 2010 Ctrl Delay	11.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	896	101	171	1075	376	110	636	184	309	410	71
Future Volume (veh/h)	56	896	101	171	1075	376	110	636	184	309	410	71
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	56	896	101	171	1075	376	110	636	184	309	410	71
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	56	1021	115	176	993	342	131	548	466	264	688	585
Arrive On Green	0.03	0.32	0.32	0.10	0.39	0.39	0.07	0.30	0.30	0.15	0.37	0.37
Sat Flow, veh/h	1757	3176	358	1757	2559	883	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	56	494	503	171	731	720	110	636	184	309	410	71
Grp Sat Flow(s),veh/h/ln	1757	1752	1781	1757	1752	1689	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	4.8	40.0	40.0	14.6	58.2	58.2	9.3	44.6	14.0	22.5	26.9	4.5
Cycle Q Clear(g_c), s	4.8	40.0	40.0	14.6	58.2	58.2	9.3	44.6	14.0	22.5	26.9	4.5
Prop In Lane	1.00		0.20	1.00		0.52	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	56	563	572	176	680	655	131	548	466	264	688	585
V/C Ratio(X)	1.00	0.88	0.88	0.97	1.08	1.10	0.84	1.16	0.39	1.17	0.60	0.12
Avail Cap(c_a), veh/h	56	565	575	176	680	655	206	548	466	264	688	585
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.6	48.1	48.1	67.3	45.9	45.9	68.5	52.7	42.0	63.8	37.9	30.9
Incr Delay (d2), s/veh	118.5	14.1	13.9	59.6	56.7	65.0	9.1	90.7	0.2	110.3	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	21.6	21.9	10.0	38.8	39.0	4.9	36.5	6.1	19.0	13.9	1.9
LnGrp Delay(d),s/veh	191.1	62.2	62.0	126.9	102.6	110.9	77.6	143.4	42.2	174.1	38.9	30.9
LnGrp LOS	F	E	E	F	F	F	E	F	D	F	D	C
Approach Vol, veh/h		1053			1622			930			790	
Approach Delay, s/veh		69.0			108.8			115.6			91.1	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	63.0	16.7	60.3	20.0	53.0	28.0	49.0
Change Period (Y+Rc), s	* 5.2	4.8	5.5	* 4.4	5.0	* 4.8	5.5	* 4.4
Max Green Setting (Gmax), s	* 4.8	58.2	17.6	* 50	15.0	* 48	22.5	* 45
Max Q Clear Time (g_c+I1), s	6.8	60.2	11.3	28.9	16.6	42.0	24.5	46.6
Green Ext Time (p_c), s	0.0	0.0	0.0	2.6	0.0	3.9	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	97.5
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	324	2145	155	233	2230	3	122	2081	200	33	1828	164
Future Volume (veh/h)	324	2145	155	233	2230	3	122	2081	200	33	1828	164
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1792	1845	1845	1792	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	324	2145	155	233	2230	3	122	2081	200	33	1828	164
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	6	3	3	6	3	3	3	3	3	3	3
Cap, veh/h	295	1859	596	227	1762	564	91	1505	673	58	1472	659
Arrive On Green	0.09	0.38	0.38	0.07	0.36	0.36	0.03	0.43	0.43	0.02	0.42	0.42
Sat Flow, veh/h	3408	4893	1568	3408	4893	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	324	2145	155	233	2230	3	122	2081	200	33	1828	164
Grp Sat Flow(s),veh/h/ln	1704	1631	1568	1704	1631	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	13.0	57.0	10.2	10.0	54.0	0.2	4.0	64.4	12.5	1.4	63.0	10.2
Cycle Q Clear(g_c), s	13.0	57.0	10.2	10.0	54.0	0.2	4.0	64.4	12.5	1.4	63.0	10.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	295	1859	596	227	1762	564	91	1505	673	58	1472	659
V/C Ratio(X)	1.10	1.15	0.26	1.03	1.27	0.01	1.34	1.38	0.30	0.56	1.24	0.25
Avail Cap(c_a), veh/h	295	1859	596	227	1762	564	91	1505	673	91	1472	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.5	46.5	32.0	70.0	48.0	30.8	73.0	42.8	28.0	73.2	43.5	28.2
Incr Delay (d2), s/veh	80.8	75.7	0.2	66.5	124.3	0.0	210.8	176.3	0.2	8.3	114.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	38.7	4.5	6.8	44.6	0.1	4.5	68.0	5.5	0.7	53.9	4.5
LnGrp Delay(d),s/veh	149.3	122.2	32.2	136.6	172.3	30.8	283.8	219.1	28.2	81.4	158.3	28.4
LnGrp LOS	F	F	C	F	F	C	F	F	C	F	F	C
Approach Vol, veh/h		2624			2466			2403			2025	
Approach Delay, s/veh		120.3			168.8			206.5			146.5	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.6	68.4	14.0	61.0	8.0	67.0	17.0	58.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	63.0	10.0	57.0	4.0	63.0	13.0	54.0
Max Q Clear Time (g_c+I1), s	3.4	66.4	12.0	59.0	6.0	65.0	15.0	56.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	160.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	519	1052	812	1	1069	240	238	1601	452	108	1102	209
Future Volume (veh/h)	519	1052	812	1	1069	240	238	1601	452	108	1102	209
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1900	1845	1845
Adj Flow Rate, veh/h	519	1052	812	1	1069	240	238	1601	452	108	1102	209
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	223	684	476	1	627	140	727	748	334	55	558	523
Arrive On Green	0.13	0.35	0.35	0.00	0.22	0.22	0.21	0.21	0.21	0.33	0.33	0.33
Sat Flow, veh/h	1757	1977	1377	1757	2848	637	3408	3505	1568	164	1673	1568
Grp Volume(v), veh/h	519	919	945	1	656	653	238	1601	452	1210	0	209
Grp Sat Flow(s),veh/h/ln	1757	1752	1602	1757	1752	1732	1704	1752	1568	1836	0	1568
Q Serve(g_s), s	19.0	51.9	51.9	0.1	33.0	33.0	8.9	32.0	32.0	50.0	0.0	15.4
Cycle Q Clear(g_c), s	19.0	51.9	51.9	0.1	33.0	33.0	8.9	32.0	32.0	50.0	0.0	15.4
Prop In Lane	1.00		0.86	1.00		0.37	1.00		1.00	0.09		1.00
Lane Grp Cap(c), veh/h	223	606	554	1	386	381	727	748	334	612	0	523
V/C Ratio(X)	2.33	1.52	1.71	0.70	1.70	1.71	0.33	2.14	1.35	1.98	0.00	0.40
Avail Cap(c_a), veh/h	223	606	554	35	386	381	727	748	334	612	0	523
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	65.5	49.1	49.1	74.9	58.5	58.5	49.9	59.0	59.0	50.0	0.0	38.5
Incr Delay (d2), s/veh	613.4	241.0	325.0	231.5	326.5	332.1	0.3	518.0	176.6	445.4	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	47.1	65.7	72.9	0.1	50.9	50.9	4.2	69.3	30.3	101.1	0.0	6.7
LnGrp Delay(d),s/veh	678.9	290.1	374.1	306.4	385.0	390.6	50.2	577.0	235.6	495.4	0.0	39.0
LnGrp LOS	F	F	F	F	F	F	D	F	F	F		D
Approach Vol, veh/h		2383			1310			2291			1419	
Approach Delay, s/veh		408.1			387.8			454.9			428.1	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		36.0	4.1	55.9		54.0	23.0	37.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		32.0	3.0	49.0		50.0	19.0	33.0
Max Q Clear Time (g_c+I1), s		34.0	2.1	53.9		52.0	21.0	35.0
Green Ext Time (p_c), s		0.0	0.0	0.0		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	422.8
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1189	0	628	0	1202	1359	0	546	400
Future Volume (veh/h)	0	0	0	1189	0	628	0	1202	1359	0	546	400
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1827	0	1827	0	1827	1827	0	1827	1827
Adj Flow Rate, veh/h				1189	0	628	0	1202	0	0	546	0
Adj No. of Lanes				2	0	2	0	3	1	0	3	1
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				4	0	4	0	4	4	0	4	4
Cap, veh/h				1372	0	1111	0	1832	570	0	1832	570
Arrive On Green				0.41	0.00	0.41	0.00	0.37	0.00	0.00	0.37	0.00
Sat Flow, veh/h				3375	0	2733	0	5152	1553	0	5152	1553
Grp Volume(v), veh/h				1189	0	628	0	1202	0	0	546	0
Grp Sat Flow(s),veh/h/ln				1688	0	1367	0	1663	1553	0	1663	1553
Q Serve(g_s), s				13.8	0.0	7.6	0.0	8.6	0.0	0.0	3.3	0.0
Cycle Q Clear(g_c), s				13.8	0.0	7.6	0.0	8.6	0.0	0.0	3.3	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1372	0	1111	0	1832	570	0	1832	570
V/C Ratio(X)				0.87	0.00	0.57	0.00	0.66	0.00	0.00	0.30	0.00
Avail Cap(c_a), veh/h				2080	0	1684	0	2969	924	0	2782	866
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				11.7	0.0	9.8	0.0	11.3	0.0	0.0	9.6	0.0
Incr Delay (d2), s/veh				1.8	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.6	0.0	2.8	0.0	3.9	0.0	0.0	1.5	0.0
LnGrp Delay(d),s/veh				13.4	0.0	10.0	0.0	11.4	0.0	0.0	9.7	0.0
LnGrp LOS				B		A		B			A	
Approach Vol, veh/h					1817			1202			546	
Approach Delay, s/veh					12.2			11.4			9.7	
Approach LOS					B			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		20.8		22.0		20.8		
Change Period (Y+Rc), s		5.1		4.6		* 5.1		
Max Green Setting (Gmax), s		23.9		26.4		* 26		
Max Q Clear Time (g_c+I1), s		5.3		15.8		10.6		
Green Ext Time (p_c), s		5.5		1.6		5.1		

Intersection Summary	
HCM 2010 Ctrl Delay	11.6
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	40	32	332	30	387	57	2903	403	682	1898	59
Future Volume (veh/h)	76	40	32	332	30	387	57	2903	403	682	1898	59
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	76	40	32	332	30	387	57	2903	403	682	1898	59
Adj No. of Lanes	1	1	0	2	1	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	64	35	28	545	295	251	72	2470	769	551	3080	96
Arrive On Green	0.04	0.04	0.04	0.16	0.16	0.16	0.04	0.50	0.50	0.16	0.62	0.62
Sat Flow, veh/h	1757	950	760	3408	1845	1568	1740	4988	1553	3375	4970	154
Grp Volume(v), veh/h	76	0	72	332	30	387	57	2903	403	682	1269	688
Grp Sat Flow(s),veh/h/ln	1757	0	1711	1704	1845	1568	1740	1663	1553	1688	1663	1800
Q Serve(g_s), s	5.5	0.0	5.5	13.6	2.1	24.0	4.9	74.3	26.5	24.5	35.2	35.3
Cycle Q Clear(g_c), s	5.5	0.0	5.5	13.6	2.1	24.0	4.9	74.3	26.5	24.5	35.2	35.3
Prop In Lane	1.00		0.44	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	64	0	63	545	295	251	72	2470	769	551	2061	1115
V/C Ratio(X)	1.18	0.00	1.15	0.61	0.10	1.54	0.79	1.18	0.52	1.24	0.62	0.62
Avail Cap(c_a), veh/h	64	0	63	545	295	251	123	2470	769	551	2061	1115
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.3	0.0	72.3	58.6	53.8	63.0	71.2	37.8	25.8	62.8	17.5	17.6
Incr Delay (d2), s/veh	168.8	0.0	159.5	1.4	0.1	263.1	6.9	83.4	0.3	121.6	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.0	5.4	6.5	1.1	28.7	2.5	53.2	11.4	20.7	16.2	17.6
LnGrp Delay(d),s/veh	241.1	0.0	231.9	60.1	53.9	326.1	78.1	121.3	26.1	184.4	17.9	18.3
LnGrp LOS	F		F	E	D	F	E	F	C	F	B	B
Approach Vol, veh/h		148			749			3363			2639	
Approach Delay, s/veh		236.6			197.3			109.1			61.0	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.3	98.2		11.0	30.0	79.5		29.5
Change Period (Y+Rc), s	* 5.1	* 5.2		5.5	5.5	* 5.2		5.5
Max Green Setting (Gmax), s	* 11	* 89		5.5	24.5	* 74		24.0
Max Q Clear Time (g_c+I1), s	6.9	37.3		7.5	26.5	76.3		26.0
Green Ext Time (p_c), s	0.0	39.1		0.0	0.0	0.0		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		103.0
HCM 2010 LOS		F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	225	1183	433	243	1482	844	374	2057	363	563	883	165
Future Volume (veh/h)	225	1183	433	243	1482	844	374	2057	363	563	883	165
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	225	1183	433	243	1482	844	374	2057	363	563	883	165
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	170	1109	496	240	1181	529	418	1738	541	393	1701	530
Arrive On Green	0.05	0.32	0.32	0.07	0.34	0.34	0.12	0.35	0.35	0.12	0.34	0.34
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	225	1183	433	243	1482	844	374	2057	363	563	883	165
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	7.5	47.6	39.2	10.6	50.7	50.7	16.4	52.4	29.9	17.5	21.3	11.8
Cycle Q Clear(g_c), s	7.5	47.6	39.2	10.6	50.7	50.7	16.4	52.4	29.9	17.5	21.3	11.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	170	1109	496	240	1181	529	418	1738	541	393	1701	530
V/C Ratio(X)	1.32	1.07	0.87	1.01	1.25	1.60	0.90	1.18	0.67	1.43	0.52	0.31
Avail Cap(c_a), veh/h	170	1109	496	240	1181	529	550	1738	541	393	1701	530
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.5	51.4	48.5	69.9	49.9	49.9	64.9	49.0	41.7	66.5	39.7	36.5
Incr Delay (d2), s/veh	180.7	46.6	15.1	61.1	121.5	277.4	12.1	88.9	2.6	209.2	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	30.1	19.0	7.0	44.4	62.7	8.4	38.3	13.2	19.5	9.8	5.1
LnGrp Delay(d),s/veh	252.1	98.0	63.6	131.1	171.4	327.2	77.0	137.9	44.3	275.6	39.8	36.7
LnGrp LOS	F	F	E	F	F	F	E	F	D	F	D	D
Approach Vol, veh/h		1841			2569			2794			1611	
Approach Delay, s/veh		108.8			218.8			117.6			121.9	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.1	56.9	13.0	56.4	23.0	58.0	16.1	53.3
Change Period (Y+Rc), s	5.5	* 5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	24.5	* 46	7.5	* 51	17.5	* 52	10.6	* 47
Max Q Clear Time (g_c+I1), s	18.4	23.3	9.5	52.7	19.5	54.4	12.6	49.6
Green Ext Time (p_c), s	0.2	12.5	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	146.0
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	342	1413	670	185	2277	544	138	2334	224	507	694	90
Future Volume (veh/h)	342	1413	670	185	2277	544	138	2334	224	507	694	90
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1845	1845	1792	1792	1845	1845	1845	1827	1845	1827
Adj Flow Rate, veh/h	342	1413	670	185	2277	544	138	2334	224	507	694	0
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	3	3	6	6	3	3	3	4	3	4
Cap, veh/h	235	1684	540	211	1655	515	182	1804	562	336	2024	624
Arrive On Green	0.07	0.34	0.34	0.06	0.34	0.34	0.05	0.36	0.36	0.10	0.40	0.00
Sat Flow, veh/h	3312	4893	1568	3408	4893	1524	3408	5036	1568	3375	5036	1553
Grp Volume(v), veh/h	342	1413	670	185	2277	544	138	2334	224	507	694	0
Grp Sat Flow(s),veh/h/ln	1656	1631	1568	1704	1631	1524	1704	1679	1568	1688	1679	1553
Q Serve(g_s), s	10.7	40.1	51.8	8.1	50.9	50.9	6.0	53.9	16.1	15.0	14.4	0.0
Cycle Q Clear(g_c), s	10.7	40.1	51.8	8.1	50.9	50.9	6.0	53.9	16.1	15.0	14.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	235	1684	540	211	1655	515	182	1804	562	336	2024	624
V/C Ratio(X)	1.45	0.84	1.24	0.88	1.38	1.06	0.76	1.29	0.40	1.51	0.34	0.00
Avail Cap(c_a), veh/h	235	1684	540	211	1655	515	251	1804	562	336	2024	624
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	69.9	45.5	49.3	70.0	49.8	49.8	70.3	48.3	36.2	67.7	31.2	0.0
Incr Delay (d2), s/veh	225.8	3.7	123.7	31.7	173.0	55.2	5.1	136.6	0.5	243.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.3	18.6	41.0	4.8	49.3	29.3	3.0	47.7	7.0	18.3	6.7	0.0
LnGrp Delay(d),s/veh	295.7	49.2	173.1	101.7	222.8	105.0	75.4	184.9	36.6	310.8	31.3	0.0
LnGrp LOS	F	D	F	F	F	F	E	F	D	F	C	
Approach Vol, veh/h		2425			3006			2696			1201	
Approach Delay, s/veh		118.2			194.0			167.0			149.3	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.4	65.6	15.0	56.5	20.0	59.0	14.1	57.4
Change Period (Y+Rc), s	* 5.4	5.1	* 4.3	5.6	5.0	5.1	* 4.8	* 5.6
Max Green Setting (Gmax), s	* 11	57.4	* 11	50.4	15.0	53.9	* 9.3	* 52
Max Q Clear Time (g_c+I1), s	8.0	16.4	12.7	52.9	17.0	55.9	10.1	53.8
Green Ext Time (p_c), s	0.0	33.8	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary			
HCM 2010 Ctrl Delay		160.7	
HCM 2010 LOS		F	

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	401	1000	197	261	1301	40	534	2626	129	50	849	175
Future Volume (veh/h)	401	1000	197	261	1301	40	534	2626	129	50	849	175
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	401	1000	197	261	1301	40	534	2626	129	50	849	175
Adj No. of Lanes	2	1	0	2	2	1	1	3	0	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	290	490	96	285	1141	511	373	2081	101	83	1183	368
Arrive On Green	0.09	0.33	0.33	0.08	0.33	0.33	0.21	0.42	0.42	0.02	0.23	0.23
Sat Flow, veh/h	3408	1498	295	3408	3505	1568	1757	4921	239	3408	5036	1568
Grp Volume(v), veh/h	401	0	1197	261	1301	40	534	1781	974	50	849	175
Grp Sat Flow(s),veh/h/ln	1704	0	1793	1704	1752	1568	1757	1679	1803	1704	1679	1568
Q Serve(g_s), s	12.7	0.0	48.8	11.3	48.6	2.6	31.7	63.1	63.1	2.2	23.2	14.3
Cycle Q Clear(g_c), s	12.7	0.0	48.8	11.3	48.6	2.6	31.7	63.1	63.1	2.2	23.2	14.3
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	290	0	586	285	1141	511	373	1420	762	83	1183	368
V/C Ratio(X)	1.38	0.00	2.04	0.91	1.14	0.08	1.43	1.25	1.28	0.60	0.72	0.48
Avail Cap(c_a), veh/h	290	0	586	285	1141	511	373	1420	762	103	1208	376
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.3	0.0	50.2	67.9	50.3	34.8	58.8	43.1	43.1	72.1	52.5	49.2
Incr Delay (d2), s/veh	192.3	0.0	475.0	31.9	74.0	0.1	208.9	120.5	135.0	6.8	1.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.7	0.0	101.4	6.6	35.2	1.1	37.0	52.9	59.9	1.1	11.0	6.3
LnGrp Delay(d),s/veh	260.6	0.0	525.3	99.8	124.3	34.9	267.7	163.6	178.1	78.9	54.3	49.5
LnGrp LOS	F		F	F	F	C	F	F	F	E	D	D
Approach Vol, veh/h		1598			1602			3289			1074	
Approach Delay, s/veh		458.8			118.1			184.8			54.6	
Approach LOS		F			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	37.2	40.1	18.0	54.0	9.1	68.1	18.2	53.8
Change Period (Y+Rc), s	5.5	5.0	5.5	* 5.2	5.5	5.0	5.5	* 5.2
Max Green Setting (Gmax), s	31.7	35.8	12.5	* 49	4.5	63.0	12.7	* 49
Max Q Clear Time (g_c+I1), s	33.7	25.2	13.3	50.8	4.2	65.1	14.7	50.6
Green Ext Time (p_c), s	0.0	9.9	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	210.1
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	298	572	88	138	825	376	119	2686	191	159	699	125
Future Volume (veh/h)	298	572	88	138	825	376	119	2686	191	159	699	125
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1829	1900	1845	1808	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	298	572	88	138	825	376	119	2686	191	159	699	125
Adj No. of Lanes	2	2	0	2	2	0	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	4	4	3	6	6	3	3	3	3	3	3
Cap, veh/h	239	915	140	183	659	299	163	2313	720	148	2290	713
Arrive On Green	0.07	0.30	0.30	0.05	0.29	0.29	0.05	0.46	0.46	0.04	0.45	0.45
Sat Flow, veh/h	3408	3022	464	3408	2299	1043	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	298	328	332	138	616	585	119	2686	191	159	699	125
Grp Sat Flow(s),veh/h/ln	1704	1738	1747	1704	1718	1624	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	10.5	24.4	24.5	6.0	43.0	43.0	5.2	68.9	11.2	6.5	13.2	7.1
Cycle Q Clear(g_c), s	10.5	24.4	24.5	6.0	43.0	43.0	5.2	68.9	11.2	6.5	13.2	7.1
Prop In Lane	1.00		0.27	1.00		0.64	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	239	526	529	183	493	466	163	2313	720	148	2290	713
V/C Ratio(X)	1.25	0.62	0.63	0.75	1.25	1.26	0.73	1.16	0.27	1.08	0.31	0.18
Avail Cap(c_a), veh/h	239	526	529	252	493	466	227	2313	720	148	2290	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.8	44.9	45.0	70.0	53.5	53.5	70.4	40.5	25.0	71.7	25.9	24.2
Incr Delay (d2), s/veh	142.0	1.7	1.8	8.1	128.5	132.2	7.1	77.8	0.2	96.0	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	11.9	12.1	3.0	38.0	36.4	2.6	48.6	4.9	5.0	6.1	3.1
LnGrp Delay(d),s/veh	211.7	46.7	46.8	78.0	182.0	185.7	77.5	118.3	25.2	167.7	26.0	24.3
LnGrp LOS	F	D	D	E	F	F	E	F	C	F	C	C
Approach Vol, veh/h		958			1339			2996			983	
Approach Delay, s/veh		98.0			172.9			110.7			48.7	
Approach LOS		F			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	74.0	16.0	48.0	12.7	73.3	13.6	50.4
Change Period (Y+Rc), s	5.5	* 5.1	5.5	* 5	5.5	* 5.1	5.5	* 5
Max Green Setting (Gmax), s	6.5	* 69	10.5	* 43	10.0	* 65	11.1	* 42
Max Q Clear Time (g_c+I1), s	8.5	70.9	12.5	45.0	7.2	15.2	8.0	26.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	46.3	0.1	4.7

Intersection Summary		
HCM 2010 Ctrl Delay		112.4
HCM 2010 LOS		F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

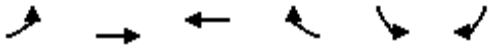
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	349	362	158	51	430	596	100	2243	500	183	914	99
Future Volume (veh/h)	349	362	158	51	430	596	100	2243	500	183	914	99
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1845	1827	1845	1845	1845
Adj Flow Rate, veh/h	349	362	158	51	430	596	100	2243	500	183	914	99
Adj No. of Lanes	2	2	1	1	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	3	4	3	3	3
Cap, veh/h	399	1037	464	65	757	339	151	2179	672	174	2203	686
Arrive On Green	0.12	0.30	0.30	0.04	0.22	0.22	0.04	0.43	0.43	0.05	0.44	0.44
Sat Flow, veh/h	3408	3505	1568	1757	3505	1568	3375	5036	1553	3408	5036	1568
Grp Volume(v), veh/h	349	362	158	51	430	596	100	2243	500	183	914	99
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1757	1752	1568	1688	1679	1553	1704	1679	1568
Q Serve(g_s), s	11.6	9.4	9.1	3.3	12.6	24.9	3.4	49.9	31.1	5.9	14.4	4.4
Cycle Q Clear(g_c), s	11.6	9.4	9.1	3.3	12.6	24.9	3.4	49.9	31.1	5.9	14.4	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	399	1037	464	65	757	339	151	2179	672	174	2203	686
V/C Ratio(X)	0.87	0.35	0.34	0.78	0.57	1.76	0.66	1.03	0.74	1.05	0.41	0.14
Avail Cap(c_a), veh/h	399	1037	464	96	757	339	296	2179	672	174	2203	686
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.1	31.9	31.8	55.0	40.4	45.2	54.2	32.7	27.4	54.7	22.3	19.5
Incr Delay (d2), s/veh	18.9	0.1	0.2	12.1	0.6	353.9	1.8	27.2	4.5	81.8	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	4.5	3.9	1.8	6.2	44.1	1.6	28.5	14.1	4.7	6.7	1.9
LnGrp Delay(d),s/veh	69.0	31.9	31.9	67.2	41.0	399.1	56.0	59.9	31.8	136.5	22.4	19.6
LnGrp LOS	E	C	C	E	D	F	E	F	C	F	C	B
Approach Vol, veh/h		869			1077			2843			1196	
Approach Delay, s/veh		46.8			240.4			54.8			39.6	
Approach LOS		D			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	55.0	19.0	30.3	10.5	55.5	9.8	39.5
Change Period (Y+Rc), s	* 5.1	5.1	5.5	* 5.4	* 5.3	5.1	5.5	* 5.4
Max Green Setting (Gmax), s	* 5.9	49.9	13.5	* 25	* 10	45.5	6.3	* 32
Max Q Clear Time (g_c+I1), s	7.9	51.9	13.6	26.9	5.4	16.4	5.3	11.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	27.3	0.0	2.5

Intersection Summary			
HCM 2010 Ctrl Delay		84.0	
HCM 2010 LOS		F	

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	309	1348	2599	851	557	192
Future Volume (veh/h)	309	1348	2599	851	557	192
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845
Adj Flow Rate, veh/h	309	1348	2599	851	557	192
Adj No. of Lanes	1	3	3	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	234	3458	2032	602	457	408
Arrive On Green	0.13	0.69	0.53	0.53	0.26	0.26
Sat Flow, veh/h	1757	5202	4023	1143	1757	1568
Grp Volume(v), veh/h	309	1348	2227	1223	557	192
Grp Sat Flow(s),veh/h/ln	1757	1679	1679	1643	1757	1568
Q Serve(g_s), s	20.0	17.2	79.0	79.0	39.0	15.5
Cycle Q Clear(g_c), s	20.0	17.2	79.0	79.0	39.0	15.5
Prop In Lane	1.00			0.70	1.00	1.00
Lane Grp Cap(c), veh/h	234	3458	1768	865	457	408
V/C Ratio(X)	1.32	0.39	1.26	1.41	1.22	0.47
Avail Cap(c_a), veh/h	234	3458	1768	865	457	408
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.0	10.1	35.5	35.5	55.5	46.8
Incr Delay (d2), s/veh	170.4	0.1	121.4	193.1	117.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.8	7.9	66.2	82.0	33.8	14.0
LnGrp Delay(d),s/veh	235.4	10.1	156.9	228.6	172.7	47.6
LnGrp LOS	F	B	F	F	F	D
Approach Vol, veh/h		1657	3450		749	
Approach Delay, s/veh		52.1	182.3		140.6	
Approach LOS		D	F		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				107.0		43.0	24.0	83.0
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				103.0		39.0	20.0	79.0
Max Q Clear Time (g_c+I1), s				19.2		41.0	22.0	81.0
Green Ext Time (p_c), s				82.5		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	140.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	878	18	73	1442	0	6	294	33	0	0	0
Future Volume (veh/h)	0	878	18	73	1442	0	6	294	33	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	0	878	18	73	1442	0	6	294	33	0	0	0
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	4	1623	33	90	2121	0	8	390	332	4	213	181
Arrive On Green	0.00	0.46	0.46	0.05	0.61	0.00	0.00	0.21	0.21	0.00	0.00	0.00
Sat Flow, veh/h	1757	3512	72	1757	3597	0	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	0	438	458	73	1442	0	6	294	33	0	0	0
Grp Sat Flow(s),veh/h/ln	1757	1752	1832	1757	1752	0	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	0.0	7.8	7.8	1.8	12.1	0.0	0.1	6.5	0.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	7.8	7.8	1.8	12.1	0.0	0.1	6.5	0.7	0.0	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	4	810	847	90	2121	0	8	390	332	4	213	181
V/C Ratio(X)	0.00	0.54	0.54	0.81	0.68	0.00	0.71	0.75	0.10	0.00	0.00	0.00
Avail Cap(c_a), veh/h	121	923	965	241	2121	0	121	549	467	80	507	431
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	8.4	8.4	20.5	5.8	0.0	21.7	16.1	13.9	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.5	15.4	0.9	0.0	72.0	3.7	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.8	3.9	1.2	5.9	0.0	0.2	3.7	0.3	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	9.0	9.0	35.9	6.7	0.0	93.7	19.8	14.0	0.0	0.0	0.0
LnGrp LOS		A	A	D	A		F	B	B			
Approach Vol, veh/h		896			1515			333			0	
Approach Delay, s/veh		9.0			8.1			20.6			0.0	
Approach LOS		A			A			C				

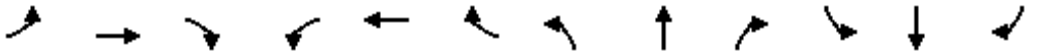
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	13.2	6.2	24.2	4.2	9.0	0.0	30.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	2.0	13.0	6.0	23.0	3.0	12.0	3.0	26.0
Max Q Clear Time (g_c+I1), s	0.0	8.5	3.8	9.8	2.1	0.0	0.0	14.1
Green Ext Time (p_c), s	0.0	0.7	0.0	10.4	0.0	0.0	0.0	10.2

Intersection Summary	
HCM 2010 Ctrl Delay	9.9
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	1002	87	889	2010	312	177	935	933	350	539	122
Future Volume (veh/h)	154	1002	87	889	2010	312	177	935	933	350	539	122
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1792	1845	1845	1792	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	154	1002	87	889	2010	312	177	935	933	350	539	122
Adj No. of Lanes	2	3	1	2	3	1	1	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	6	3	3	6	3	3	3	3	3	3	3
Cap, veh/h	73	895	287	414	1384	444	202	436	435	170	1574	704
Arrive On Green	0.02	0.18	0.18	0.12	0.28	0.28	0.12	0.51	0.51	0.05	0.45	0.45
Sat Flow, veh/h	3408	4893	1568	3408	4893	1568	1757	849	847	3408	3505	1568
Grp Volume(v), veh/h	154	1002	87	889	2010	312	177	0	1868	350	539	122
Grp Sat Flow(s),veh/h/ln	1704	1631	1568	1704	1631	1568	1757	0	1695	1704	1752	1568
Q Serve(g_s), s	3.0	25.6	6.7	17.0	39.6	24.9	13.9	0.0	72.0	7.0	14.0	6.5
Cycle Q Clear(g_c), s	3.0	25.6	6.7	17.0	39.6	24.9	13.9	0.0	72.0	7.0	14.0	6.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	73	895	287	414	1384	444	202	0	872	170	1574	704
V/C Ratio(X)	2.11	1.12	0.30	2.15	1.45	0.70	0.87	0.00	2.14	2.05	0.34	0.17
Avail Cap(c_a), veh/h	73	895	287	414	1384	444	289	0	872	170	1574	704
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.5	57.2	49.5	61.5	50.2	44.9	60.9	0.0	34.0	66.5	25.1	23.0
Incr Delay (d2), s/veh	542.0	68.7	0.8	524.7	207.6	5.5	18.5	0.0	518.0	494.0	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	17.2	3.0	38.1	44.4	11.5	7.8	0.0	158.9	15.0	6.8	2.8
LnGrp Delay(d),s/veh	610.5	125.9	50.3	586.2	257.8	50.4	79.4	0.0	552.0	560.5	25.2	23.1
LnGrp LOS	F	F	D	F	F	D	E		F	F	C	C
Approach Vol, veh/h		1243			3211			2045			1011	
Approach Delay, s/veh		180.6			328.5			511.1			210.3	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.0	32.0	20.1	66.9	7.0	46.0	11.0	76.0
Change Period (Y+Rc), s	4.0	6.4	4.0	4.0	4.0	6.4	4.0	4.0
Max Green Setting (Gmax), s	17.0	25.6	23.0	56.0	3.0	39.6	7.0	72.0
Max Q Clear Time (g_c+I1), s	19.0	27.6	15.9	16.0	5.0	41.6	9.0	74.0
Green Ext Time (p_c), s	0.0	0.0	0.3	39.5	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	337.9
HCM 2010 LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	586	27	156	684	16	31	809	160	11	282	14
Future Volume (veh/h)	89	586	27	156	684	16	31	809	160	11	282	14
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1759	1759	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	89	586	27	156	684	16	31	809	160	11	282	14
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	8	8	8	3	3	3	3	3	3
Cap, veh/h	110	557	26	171	625	15	39	665	131	18	752	37
Arrive On Green	0.06	0.33	0.33	0.10	0.37	0.37	0.02	0.44	0.44	0.01	0.43	0.43
Sat Flow, veh/h	1707	1700	78	1675	1712	40	1757	1496	296	1757	1743	87
Grp Volume(v), veh/h	89	0	613	156	0	700	31	0	969	11	0	296
Grp Sat Flow(s),veh/h/ln	1707	0	1779	1675	0	1752	1757	0	1792	1757	0	1829
Q Serve(g_s), s	7.1	0.0	45.0	12.7	0.0	50.2	2.4	0.0	61.0	0.9	0.0	15.1
Cycle Q Clear(g_c), s	7.1	0.0	45.0	12.7	0.0	50.2	2.4	0.0	61.0	0.9	0.0	15.1
Prop In Lane	1.00		0.04	1.00		0.02	1.00		0.17	1.00		0.05
Lane Grp Cap(c), veh/h	110	0	583	171	0	640	39	0	796	18	0	790
V/C Ratio(X)	0.81	0.00	1.05	0.91	0.00	1.09	0.79	0.00	1.22	0.63	0.00	0.37
Avail Cap(c_a), veh/h	174	0	583	171	0	640	179	0	796	179	0	812
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	63.4	0.0	46.2	61.1	0.0	43.6	66.8	0.0	38.2	67.7	0.0	26.5
Incr Delay (d2), s/veh	14.1	0.0	51.7	44.8	0.0	63.9	28.3	0.0	109.2	31.4	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	0.0	30.4	8.0	0.0	35.5	1.5	0.0	54.2	0.6	0.0	7.6
LnGrp Delay(d),s/veh	77.6	0.0	97.9	105.9	0.0	107.5	95.1	0.0	147.4	99.2	0.0	26.8
LnGrp LOS	E		F	F		F	F		F	F		C
Approach Vol, veh/h		702			856			1000			307	
Approach Delay, s/veh		95.3			107.2			145.8			29.4	
Approach LOS		F			F			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.4	65.0	18.0	49.0	7.1	63.3	12.8	54.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	14.0	61.0	14.0	45.0	14.0	61.0	14.0	45.0
Max Q Clear Time (g_c+I1), s	2.9	63.0	14.7	47.0	4.4	17.1	9.1	52.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	13.9	0.1	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		109.4
HCM 2010 LOS		F

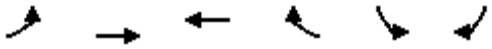
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	525	47	944	25	63	161	986	1181	13	105	1715	1101
Future Volume (veh/h)	525	47	944	25	63	161	986	1181	13	105	1715	1101
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1900	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	559	0	944	25	63	161	986	1181	13	105	1715	0
Adj No. of Lanes	2	0	1	0	1	1	1	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	712	0	318	19	48	57	549	2814	31	126	1536	478
Arrive On Green	0.20	0.00	0.20	0.04	0.04	0.04	0.32	0.55	0.55	0.07	0.31	0.00
Sat Flow, veh/h	3480	0	1553	517	1302	1568	1740	5086	56	1740	4988	1553
Grp Volume(v), veh/h	559	0	944	88	0	161	986	772	422	105	1715	0
Grp Sat Flow(s),veh/h/ln	1740	0	1553	1819	0	1568	1740	1663	1817	1740	1663	1553
Q Serve(g_s), s	22.8	0.0	30.7	5.5	0.0	5.5	47.3	20.3	20.3	8.9	46.2	0.0
Cycle Q Clear(g_c), s	22.8	0.0	30.7	5.5	0.0	5.5	47.3	20.3	20.3	8.9	46.2	0.0
Prop In Lane	1.00		1.00	0.28		1.00	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	712	0	318	67	0	57	549	1839	1005	126	1536	478
V/C Ratio(X)	0.78	0.00	2.97	1.32	0.00	2.80	1.80	0.42	0.42	0.84	1.12	0.00
Avail Cap(c_a), veh/h	712	0	318	67	0	57	549	1839	1005	194	1536	478
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.5	0.0	59.6	72.3	0.0	72.3	51.3	19.5	19.5	68.7	51.9	0.0
Incr Delay (d2), s/veh	5.3	0.0	895.0	217.5	0.0	856.3	366.0	0.1	0.1	10.2	61.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.5	0.0	92.2	6.8	0.0	16.1	78.5	9.3	10.2	4.7	30.0	0.0
LnGrp Delay(d),s/veh	61.8	0.0	954.7	289.7	0.0	928.5	417.3	19.6	19.6	78.9	113.8	0.0
LnGrp LOS	E		F	F		F	F	B	B	E	F	
Approach Vol, veh/h		1503			249			2180			1820	
Approach Delay, s/veh		622.6			702.8			199.5			111.8	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	52.0	51.0		11.0	15.2	87.8		36.0
Change Period (Y+Rc), s	* 4.7	4.8		5.5	* 4.4	* 4.8		5.3
Max Green Setting (Gmax), s	* 47	46.2		5.5	* 17	* 77		30.7
Max Q Clear Time (g_c+I1), s	49.3	48.2		7.5	10.9	22.3		32.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	14.1		0.0

Intersection Summary			
HCM 2010 Ctrl Delay		304.1	
HCM 2010 LOS		F	

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	386	1068	1481	727	151	37
Future Volume (veh/h)	386	1068	1481	727	151	37
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845
Adj Flow Rate, veh/h	386	1068	1481	727	151	37
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	297	2959	1518	689	175	156
Arrive On Green	0.17	0.84	0.65	0.65	0.10	0.10
Sat Flow, veh/h	1757	3597	2438	1064	1757	1568
Grp Volume(v), veh/h	386	1068	1076	1132	151	37
Grp Sat Flow(s),veh/h/ln	1757	1752	1752	1657	1757	1568
Q Serve(g_s), s	24.0	9.7	79.7	92.0	12.0	3.1
Cycle Q Clear(g_c), s	24.0	9.7	79.7	92.0	12.0	3.1
Prop In Lane	1.00			0.64	1.00	1.00
Lane Grp Cap(c), veh/h	297	2959	1134	1073	175	156
V/C Ratio(X)	1.30	0.36	0.95	1.06	0.86	0.24
Avail Cap(c_a), veh/h	297	2959	1134	1073	198	177
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.1	2.5	22.9	25.1	63.1	59.0
Incr Delay (d2), s/veh	158.0	0.1	15.9	43.4	28.3	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.6	4.6	43.3	54.6	7.2	2.8
LnGrp Delay(d),s/veh	217.1	2.6	38.8	68.5	91.4	59.8
LnGrp LOS	F	A	D	F	F	E
Approach Vol, veh/h		1454	2208		188	
Approach Delay, s/veh		59.5	54.0		85.2	
Approach LOS		E	D		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		124.0		18.1	28.0	96.0		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		120.0		16.0	24.0	92.0		
Max Q Clear Time (g_c+I1), s		11.7		14.0	26.0	94.0		
Green Ext Time (p_c), s		88.3		0.1	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	57.6
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	342	228	35	78	307	777	37	2203	90	522	2360	899
Future Volume (veh/h)	342	228	35	78	307	777	37	2203	90	522	2360	899
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	342	228	35	78	307	777	37	2203	90	522	2360	899
Adj No. of Lanes	2	3	0	2	1	2	2	3	0	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	306	1130	168	119	368	1052	65	2118	86	464	2739	853
Arrive On Green	0.09	0.26	0.26	0.03	0.20	0.20	0.02	0.43	0.43	0.14	0.54	0.54
Sat Flow, veh/h	3408	4428	658	3514	1845	3136	3408	4964	202	3408	5036	1568
Grp Volume(v), veh/h	342	171	92	78	307	777	37	1487	806	522	2360	899
Grp Sat Flow(s),veh/h/ln	1704	1679	1729	1757	1845	1568	1704	1679	1809	1704	1679	1568
Q Serve(g_s), s	13.5	6.0	6.3	3.3	24.1	30.0	1.6	64.2	64.2	20.5	60.5	81.9
Cycle Q Clear(g_c), s	13.5	6.0	6.3	3.3	24.1	30.0	1.6	64.2	64.2	20.5	60.5	81.9
Prop In Lane	1.00		0.38	1.00		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	306	857	441	119	368	1052	65	1432	772	464	2739	853
V/C Ratio(X)	1.12	0.20	0.21	0.65	0.83	0.74	0.57	1.04	1.04	1.12	0.86	1.05
Avail Cap(c_a), veh/h	306	857	441	170	368	1052	70	1432	772	464	2739	853
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.5	44.0	44.1	71.8	57.9	44.2	73.2	43.1	43.2	65.0	29.5	34.3
Incr Delay (d2), s/veh	87.3	0.0	0.1	2.3	14.4	2.5	4.7	34.3	44.7	80.4	2.9	46.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	2.8	3.0	1.6	13.8	14.6	0.8	36.5	41.5	14.8	28.7	46.1
LnGrp Delay(d),s/veh	155.8	44.0	44.2	74.1	72.3	46.6	78.0	77.4	87.8	145.4	32.4	80.4
LnGrp LOS	F	D	D	E	E	D	E	F	F	F	C	F
Approach Vol, veh/h		605			1162			2330			3781	
Approach Delay, s/veh		107.3			55.2			81.0			59.4	
Approach LOS		F			E			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	87.5	19.0	35.7	26.0	69.8	10.6	44.1
Change Period (Y+Rc), s	5.5	5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	3.1	81.3	13.5	* 30	20.5	* 64	7.3	* 36
Max Q Clear Time (g_c+I1), s	3.6	83.9	15.5	32.0	22.5	66.2	5.3	8.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	68.9
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	64	13	38	46	66	37	2194	63	133	1792	215
Future Volume (veh/h)	105	64	13	38	46	66	37	2194	63	133	1792	215
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	91	84	13	38	46	66	37	2194	63	133	1792	215
Adj No. of Lanes	1	1	0	1	1	1	1	3	0	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	131	117	18	109	114	97	46	2811	80	167	2852	340
Arrive On Green	0.07	0.07	0.07	0.06	0.06	0.06	0.03	0.56	0.56	0.09	0.63	0.63
Sat Flow, veh/h	1757	1561	242	1757	1845	1568	1757	5032	144	1757	4562	544
Grp Volume(v), veh/h	91	0	97	38	46	66	37	1462	795	133	1316	691
Grp Sat Flow(s),veh/h/ln	1757	0	1802	1757	1845	1568	1757	1679	1819	1757	1679	1749
Q Serve(g_s), s	4.9	0.0	5.1	2.0	2.3	4.0	2.0	33.1	33.3	7.2	23.5	23.8
Cycle Q Clear(g_c), s	4.9	0.0	5.1	2.0	2.3	4.0	2.0	33.1	33.3	7.2	23.5	23.8
Prop In Lane	1.00		0.13	1.00		1.00	1.00		0.08	1.00		0.31
Lane Grp Cap(c), veh/h	131	0	135	109	114	97	46	1875	1016	167	2099	1093
V/C Ratio(X)	0.69	0.00	0.72	0.35	0.40	0.68	0.80	0.78	0.78	0.80	0.63	0.63
Avail Cap(c_a), veh/h	508	0	521	490	514	437	112	2159	1170	215	2349	1224
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.9	0.0	44.0	43.7	43.9	44.6	47.1	16.8	16.8	43.1	11.2	11.3
Incr Delay (d2), s/veh	2.4	0.0	2.7	0.7	0.8	3.1	11.3	1.4	2.6	11.3	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	2.7	1.0	1.2	1.8	1.1	15.6	17.3	4.0	10.9	11.5
LnGrp Delay(d),s/veh	46.3	0.0	46.7	44.4	44.7	47.7	58.3	18.1	19.4	54.4	11.5	11.8
LnGrp LOS	D		D	D	D	D	E	B	B	D	B	B
Approach Vol, veh/h		188			150			2294			2140	
Approach Delay, s/veh		46.5			46.0			19.2			14.3	
Approach LOS		D			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.4	65.6		11.5	13.8	59.1		12.8
Change Period (Y+Rc), s	* 4.8	4.8		5.5	* 4.6	4.8		5.5
Max Green Setting (Gmax), s	* 6.2	68.0		27.1	* 12	62.5		28.1
Max Q Clear Time (g_c+I1), s	4.0	25.8		6.0	9.2	35.3		7.1
Green Ext Time (p_c), s	0.0	25.0		0.1	0.0	19.0		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	18.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

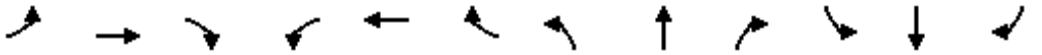
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	837	547	150	1323	856	560	1383	196	231	1176	172
Future Volume (veh/h)	44	837	547	150	1323	856	560	1383	196	231	1176	172
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	44	837	547	150	1323	856	560	1383	196	231	1176	172
Adj No. of Lanes	2	3	0	2	3	1	2	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	77	1150	537	202	1911	595	490	1692	527	266	1199	175
Arrive On Green	0.02	0.34	0.34	0.06	0.38	0.38	0.14	0.34	0.34	0.08	0.27	0.27
Sat Flow, veh/h	3408	3357	1568	3408	5036	1568	3408	5036	1568	3408	4438	649
Grp Volume(v), veh/h	44	837	547	150	1323	856	560	1383	196	231	889	459
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1679	1568	1704	1679	1730
Q Serve(g_s), s	1.6	26.6	41.7	5.3	26.9	46.2	17.5	30.6	11.6	8.2	32.0	32.0
Cycle Q Clear(g_c), s	1.6	26.6	41.7	5.3	26.9	46.2	17.5	30.6	11.6	8.2	32.0	32.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.38
Lane Grp Cap(c), veh/h	77	1150	537	202	1911	595	490	1692	527	266	907	468
V/C Ratio(X)	0.57	0.73	1.02	0.74	0.69	1.44	1.14	0.82	0.37	0.87	0.98	0.98
Avail Cap(c_a), veh/h	84	1150	537	221	1911	595	490	1692	527	266	907	468
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.9	35.0	40.0	56.3	31.8	37.8	52.1	37.0	30.7	55.5	44.1	44.1
Incr Delay (d2), s/veh	3.8	2.0	43.5	9.6	0.9	206.9	86.3	3.1	0.2	24.1	25.0	36.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	12.7	24.4	2.7	12.7	54.1	14.0	14.7	5.0	4.7	18.0	20.0
LnGrp Delay(d),s/veh	62.7	37.1	83.5	65.9	32.7	244.7	138.4	40.1	30.8	79.6	69.1	80.5
LnGrp LOS	E	D	F	E	C	F	F	D	C	E	E	F
Approach Vol, veh/h		1428			2329			2139			1579	
Approach Delay, s/veh		55.6			112.8			65.0			73.9	
Approach LOS		E			F			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.0	38.5	8.3	52.0	15.0	46.5	12.7	47.5
Change Period (Y+Rc), s	5.5	* 5.6	5.5	5.8	5.5	* 5.6	5.5	5.8
Max Green Setting (Gmax), s	17.5	* 33	3.0	46.2	9.5	* 41	7.9	41.3
Max Q Clear Time (g_c+I1), s	19.5	34.0	3.6	48.2	10.2	32.6	7.3	43.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	5.6	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	80.0
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	921	47	489	1987	744	98	667	234	452	482	122
Future Volume (veh/h)	252	921	47	489	1987	744	98	667	234	452	482	122
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	252	921	47	489	1987	744	98	667	234	452	482	122
Adj No. of Lanes	1	2	0	2	2	1	1	1	0	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	127	1069	55	499	1355	606	119	433	152	223	607	516
Arrive On Green	0.07	0.31	0.31	0.15	0.39	0.39	0.07	0.33	0.33	0.07	0.33	0.33
Sat Flow, veh/h	1757	3393	173	3408	3505	1568	1757	1306	458	3408	1845	1568
Grp Volume(v), veh/h	252	476	492	489	1987	744	98	0	901	452	482	122
Grp Sat Flow(s),veh/h/ln	1757	1752	1814	1704	1752	1568	1757	0	1764	1704	1845	1568
Q Serve(g_s), s	10.5	37.1	37.1	20.8	56.2	56.2	8.0	0.0	48.2	9.5	34.5	8.2
Cycle Q Clear(g_c), s	10.5	37.1	37.1	20.8	56.2	56.2	8.0	0.0	48.2	9.5	34.5	8.2
Prop In Lane	1.00		0.10	1.00		1.00	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	127	552	571	499	1355	606	119	0	585	223	607	516
V/C Ratio(X)	1.99	0.86	0.86	0.98	1.47	1.23	0.83	0.00	1.54	2.03	0.79	0.24
Avail Cap(c_a), veh/h	127	552	571	499	1355	606	139	0	585	223	607	516
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.5	46.8	46.8	61.8	44.6	44.6	66.9	0.0	48.6	68.0	44.3	35.5
Incr Delay (d2), s/veh	470.8	12.6	12.2	34.7	214.1	116.5	24.9	0.0	251.9	478.8	6.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.7	19.9	20.5	12.2	67.4	43.9	4.7	0.0	64.3	19.3	18.7	3.6
LnGrp Delay(d),s/veh	538.2	59.4	59.0	96.6	258.7	161.1	91.9	0.0	300.5	546.8	50.9	35.6
LnGrp LOS	F	E	E	F	F	F	F		F	F	D	D
Approach Vol, veh/h		1220			3220			999			1056	
Approach Delay, s/veh		158.2			211.6			280.0			261.4	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	61.1	15.3	53.0	26.4	50.7	15.0	53.3
Change Period (Y+Rc), s	5.5	* 4.9	5.5	* 5.1	* 5.1	* 4.9	5.5	* 5.1
Max Green Setting (Gmax), s	10.5	* 56	11.5	* 46	* 21	* 46	9.5	* 48
Max Q Clear Time (g_c+I1), s	12.5	58.2	10.0	36.5	22.8	39.1	11.5	50.2
Green Ext Time (p_c), s	0.0	0.0	0.0	1.3	0.0	5.2	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		220.2
HCM 2010 LOS		F

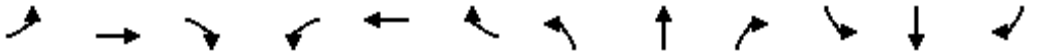
Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	339	1011	35	71	1264	130	133	358	223	93	211	494
Future Volume (veh/h)	339	1011	35	71	1264	130	133	358	223	93	211	494
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	339	1011	35	71	1264	130	133	358	223	93	211	494
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	386	1573	704	162	1341	600	172	900	403	155	883	395
Arrive On Green	0.11	0.45	0.45	0.05	0.38	0.38	0.05	0.26	0.26	0.05	0.25	0.25
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	339	1011	35	71	1264	130	133	358	223	93	211	494
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	7.8	17.7	1.0	1.6	27.6	4.4	3.1	6.7	9.8	2.1	3.8	20.0
Cycle Q Clear(g_c), s	7.8	17.7	1.0	1.6	27.6	4.4	3.1	6.7	9.8	2.1	3.8	20.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	386	1573	704	162	1341	600	172	900	403	155	883	395
V/C Ratio(X)	0.88	0.64	0.05	0.44	0.94	0.22	0.77	0.40	0.55	0.60	0.24	1.25
Avail Cap(c_a), veh/h	386	1573	704	644	1369	612	172	900	403	215	883	395
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.6	17.0	12.3	36.8	23.7	16.5	37.2	24.4	25.6	37.2	23.6	29.7
Incr Delay (d2), s/veh	19.8	0.9	0.0	1.9	12.9	0.2	19.5	0.3	1.7	3.7	0.1	132.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	8.8	0.4	0.8	15.7	1.9	1.9	3.3	4.4	1.1	1.9	23.1
LnGrp Delay(d),s/veh	54.4	17.9	12.4	38.7	36.5	16.7	56.8	24.7	27.2	40.8	23.8	161.8
LnGrp LOS	D	B	B	D	D	B	E	C	C	D	C	F
Approach Vol, veh/h		1385			1465			714			798	
Approach Delay, s/veh		26.7			34.9			31.5			111.2	
Approach LOS		C			C			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	24.4	7.8	39.6	8.0	24.0	13.0	34.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	19.0	15.0	25.0	4.0	20.0	9.0	31.0
Max Q Clear Time (g_c+I1), s	4.1	11.8	3.6	19.7	5.1	22.0	9.8	29.6
Green Ext Time (p_c), s	0.0	3.3	0.2	4.8	0.0	0.0	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	45.7
HCM 2010 LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	960	34	61	2121	160	28	538	67	72	303	152
Future Volume (veh/h)	77	960	34	61	2121	160	28	538	67	72	303	152
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1759	1845	1845	1759	1845
Adj Flow Rate, veh/h	77	960	34	61	2121	160	28	538	67	72	303	152
Adj No. of Lanes	2	2	0	1	2	1	1	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	8	3	3	8	3
Cap, veh/h	91	1874	66	77	1963	878	35	504	449	68	504	449
Arrive On Green	0.03	0.54	0.54	0.04	0.56	0.56	0.02	0.29	0.29	0.02	0.29	0.29
Sat Flow, veh/h	3408	3453	122	1757	3505	1568	1757	1759	1568	3408	1759	1568
Grp Volume(v), veh/h	77	487	507	61	2121	160	28	538	67	72	303	152
Grp Sat Flow(s),veh/h/ln	1704	1752	1823	1757	1752	1568	1757	1759	1568	1704	1759	1568
Q Serve(g_s), s	3.4	26.4	26.4	5.2	84.0	7.5	2.4	43.0	4.8	3.0	22.3	11.5
Cycle Q Clear(g_c), s	3.4	26.4	26.4	5.2	84.0	7.5	2.4	43.0	4.8	3.0	22.3	11.5
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	91	951	989	77	1963	878	35	504	449	68	504	449
V/C Ratio(X)	0.85	0.51	0.51	0.79	1.08	0.18	0.79	1.07	0.15	1.06	0.60	0.34
Avail Cap(c_a), veh/h	91	951	989	105	1963	878	70	504	449	68	504	449
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.7	21.7	21.7	71.0	33.0	16.2	73.2	53.5	39.9	73.5	46.1	42.3
Incr Delay (d2), s/veh	48.8	0.5	0.4	23.5	46.0	0.1	31.4	59.1	0.2	125.4	2.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	12.8	13.4	3.0	52.9	3.3	1.5	29.1	2.1	2.6	11.1	5.0
LnGrp Delay(d),s/veh	121.5	22.2	22.2	94.5	79.0	16.3	104.5	112.6	40.0	200.3	48.1	42.7
LnGrp LOS	F	C	C	F	F	B	F	F	D	F	D	D
Approach Vol, veh/h		1071			2342			633			527	
Approach Delay, s/veh		29.3			75.1			104.5			67.3	
Approach LOS		C			E			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	47.0	10.6	85.4	7.0	47.0	8.0	88.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	43.0	9.0	79.0	6.0	40.0	4.0	84.0
Max Q Clear Time (g_c+I1), s	5.0	45.0	7.2	28.4	4.4	24.3	5.4	86.0
Green Ext Time (p_c), s	0.0	0.0	0.0	43.9	0.0	5.7	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	67.6
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	314	196	189	116	446	181	374	2021	149	232	2018	282
Future Volume (veh/h)	314	196	189	116	446	181	374	2021	149	232	2018	282
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	314	196	189	116	446	181	374	2021	149	232	2018	282
Adj No. of Lanes	2	2	1	2	2	1	2	4	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	350	838	375	163	674	416	417	2985	737	278	2164	674
Arrive On Green	0.10	0.24	0.24	0.05	0.18	0.18	0.12	0.47	0.47	0.08	0.43	0.43
Sat Flow, veh/h	3408	3505	1568	3514	3689	1568	3375	6285	1553	3375	4988	1553
Grp Volume(v), veh/h	314	196	189	116	446	181	374	2021	149	232	2018	282
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1757	1845	1568	1688	1571	1553	1688	1663	1553
Q Serve(g_s), s	12.9	6.4	14.7	4.6	15.9	13.5	15.4	35.1	7.9	9.6	54.3	17.7
Cycle Q Clear(g_c), s	12.9	6.4	14.7	4.6	15.9	13.5	15.4	35.1	7.9	9.6	54.3	17.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	350	838	375	163	674	416	417	2985	737	278	2164	674
V/C Ratio(X)	0.90	0.23	0.50	0.71	0.66	0.44	0.90	0.68	0.20	0.83	0.93	0.42
Avail Cap(c_a), veh/h	350	943	422	214	836	485	418	2985	737	404	2254	702
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.6	43.3	46.5	66.4	53.6	43.1	61.0	28.7	21.5	63.8	38.0	27.6
Incr Delay (d2), s/veh	23.9	0.2	1.5	4.2	3.2	2.0	20.9	0.5	0.0	6.4	8.5	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	3.1	6.5	2.3	8.4	6.1	8.4	15.3	3.4	4.7	26.6	7.9
LnGrp Delay(d),s/veh	86.6	43.5	48.0	70.6	56.8	45.1	81.9	29.2	21.6	70.2	46.5	29.1
LnGrp LOS	F	D	D	E	E	D	F	C	C	E	D	C
Approach Vol, veh/h		699			743			2544			2532	
Approach Delay, s/veh		64.1			56.1			36.5			46.7	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.9	66.7	20.0	31.6	17.1	72.5	12.0	39.5
Change Period (Y+Rc), s	5.5	* 5.4	5.5	5.8	5.5	* 5.4	5.5	* 5.8
Max Green Setting (Gmax), s	17.5	* 64	14.5	32.0	16.9	* 64	8.6	* 38
Max Q Clear Time (g_c+I1), s	17.4	56.3	14.9	17.9	11.6	37.1	6.6	16.7
Green Ext Time (p_c), s	0.0	5.0	0.0	7.9	0.1	27.0	0.0	10.3

Intersection Summary	
HCM 2010 Ctrl Delay	45.7
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	209	484	305	633	1270	29	860	2024	314	110	769	329
Future Volume (veh/h)	209	484	305	633	1270	29	860	2024	314	110	769	329
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1827	1827	1827	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	209	484	305	633	1270	29	860	2024	314	110	769	329
Adj No. of Lanes	2	2	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	4	4	4	4	4	4
Cap, veh/h	252	700	313	641	1575	490	866	2091	651	133	1008	314
Arrive On Green	0.07	0.20	0.20	0.19	0.32	0.32	0.26	0.42	0.42	0.04	0.20	0.20
Sat Flow, veh/h	3408	3505	1568	3375	4988	1553	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	209	484	305	633	1270	29	860	2024	314	110	769	329
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1688	1663	1553	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	9.1	19.2	29.0	28.1	35.1	2.0	38.2	59.6	22.1	4.9	21.8	30.3
Cycle Q Clear(g_c), s	9.1	19.2	29.0	28.1	35.1	2.0	38.2	59.6	22.1	4.9	21.8	30.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	252	700	313	641	1575	490	866	2091	651	133	1008	314
V/C Ratio(X)	0.83	0.69	0.97	0.99	0.81	0.06	0.99	0.97	0.48	0.83	0.76	1.05
Avail Cap(c_a), veh/h	275	700	313	641	1575	490	866	2093	652	133	1008	314
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.6	55.8	59.7	60.6	47.2	35.8	55.7	42.6	31.7	71.6	56.5	59.9
Incr Delay (d2), s/veh	16.1	3.7	43.8	32.3	4.1	0.2	28.9	13.1	1.1	31.9	4.1	64.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	9.7	16.4	16.0	16.7	0.9	21.3	29.9	9.6	2.9	10.4	18.6
LnGrp Delay(d),s/veh	84.7	59.4	103.5	93.0	51.3	36.0	84.6	55.8	32.9	103.6	60.6	124.0
LnGrp LOS	F	E	F	F	D	D	F	E	C	F	E	F
Approach Vol, veh/h		998			1932			3198			1208	
Approach Delay, s/veh		78.2			64.7			61.3			81.8	
Approach LOS		E			E			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	44.0	36.1	16.6	53.4	11.4	68.7	34.0	36.0
Change Period (Y+Rc), s	5.5	* 5.8	5.5	* 6	5.5	* 5.8	5.5	6.0
Max Green Setting (Gmax), s	38.5	* 30	12.1	* 47	5.9	* 63	28.5	30.0
Max Q Clear Time (g_c+I1), s	40.2	32.3	11.1	37.1	6.9	61.6	30.1	31.0
Green Ext Time (p_c), s	0.0	0.0	0.0	9.1	0.0	1.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	67.8
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	316	562	158	39	1823	838	408	2031	20	82	816	608
Future Volume (veh/h)	316	562	158	39	1823	838	408	2031	20	82	816	608
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	316	562	158	39	1823	838	408	2031	20	82	816	608
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	259	2163	674	68	1880	585	346	1868	582	78	1472	458
Arrive On Green	0.08	0.43	0.43	0.02	0.37	0.37	0.10	0.37	0.37	0.02	0.30	0.30
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	316	562	158	39	1823	838	408	2031	20	82	816	608
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	11.5	10.8	9.7	1.7	53.7	56.4	15.5	56.6	1.2	3.5	20.8	44.6
Cycle Q Clear(g_c), s	11.5	10.8	9.7	1.7	53.7	56.4	15.5	56.6	1.2	3.5	20.8	44.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	259	2163	674	68	1880	585	346	1868	582	78	1472	458
V/C Ratio(X)	1.22	0.26	0.23	0.58	0.97	1.43	1.18	1.09	0.03	1.05	0.55	1.33
Avail Cap(c_a), veh/h	259	2163	674	115	1880	585	346	1868	582	78	1472	458
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.8	27.7	27.3	73.4	46.5	47.4	67.8	47.2	29.9	73.8	44.9	53.3
Incr Delay (d2), s/veh	127.9	0.0	0.1	2.9	14.2	204.0	106.2	48.8	0.0	115.8	0.3	161.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	5.0	4.2	0.8	27.5	57.5	12.3	34.4	0.5	2.9	9.6	39.7
LnGrp Delay(d),s/veh	197.7	27.7	27.4	76.3	60.7	251.4	174.0	96.1	29.9	190.6	45.1	214.7
LnGrp LOS	F	C	C	E	E	F	F	F	C	F	D	F
Approach Vol, veh/h		1036			2700			2459			1506	
Approach Delay, s/veh		79.5			120.1			108.5			121.5	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.0	50.6	17.0	62.5	9.0	62.6	8.5	71.0
Change Period (Y+Rc), s	5.5	6.0	5.5	* 6.1	5.5	* 6	5.5	* 6.1
Max Green Setting (Gmax), s	15.5	44.0	11.5	* 56	3.5	* 57	5.1	* 62
Max Q Clear Time (g_c+I1), s	17.5	46.6	13.5	58.4	5.5	58.6	3.7	12.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.6

Intersection Summary	
HCM 2010 Ctrl Delay	111.2
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	616	797	163	96	1814	925	760	2133	202	149	970	733
Future Volume (veh/h)	616	797	163	96	1814	925	760	2133	202	149	970	733
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1759	1759	1759	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	616	797	163	96	1814	925	760	2133	202	149	970	733
Adj No. of Lanes	2	3	0	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	8	8	8	4	4	4	4	4	4
Cap, veh/h	375	1700	345	136	1617	503	461	1845	575	124	1347	419
Arrive On Green	0.11	0.40	0.40	0.04	0.34	0.34	0.14	0.37	0.37	0.04	0.27	0.27
Sat Flow, veh/h	3408	4199	852	3250	4803	1495	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	616	636	324	96	1814	925	760	2133	202	149	970	733
Grp Sat Flow(s),veh/h/ln	1704	1679	1694	1625	1601	1495	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	16.5	20.9	21.1	4.4	50.5	50.5	20.5	55.5	14.1	5.5	26.4	40.5
Cycle Q Clear(g_c), s	16.5	20.9	21.1	4.4	50.5	50.5	20.5	55.5	14.1	5.5	26.4	40.5
Prop In Lane	1.00		0.50	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	375	1359	686	136	1617	503	461	1845	575	124	1347	419
V/C Ratio(X)	1.64	0.47	0.47	0.71	1.12	1.84	1.65	1.16	0.35	1.20	0.72	1.75
Avail Cap(c_a), veh/h	375	1359	686	195	1617	503	461	1845	575	124	1347	419
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.8	32.8	32.8	71.0	49.8	49.7	64.8	47.2	34.2	72.3	49.6	54.8
Incr Delay (d2), s/veh	301.2	0.1	0.2	2.5	63.7	384.5	301.0	76.7	0.1	145.8	1.6	346.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	23.4	9.6	9.9	2.0	31.8	74.5	28.8	38.6	6.1	5.1	12.3	57.8
LnGrp Delay(d),s/veh	367.9	32.9	33.0	73.5	113.4	434.2	365.7	124.0	34.4	218.0	51.3	401.2
LnGrp LOS	F	C	C	E	F	F	F	F	C	F	D	F
Approach Vol, veh/h		1576			2835			3095			1852	
Approach Delay, s/veh		163.9			216.7			177.5			203.2	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	46.0	22.0	56.0	11.0	61.0	11.8	66.2
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	20.5	40.5	16.5	50.5	5.5	55.5	9.0	58.0
Max Q Clear Time (g_c+I1), s	22.5	42.5	18.5	52.5	7.5	57.5	6.4	23.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.4

Intersection Summary	
HCM 2010 Ctrl Delay	192.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	601	553	129	383	1372	324	185	1555	158	117	817	860
Future Volume (veh/h)	601	553	129	383	1372	324	185	1555	158	117	817	860
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845	1845	1827	1827	1827	1836	1900
Adj Flow Rate, veh/h	601	553	129	383	1372	324	185	1555	158	117	817	860
Adj No. of Lanes	2	2	1	0	1	1	1	2	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	4	4	4	4	4
Cap, veh/h	468	481	215	173	618	679	94	949	424	92	442	395
Arrive On Green	0.14	0.14	0.14	0.43	0.43	0.43	0.05	0.27	0.27	0.03	0.25	0.25
Sat Flow, veh/h	3408	3505	1568	398	1427	1568	1757	3471	1553	3375	1744	1561
Grp Volume(v), veh/h	601	553	129	1755	0	324	185	1555	158	117	817	860
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1825	0	1568	1757	1736	1553	1688	1744	1561
Q Serve(g_s), s	20.6	20.6	11.6	65.0	0.0	22.1	8.0	41.0	12.3	4.1	38.0	38.0
Cycle Q Clear(g_c), s	20.6	20.6	11.6	65.0	0.0	22.1	8.0	41.0	12.3	4.1	38.0	38.0
Prop In Lane	1.00		1.00	0.22		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	468	481	215	791	0	679	94	949	424	92	442	395
V/C Ratio(X)	1.28	1.15	0.60	2.22	0.00	0.48	1.97	1.64	0.37	1.27	1.85	2.18
Avail Cap(c_a), veh/h	468	481	215	791	0	679	94	949	424	92	442	395
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.7	64.7	60.8	42.5	0.0	30.4	71.0	54.5	44.1	72.9	56.0	56.0
Incr Delay (d2), s/veh	143.3	88.8	4.5	552.9	0.0	0.5	474.5	292.3	0.5	181.9	390.7	537.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.0	15.9	5.3	154.2	0.0	9.6	16.2	58.2	5.4	4.2	66.2	75.4
LnGrp Delay(d),s/veh	208.0	153.5	65.3	595.4	0.0	30.9	545.5	346.8	44.6	254.8	446.7	593.2
LnGrp LOS	F	F	E	F		C	F	F	D	F	F	F
Approach Vol, veh/h		1283			2079			1898			1794	
Approach Delay, s/veh		170.2			507.4			341.0			504.4	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	43.0		26.0	9.0	46.0		69.0
Change Period (Y+Rc), s	4.0	5.0		* 5.4	* 4.9	5.0		4.0
Max Green Setting (Gmax), s	8.0	38.0		* 21	* 4.1	41.0		65.0
Max Q Clear Time (g_c+I1), s	10.0	40.0		22.6	6.1	43.0		67.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary			
HCM 2010 Ctrl Delay		400.5	
HCM 2010 LOS		F	

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	186	876	55	364	1869	393	81	1238	297	205	734	417
Future Volume (veh/h)	186	876	55	364	1869	393	81	1238	297	205	734	417
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1792	1845	1845	1845	1827	1845	1845
Adj Flow Rate, veh/h	186	876	55	364	1869	393	81	1238	297	205	734	417
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	6	3	3	3	4	3	3
Cap, veh/h	141	1381	618	420	1668	799	123	1039	465	163	1082	549
Arrive On Green	0.04	0.39	0.39	0.12	0.48	0.48	0.04	0.30	0.30	0.05	0.31	0.31
Sat Flow, veh/h	3408	3505	1568	3408	3505	1524	3408	3505	1568	3375	3505	1568
Grp Volume(v), veh/h	186	876	55	364	1869	393	81	1238	297	205	734	417
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1524	1704	1752	1568	1688	1752	1568
Q Serve(g_s), s	6.0	29.3	3.2	15.2	69.0	24.0	3.4	43.0	23.8	7.0	26.5	34.1
Cycle Q Clear(g_c), s	6.0	29.3	3.2	15.2	69.0	24.0	3.4	43.0	23.8	7.0	26.5	34.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	141	1381	618	420	1668	799	123	1039	465	163	1082	549
V/C Ratio(X)	1.32	0.63	0.09	0.87	1.12	0.49	0.66	1.19	0.64	1.26	0.68	0.76
Avail Cap(c_a), veh/h	141	1381	618	541	1668	799	165	1039	465	163	1082	549
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.5	35.5	27.6	62.4	38.0	22.1	69.0	51.0	44.3	69.0	43.8	41.7
Incr Delay (d2), s/veh	184.5	1.0	0.1	11.4	62.9	0.5	5.9	95.7	2.9	156.2	1.7	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	14.3	1.4	7.8	47.9	10.1	1.7	34.6	10.7	6.8	13.1	15.7
LnGrp Delay(d),s/veh	254.0	36.5	27.7	73.8	100.9	22.6	74.9	146.7	47.2	225.2	45.5	47.8
LnGrp LOS	F	D	C	E	F	C	E	F	D	F	D	D
Approach Vol, veh/h		1117			2626			1616			1356	
Approach Delay, s/veh		72.3			85.4			124.8			73.4	
Approach LOS		E			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.9	63.1	9.2	50.8	10.0	75.0	11.0	49.0
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	23.0	52.0	7.0	43.0	6.0	69.0	7.0	43.0
Max Q Clear Time (g_c+I1), s	17.2	31.3	5.4	36.1	8.0	71.0	9.0	45.0
Green Ext Time (p_c), s	0.7	19.0	0.0	6.2	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	90.3
HCM 2010 LOS	F

Notes

User approved changes to right turn type.

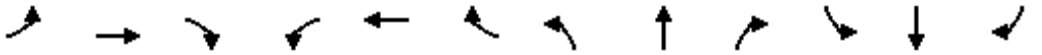
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	399	14	30	1199	542	615
Future Volume (veh/h)	399	14	30	1199	542	615
Number	7	14	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1900	1827	1827	1827	1900
Adj Flow Rate, veh/h	399	14	30	1199	542	615
Adj No. of Lanes	0	0	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	4	4	4	4
Cap, veh/h	450	16	35	1848	709	634
Arrive On Green	0.29	0.29	0.02	0.53	0.41	0.41
Sat Flow, veh/h	1579	55	1740	3563	1827	1553
Grp Volume(v), veh/h	414	0	30	1199	542	615
Grp Sat Flow(s),veh/h/ln	1639	0	1740	1736	1736	1553
Q Serve(g_s), s	12.8	0.0	0.9	13.1	14.3	20.6
Cycle Q Clear(g_c), s	12.8	0.0	0.9	13.1	14.3	20.6
Prop In Lane	0.96	0.03	1.00			1.00
Lane Grp Cap(c), veh/h	467	0	35	1848	709	634
V/C Ratio(X)	0.89	0.00	0.85	0.65	0.76	0.97
Avail Cap(c_a), veh/h	524	0	200	2202	709	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.2	0.0	25.9	8.9	13.5	15.4
Incr Delay (d2), s/veh	15.5	0.0	18.6	0.3	4.5	28.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	0.0	0.6	6.2	7.7	13.6
LnGrp Delay(d),s/veh	33.6	0.0	44.6	9.2	18.0	43.4
LnGrp LOS	C		D	A	B	D
Approach Vol, veh/h	414			1229	1157	
Approach Delay, s/veh	33.6			10.0	31.5	
Approach LOS	C			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	6.6	27.4		19.1		34.0		
Change Period (Y+Rc), s	5.5	* 5.7		4.0		* 5.7		
Max Green Setting (Gmax), s	6.1	* 22		17.0		* 34		
Max Q Clear Time (g_c+I1), s	2.9	22.6		14.8		15.1		
Green Ext Time (p_c), s	0.0	0.0		0.3		7.6		

Intersection Summary	
HCM 2010 Ctrl Delay	22.4
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	246	25	52	4	32	48	8	1263	26	22	1847	416
Future Volume (veh/h)	246	25	52	4	32	48	8	1263	26	22	1847	416
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1583	1845	1845	1845	1845	1810	1845	1845	1845
Adj Flow Rate, veh/h	246	25	52	4	32	48	8	1263	26	22	1847	416
Adj No. of Lanes	2	1	1	1	1	1	2	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	20	3	3	3	3	5	3	3	3
Cap, veh/h	320	276	234	6	110	94	28	2145	941	34	2185	978
Arrive On Green	0.09	0.15	0.15	0.00	0.06	0.06	0.01	0.61	0.61	0.02	0.62	0.62
Sat Flow, veh/h	3408	1845	1568	1508	1845	1568	3408	3505	1538	1757	3505	1568
Grp Volume(v), veh/h	246	25	52	4	32	48	8	1263	26	22	1847	416
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1508	1845	1568	1704	1752	1538	1757	1752	1568
Q Serve(g_s), s	5.3	0.9	2.2	0.2	1.2	2.2	0.2	16.3	0.5	0.9	31.3	10.1
Cycle Q Clear(g_c), s	5.3	0.9	2.2	0.2	1.2	2.2	0.2	16.3	0.5	0.9	31.3	10.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	320	276	234	6	110	94	28	2145	941	34	2185	978
V/C Ratio(X)	0.77	0.09	0.22	0.62	0.29	0.51	0.29	0.59	0.03	0.64	0.85	0.43
Avail Cap(c_a), veh/h	320	470	400	81	396	336	183	2162	949	118	2209	988
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.0	27.3	27.9	37.1	33.5	34.0	36.8	8.8	5.7	36.3	11.2	7.2
Incr Delay (d2), s/veh	10.8	0.1	0.5	70.4	1.4	4.3	5.5	0.4	0.0	17.9	3.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.5	1.0	0.2	0.7	1.1	0.1	7.8	0.2	0.6	15.8	4.4
LnGrp Delay(d),s/veh	43.8	27.5	28.4	107.4	35.0	38.3	42.3	9.2	5.7	54.2	14.4	7.5
LnGrp LOS	D	C	C	F	C	D	D	A	A	D	B	A
Approach Vol, veh/h		323			84			1297			2285	
Approach Delay, s/veh		40.1			40.3			9.3			13.5	
Approach LOS		D			D			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	49.6	4.3	15.1	4.6	50.5	11.0	8.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	46.0	4.0	19.0	4.0	47.0	7.0	16.0
Max Q Clear Time (g_c+I1), s	2.9	18.3	2.2	4.2	2.2	33.3	7.3	4.2
Green Ext Time (p_c), s	0.0	25.9	0.0	0.5	0.0	13.2	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	14.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	609	404	58	61	775	97	2	621	43	93	1047	1120
Future Volume (veh/h)	609	404	58	61	775	97	2	621	43	93	1047	1120
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1810	1810	1810	1810	1810	1810
Adj Flow Rate, veh/h	609	404	58	61	775	97	2	621	43	93	1047	1120
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	5	5	5	5	5	5
Cap, veh/h	549	1237	554	97	773	346	5	1452	649	138	1588	710
Arrive On Green	0.17	0.36	0.36	0.03	0.23	0.23	0.00	0.42	0.42	0.04	0.46	0.46
Sat Flow, veh/h	3312	3406	1524	3312	3406	1524	3343	3438	1538	3343	3438	1538
Grp Volume(v), veh/h	609	404	58	61	775	97	2	621	43	93	1047	1120
Grp Sat Flow(s),veh/h/ln	1656	1703	1524	1656	1703	1524	1672	1719	1538	1672	1719	1538
Q Serve(g_s), s	24.4	12.6	3.7	2.7	33.4	7.7	0.1	18.8	2.4	4.0	34.7	68.0
Cycle Q Clear(g_c), s	24.4	12.6	3.7	2.7	33.4	7.7	0.1	18.8	2.4	4.0	34.7	68.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	549	1237	554	97	773	346	5	1452	649	138	1588	710
V/C Ratio(X)	1.11	0.33	0.10	0.63	1.00	0.28	0.37	0.43	0.07	0.67	0.66	1.58
Avail Cap(c_a), veh/h	549	1237	554	151	773	346	68	1457	652	195	1588	710
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.4	33.9	31.0	70.7	56.9	47.0	73.4	30.0	25.3	69.6	30.7	39.6
Incr Delay (d2), s/veh	72.1	0.3	0.2	2.5	33.1	0.9	15.3	0.2	0.0	2.1	1.0	266.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.6	6.0	1.6	1.3	19.2	3.3	0.1	8.9	1.0	1.9	16.7	81.4
LnGrp Delay(d),s/veh	133.5	34.2	31.2	73.2	90.1	47.9	88.7	30.2	25.3	71.8	31.7	305.9
LnGrp LOS	F	C	C	E	F	D	F	C	C	E	C	F
Approach Vol, veh/h		1071			933			666			2260	
Approach Delay, s/veh		90.5			84.6			30.1			169.2	
Approach LOS		F			F			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.0	39.4	4.8	74.0	8.9	59.5	10.7	68.2
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	24.4	33.4	3.0	68.0	6.7	51.1	8.6	62.4
Max Q Clear Time (g_c+I1), s	26.4	35.4	2.1	70.0	4.7	14.6	6.0	20.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	20.7	0.0	29.7

Intersection Summary	
HCM 2010 Ctrl Delay	117.3
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	828	93	283	739	154	96	1085	299	69	763	137
Future Volume (veh/h)	164	828	93	283	739	154	96	1085	299	69	763	137
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	164	828	93	283	739	154	96	1085	299	69	763	137
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	198	902	101	259	1117	500	122	1197	536	80	1113	498
Arrive On Green	0.11	0.28	0.28	0.15	0.32	0.32	0.07	0.34	0.34	0.05	0.32	0.32
Sat Flow, veh/h	1757	3177	357	1757	3505	1568	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	164	457	464	283	739	154	96	1085	299	69	763	137
Grp Sat Flow(s),veh/h/ln	1757	1752	1782	1757	1752	1568	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	8.0	22.2	22.2	13.0	16.0	6.5	4.7	26.0	13.7	3.4	16.7	5.8
Cycle Q Clear(g_c), s	8.0	22.2	22.2	13.0	16.0	6.5	4.7	26.0	13.7	3.4	16.7	5.8
Prop In Lane	1.00		0.20	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	198	498	506	259	1117	500	122	1197	536	80	1113	498
V/C Ratio(X)	0.83	0.92	0.92	1.09	0.66	0.31	0.79	0.91	0.56	0.87	0.69	0.28
Avail Cap(c_a), veh/h	239	517	526	259	1117	500	160	1233	552	80	1113	498
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.2	30.6	30.6	37.6	25.9	22.7	40.4	27.7	23.6	41.8	26.2	22.5
Incr Delay (d2), s/veh	17.9	21.0	20.8	82.6	1.5	0.3	17.4	9.6	1.2	58.2	1.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	13.6	13.8	12.2	7.9	2.9	2.9	14.1	6.1	3.0	8.3	2.5
LnGrp Delay(d),s/veh	56.1	51.6	51.3	120.2	27.4	23.0	57.7	37.3	24.8	100.0	28.0	22.8
LnGrp LOS	E	D	D	F	C	C	E	D	C	F	C	C
Approach Vol, veh/h		1085			1176			1480			969	
Approach Delay, s/veh		52.2			49.1			36.1			32.4	
Approach LOS		D			D			D			C	

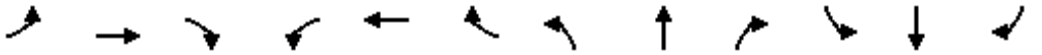
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	34.1	17.0	29.0	10.1	32.0	13.9	32.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	31.0	13.0	26.0	8.0	27.0	12.0	27.0
Max Q Clear Time (g_c+I1), s	5.4	28.0	15.0	24.2	6.7	18.7	10.0	18.0
Green Ext Time (p_c), s	0.0	2.1	0.0	0.8	0.0	7.0	0.1	6.6

Intersection Summary	
HCM 2010 Ctrl Delay	42.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	619	224	68	784	100	170	1642	191	141	439	57
Future Volume (veh/h)	124	619	224	68	784	100	170	1642	191	141	439	57
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	124	619	224	68	784	100	170	1642	191	141	439	57
Adj No. of Lanes	1	2	1	1	2	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	108	906	405	86	770	98	197	1594	183	107	1410	182
Arrive On Green	0.06	0.26	0.26	0.05	0.25	0.25	0.11	0.51	0.51	0.06	0.46	0.46
Sat Flow, veh/h	1757	3505	1568	1757	3128	399	1740	3139	360	1740	3093	399
Grp Volume(v), veh/h	124	619	224	68	439	445	170	897	936	141	245	251
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1774	1740	1736	1763	1740	1736	1756
Q Serve(g_s), s	8.0	20.7	16.1	5.0	32.0	32.0	12.5	66.0	66.0	8.0	11.6	11.8
Cycle Q Clear(g_c), s	8.0	20.7	16.1	5.0	32.0	32.0	12.5	66.0	66.0	8.0	11.6	11.8
Prop In Lane	1.00		1.00	1.00		0.22	1.00		0.20	1.00		0.23
Lane Grp Cap(c), veh/h	108	906	405	86	431	437	197	881	895	107	791	801
V/C Ratio(X)	1.15	0.68	0.55	0.79	1.02	1.02	0.86	1.02	1.05	1.32	0.31	0.31
Avail Cap(c_a), veh/h	108	906	405	108	431	437	308	881	895	107	791	801
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.0	43.4	41.7	61.1	49.0	49.0	56.6	32.0	32.0	61.0	22.4	22.4
Incr Delay (d2), s/veh	131.5	2.1	1.6	25.5	48.0	47.8	13.9	34.8	42.8	194.0	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	10.2	7.1	3.0	21.2	21.5	6.8	39.8	42.5	9.6	5.6	5.8
LnGrp Delay(d),s/veh	192.5	45.5	43.3	86.7	97.0	96.8	70.6	66.8	74.8	255.0	22.6	22.7
LnGrp LOS	F	D	D	F	F	F	E	F	F	F	C	C
Approach Vol, veh/h		967			952			2003			637	
Approach Delay, s/veh		63.9			96.2			70.8			74.1	
Approach LOS		E			F			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	70.0	10.4	37.6	18.7	63.3	12.0	36.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	66.0	8.0	32.0	23.0	51.0	8.0	32.0
Max Q Clear Time (g_c+I1), s	10.0	68.0	7.0	22.7	14.5	13.8	10.0	34.0
Green Ext Time (p_c), s	0.0	0.0	0.0	6.5	0.3	26.1	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	75.1
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	1304	169	175	1505	116	194	1576	174	126	368	126
Future Volume (veh/h)	320	1304	169	175	1505	116	194	1576	174	126	368	126
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1827	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	320	1304	169	175	1505	116	194	1576	174	126	368	126
Adj No. of Lanes	1	3	0	1	3	1	1	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	255	1401	182	151	1264	393	215	1368	149	104	1283	574
Arrive On Green	0.15	0.31	0.31	0.09	0.25	0.25	0.12	0.43	0.43	0.06	0.37	0.37
Sat Flow, veh/h	1740	4470	579	1740	4988	1553	1740	3157	345	1740	3471	1553
Grp Volume(v), veh/h	320	970	503	175	1505	116	194	858	892	126	368	126
Grp Sat Flow(s),veh/h/ln	1740	1663	1725	1740	1663	1553	1740	1736	1766	1740	1736	1553
Q Serve(g_s), s	22.0	42.4	42.4	13.0	38.0	9.0	16.5	65.0	65.0	9.0	11.2	8.4
Cycle Q Clear(g_c), s	22.0	42.4	42.4	13.0	38.0	9.0	16.5	65.0	65.0	9.0	11.2	8.4
Prop In Lane	1.00		0.34	1.00		1.00	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	255	1042	540	151	1264	393	215	752	765	104	1283	574
V/C Ratio(X)	1.25	0.93	0.93	1.16	1.19	0.29	0.90	1.14	1.17	1.21	0.29	0.22
Avail Cap(c_a), veh/h	255	1042	540	151	1264	393	232	752	765	104	1283	574
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.0	49.9	49.9	68.5	56.0	45.2	64.8	42.5	42.5	70.5	33.3	32.4
Incr Delay (d2), s/veh	142.3	14.2	23.0	122.9	94.1	0.4	32.6	78.9	88.4	154.0	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.6	21.6	23.7	11.4	28.4	3.9	9.9	47.6	50.5	8.8	5.4	3.6
LnGrp Delay(d),s/veh	206.3	64.2	72.9	191.4	150.1	45.6	97.4	121.4	130.9	224.5	33.5	32.6
LnGrp LOS	F	E	E	F	F	D	F	F	F	F	C	C
Approach Vol, veh/h		1793			1796			1944			620	
Approach Delay, s/veh		92.0			147.4			123.4			72.1	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	69.0	17.0	51.0	22.6	59.4	26.0	42.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	9.0	65.0	13.0	47.0	20.0	54.0	22.0	38.0
Max Q Clear Time (g_c+I1), s	11.0	67.0	15.0	44.4	18.5	13.2	24.0	40.0
Green Ext Time (p_c), s	0.0	0.0	0.0	2.5	0.1	26.1	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		116.1
HCM 2010 LOS		F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	1211	180	95	1807	395	135	1002	266	25	268	186
Future Volume (veh/h)	159	1211	180	95	1807	395	135	1002	266	25	268	186
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1827	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	159	1211	180	95	1807	395	135	1002	266	25	268	186
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	3	3	3	3	3	3
Cap, veh/h	151	1572	233	116	1730	774	160	987	442	31	731	327
Arrive On Green	0.09	0.52	0.52	0.07	0.50	0.50	0.09	0.28	0.28	0.02	0.21	0.21
Sat Flow, veh/h	1740	3034	449	1740	3471	1553	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	159	690	701	95	1807	395	135	1002	266	25	268	186
Grp Sat Flow(s),veh/h/ln	1740	1736	1748	1740	1736	1553	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	12.0	44.1	44.7	7.5	69.0	23.7	10.5	39.0	20.3	2.0	9.1	14.7
Cycle Q Clear(g_c), s	12.0	44.1	44.7	7.5	69.0	23.7	10.5	39.0	20.3	2.0	9.1	14.7
Prop In Lane	1.00		0.26	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	151	899	906	116	1730	774	160	987	442	31	731	327
V/C Ratio(X)	1.05	0.77	0.77	0.82	1.04	0.51	0.85	1.02	0.60	0.80	0.37	0.57
Avail Cap(c_a), veh/h	151	899	906	138	1730	774	241	987	442	51	731	327
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.2	26.7	26.8	63.8	34.7	23.4	62.0	49.7	43.0	67.8	46.9	49.2
Incr Delay (d2), s/veh	88.5	4.0	4.2	26.7	34.4	0.6	15.7	32.4	2.3	35.2	0.3	2.3
Initial Q Delay(d3),s/veh	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	22.1	22.5	4.5	41.2	10.3	5.8	23.2	9.1	1.3	4.4	6.6
LnGrp Delay(d),s/veh	151.8	30.7	31.0	90.5	69.1	23.9	77.7	82.2	45.3	103.0	47.3	51.5
LnGrp LOS	F	C	C	F	F	C	E	F	D	F	D	D
Approach Vol, veh/h		1550			2297			1403			479	
Approach Delay, s/veh		43.3			62.2			74.8			51.8	
Approach LOS		D			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	43.0	13.2	75.8	16.6	32.9	16.0	73.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	39.0	11.0	70.0	19.0	24.0	12.0	69.0
Max Q Clear Time (g_c+I1), s	4.0	41.0	9.5	46.7	12.5	16.7	14.0	71.0
Green Ext Time (p_c), s	0.0	0.0	0.0	22.0	0.2	5.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	59.3
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	418	508	33	74	698	278	55	1452	59	92	873	9
Future Volume (veh/h)	418	508	33	74	698	278	55	1452	59	92	873	9
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1827	1827	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	418	508	33	74	698	278	55	1452	59	92	873	9
Adj No. of Lanes	2	3	1	2	3	1	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	453	1374	428	127	893	278	112	1577	64	149	1647	737
Arrive On Green	0.13	0.28	0.28	0.04	0.18	0.18	0.03	0.46	0.46	0.04	0.47	0.47
Sat Flow, veh/h	3375	4988	1553	3375	4988	1553	3375	3400	138	3375	3471	1553
Grp Volume(v), veh/h	418	508	33	74	698	278	55	740	771	92	873	9
Grp Sat Flow(s),veh/h/ln	1688	1663	1553	1688	1663	1553	1688	1736	1803	1688	1736	1553
Q Serve(g_s), s	10.9	7.3	1.4	1.9	11.9	16.0	1.4	35.6	35.9	2.4	15.8	0.3
Cycle Q Clear(g_c), s	10.9	7.3	1.4	1.9	11.9	16.0	1.4	35.6	35.9	2.4	15.8	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	453	1374	428	127	893	278	112	805	836	149	1647	737
V/C Ratio(X)	0.92	0.37	0.08	0.58	0.78	1.00	0.49	0.92	0.92	0.62	0.53	0.01
Avail Cap(c_a), veh/h	453	1374	428	189	893	278	151	815	847	151	1647	737
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.2	26.1	24.0	42.3	35.0	36.7	42.5	22.4	22.5	42.0	16.5	12.4
Incr Delay (d2), s/veh	24.5	0.2	0.1	4.2	4.6	54.1	3.3	15.3	15.4	7.2	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	3.4	0.6	1.0	5.9	11.0	0.7	20.3	21.3	1.3	7.6	0.1
LnGrp Delay(d),s/veh	62.7	26.3	24.0	46.5	39.6	90.8	45.7	37.7	37.8	49.2	16.8	12.4
LnGrp LOS	E	C	C	D	D	F	D	D	D	D	B	B
Approach Vol, veh/h		959			1050			1566			974	
Approach Delay, s/veh		42.1			53.6			38.0			19.8	
Approach LOS		D			D			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	45.5	7.4	28.6	7.0	46.4	16.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	42.0	5.0	23.0	4.0	42.0	12.0	16.0
Max Q Clear Time (g_c+I1), s	4.4	37.9	3.9	9.3	3.4	17.8	12.9	18.0
Green Ext Time (p_c), s	0.0	3.6	0.0	7.7	0.0	18.7	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	38.6
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	411	58	1	471	23	170	540	38	8	217	28
Future Volume (veh/h)	142	411	58	1	471	23	170	540	38	8	217	28
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1827	1827	1827	1845	1845	1845
Adj Flow Rate, veh/h	142	411	58	1	471	23	170	540	38	8	217	28
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	3	3	3
Cap, veh/h	179	1006	141	3	766	37	215	656	558	15	451	383
Arrive On Green	0.10	0.33	0.33	0.00	0.23	0.23	0.12	0.36	0.36	0.01	0.24	0.24
Sat Flow, veh/h	1740	3058	429	1740	3369	164	1740	1827	1553	1757	1845	1568
Grp Volume(v), veh/h	142	232	237	1	242	252	170	540	38	8	217	28
Grp Sat Flow(s),veh/h/ln	1740	1736	1751	1740	1736	1798	1740	1827	1553	1757	1845	1568
Q Serve(g_s), s	4.2	5.5	5.6	0.0	6.6	6.7	5.0	14.2	0.9	0.2	5.3	0.7
Cycle Q Clear(g_c), s	4.2	5.5	5.6	0.0	6.6	6.7	5.0	14.2	0.9	0.2	5.3	0.7
Prop In Lane	1.00		0.24	1.00		0.09	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	179	571	576	3	394	409	215	656	558	15	451	383
V/C Ratio(X)	0.79	0.41	0.41	0.30	0.61	0.62	0.79	0.82	0.07	0.54	0.48	0.07
Avail Cap(c_a), veh/h	197	590	595	131	525	543	296	794	675	133	627	533
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.2	13.8	13.8	26.4	18.4	18.4	22.6	15.4	11.1	26.1	17.1	15.4
Incr Delay (d2), s/veh	18.1	0.5	0.5	45.2	1.6	1.5	9.7	5.9	0.1	27.6	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	2.7	2.8	0.1	3.3	3.5	3.0	8.1	0.4	0.2	2.8	0.3
LnGrp Delay(d),s/veh	41.3	14.2	14.3	71.6	19.9	19.9	32.2	21.3	11.2	53.8	17.9	15.5
LnGrp LOS	D	B	B	E	B	B	C	C	B	D	B	B
Approach Vol, veh/h		611			495			748			253	
Approach Delay, s/veh		20.5			20.0			23.3			18.8	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.4	23.0	4.1	21.4	10.5	16.9	9.4	16.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	23.0	4.0	18.0	9.0	18.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	2.2	16.2	2.0	7.6	7.0	7.3	6.2	8.7
Green Ext Time (p_c), s	0.0	2.8	0.0	4.3	0.1	3.8	0.0	3.4

Intersection Summary	
HCM 2010 Ctrl Delay	21.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1	154	110	3	1	305	1893	37	0	1646	0
Future Volume (veh/h)	0	1	154	110	3	1	305	1893	37	0	1646	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1759	1900	1845	1845	1900	1792	1792	1792	1792	1792	1900
Adj Flow Rate, veh/h	0	1	154	110	3	1	305	1893	37	0	1646	0
Adj No. of Lanes	0	1	0	1	1	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	8	8	8	3	3	3	6	6	6	6	6	6
Cap, veh/h	0	1	177	139	105	35	307	2073	928	106	1672	0
Arrive On Green	0.00	0.12	0.12	0.08	0.08	0.08	0.18	0.61	0.61	0.00	0.49	0.00
Sat Flow, veh/h	0	10	1487	1757	1325	442	1707	3406	1524	1707	3495	0
Grp Volume(v), veh/h	0	0	155	110	0	4	305	1893	37	0	1646	0
Grp Sat Flow(s),veh/h/ln	0	0	1497	1757	0	1767	1707	1703	1524	1707	1703	0
Q Serve(g_s), s	0.0	0.0	12.4	7.5	0.0	0.3	21.8	59.8	1.2	0.0	58.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	12.4	7.5	0.0	0.3	21.8	59.8	1.2	0.0	58.2	0.0
Prop In Lane	0.00		0.99	1.00		0.25	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	0	0	178	139	0	139	307	2073	928	106	1672	0
V/C Ratio(X)	0.00	0.00	0.87	0.79	0.00	0.03	0.99	0.91	0.04	0.00	0.98	0.00
Avail Cap(c_a), veh/h	0	0	196	230	0	231	307	2174	972	106	1672	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	52.9	55.3	0.0	52.0	50.0	21.0	9.6	0.0	30.6	0.0
Incr Delay (d2), s/veh	0.0	0.0	30.0	9.7	0.0	0.1	49.2	6.3	0.0	0.0	18.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	6.7	4.0	0.0	0.1	14.4	29.7	0.5	0.0	31.5	0.0
LnGrp Delay(d),s/veh	0.0	0.0	82.9	65.0	0.0	52.0	99.2	27.3	9.6	0.0	49.0	0.0
LnGrp LOS			F	E		D	F	C	A		D	
Approach Vol, veh/h		155			114			2235			1646	
Approach Delay, s/veh		82.9			64.6			36.8			49.0	
Approach LOS		F			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.6	78.4		18.6	26.0	64.0		13.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	78.0		16.0	22.0	60.0		16.0
Max Q Clear Time (g_c+I1), s	0.0	61.8		14.4	23.8	60.2		9.5
Green Ext Time (p_c), s	0.0	12.6		0.1	0.0	0.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	44.1
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	3	19	194	6	606	16	1816	105	226	1575	0
Future Volume (veh/h)	0	3	19	194	6	606	16	1816	105	226	1575	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	0	3	19	194	6	606	16	1816	105	226	1575	0
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	1	22	139	219	4	394	23	1827	105	210	2274	0
Arrive On Green	0.00	0.10	0.10	0.12	0.25	0.25	0.01	0.54	0.54	0.12	0.65	0.00
Sat Flow, veh/h	1757	218	1382	1757	15	1555	1757	3370	193	1757	3597	0
Grp Volume(v), veh/h	0	0	22	194	0	612	16	936	985	226	1575	0
Grp Sat Flow(s),veh/h/ln	1757	0	1601	1757	0	1570	1757	1752	1811	1757	1752	0
Q Serve(g_s), s	0.0	0.0	1.8	15.4	0.0	36.0	1.3	74.6	77.0	17.0	40.7	0.0
Cycle Q Clear(g_c), s	0.0	0.0	1.8	15.4	0.0	36.0	1.3	74.6	77.0	17.0	40.7	0.0
Prop In Lane	1.00		0.86	1.00		0.99	1.00		0.11	1.00		0.00
Lane Grp Cap(c), veh/h	1	0	161	219	0	398	23	950	982	210	2274	0
V/C Ratio(X)	0.00	0.00	0.14	0.89	0.00	1.54	0.69	0.99	1.00	1.07	0.69	0.00
Avail Cap(c_a), veh/h	49	0	180	297	0	398	62	950	982	210	2274	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	58.2	61.2	0.0	53.0	69.8	31.9	32.5	62.5	15.9	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.4	20.8	0.0	254.1	30.7	25.5	29.4	83.2	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.8	8.8	0.0	43.7	0.8	42.6	46.2	13.1	19.8	0.0
LnGrp Delay(d),s/veh	0.0	0.0	58.6	81.9	0.0	307.1	100.5	57.5	61.9	145.7	16.8	0.0
LnGrp LOS			E	F		F	F	E	F	F	B	
Approach Vol, veh/h		22			806			1937			1801	
Approach Delay, s/veh		58.6			252.9			60.1			33.0	
Approach LOS		E			F			E			C	

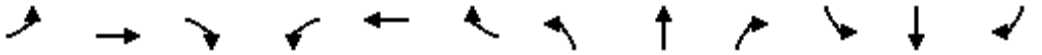
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.0	81.0	21.7	18.3	5.9	96.1	0.0	40.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	17.0	77.0	24.0	16.0	5.0	89.0	4.0	36.0
Max Q Clear Time (g_c+I1), s	19.0	79.0	17.4	3.8	3.3	42.7	0.0	38.0
Green Ext Time (p_c), s	0.0	0.0	0.3	3.8	0.0	42.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	83.4
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	339	6	4	1	5	7	3	1414	1	0	1474	301
Future Volume (veh/h)	339	6	4	1	5	7	3	1414	1	0	1474	301
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1900	1845	1900	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	339	6	4	1	5	7	3	1414	1	0	1474	0
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	391	7	354	2	8	12	6	2088	1	3	1814	812
Arrive On Green	0.23	0.23	0.23	0.01	0.01	0.01	0.00	0.58	0.58	0.00	0.52	0.00
Sat Flow, veh/h	1728	31	1568	129	646	904	1757	3594	3	1757	3505	1568
Grp Volume(v), veh/h	345	0	4	13	0	0	3	689	726	0	1474	0
Grp Sat Flow(s),veh/h/ln	1758	0	1568	1679	0	0	1757	1752	1844	1757	1752	1568
Q Serve(g_s), s	12.6	0.0	0.1	0.5	0.0	0.0	0.1	18.1	18.1	0.0	23.3	0.0
Cycle Q Clear(g_c), s	12.6	0.0	0.1	0.5	0.0	0.0	0.1	18.1	18.1	0.0	23.3	0.0
Prop In Lane	0.98		1.00	0.08		0.54	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	397	0	354	22	0	0	6	1018	1071	3	1814	812
V/C Ratio(X)	0.87	0.00	0.01	0.60	0.00	0.00	0.53	0.68	0.68	0.00	0.81	0.00
Avail Cap(c_a), veh/h	449	0	400	403	0	0	106	1018	1071	106	1947	871
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	24.8	0.0	20.0	32.7	0.0	0.0	33.1	9.6	9.6	0.0	13.4	0.0
Incr Delay (d2), s/veh	15.1	0.0	0.0	24.2	0.0	0.0	59.4	1.8	1.7	0.0	2.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	0.0	0.1	0.4	0.0	0.0	0.1	9.1	9.6	0.0	11.7	0.0
LnGrp Delay(d),s/veh	39.9	0.0	20.0	56.9	0.0	0.0	92.5	11.5	11.4	0.0	16.0	0.0
LnGrp LOS	D		C	E			F	B	B		B	
Approach Vol, veh/h		349			13			1418			1474	
Approach Delay, s/veh		39.7			56.9			11.6			16.0	
Approach LOS		D			E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	42.7		19.1	4.2	38.5		4.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	37.0		17.0	4.0	37.0		16.0
Max Q Clear Time (g_c+I1), s	0.0	20.1		14.6	2.1	25.3		2.5
Green Ext Time (p_c), s	0.0	15.3		0.5	0.0	9.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	16.8
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	255	536	511	86	1274	4	270	1018	63	2	1420	320
Future Volume (veh/h)	255	536	511	86	1274	4	270	1018	63	2	1420	320
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	255	536	511	86	1274	4	270	1018	63	2	1420	320
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	236	1294	579	131	1186	531	262	1637	732	7	1375	615
Arrive On Green	0.07	0.37	0.37	0.04	0.34	0.34	0.08	0.47	0.47	0.00	0.39	0.39
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	255	536	511	86	1274	4	270	1018	63	2	1420	320
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	9.0	14.8	39.6	3.2	44.0	0.2	10.0	28.4	2.9	0.1	51.0	20.3
Cycle Q Clear(g_c), s	9.0	14.8	39.6	3.2	44.0	0.2	10.0	28.4	2.9	0.1	51.0	20.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	236	1294	579	131	1186	531	262	1637	732	7	1375	615
V/C Ratio(X)	1.08	0.41	0.88	0.66	1.07	0.01	1.03	0.62	0.09	0.27	1.03	0.52
Avail Cap(c_a), veh/h	236	1294	579	131	1186	531	262	1637	732	105	1375	615
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.5	30.5	38.4	61.7	43.0	28.5	60.0	26.0	19.2	64.8	39.5	30.2
Incr Delay (d2), s/veh	81.7	0.2	14.9	11.3	48.4	0.0	63.5	0.7	0.0	19.0	33.1	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	7.2	19.6	1.7	29.2	0.1	7.0	13.9	1.3	0.1	31.0	8.9
LnGrp Delay(d),s/veh	142.2	30.7	53.3	72.9	91.4	28.5	123.6	26.7	19.3	83.7	72.6	30.9
LnGrp LOS	F	C	D	E	F	C	F	C	B	F	F	C
Approach Vol, veh/h		1302			1364			1351			1742	
Approach Delay, s/veh		61.4			90.1			45.7			65.0	
Approach LOS		E			F			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.3	64.7	9.0	52.0	14.0	55.0	13.0	48.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	57.0	5.0	48.0	10.0	51.0	9.0	44.0
Max Q Clear Time (g_c+I1), s	2.1	30.4	5.2	41.6	12.0	53.0	11.0	46.0
Green Ext Time (p_c), s	0.0	22.0	0.0	5.5	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	65.6
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	2128	45	18	2794	252	445	195	33	203	66	260
Future Volume (veh/h)	140	2128	45	18	2794	252	445	195	33	203	66	260
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	140	2128	45	18	2794	252	445	195	33	203	66	260
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	94	2150	45	25	1867	166	258	295	251	187	221	188
Arrive On Green	0.05	0.61	0.61	0.01	0.57	0.57	0.15	0.16	0.16	0.11	0.12	0.12
Sat Flow, veh/h	1757	3510	74	1757	3257	289	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	140	1059	1114	18	1484	1562	445	195	33	203	66	260
Grp Sat Flow(s),veh/h/ln	1757	1752	1832	1757	1752	1794	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	8.0	88.7	90.3	1.5	86.0	86.0	22.0	14.9	2.7	16.0	4.9	18.0
Cycle Q Clear(g_c), s	8.0	88.7	90.3	1.5	86.0	86.0	22.0	14.9	2.7	16.0	4.9	18.0
Prop In Lane	1.00		0.04	1.00		0.16	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	94	1074	1122	25	1005	1028	258	295	251	187	221	188
V/C Ratio(X)	1.49	0.99	0.99	0.73	1.48	1.52	1.73	0.66	0.13	1.08	0.30	1.38
Avail Cap(c_a), veh/h	94	1074	1122	47	1005	1028	258	295	251	187	221	188
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.0	28.4	28.7	73.7	32.0	32.0	64.0	59.2	54.1	67.0	60.2	66.0
Incr Delay (d2), s/veh	270.2	24.0	25.1	33.2	220.0	238.6	343.0	5.4	0.2	89.7	0.7	201.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.9	49.8	53.3	1.0	102.7	110.4	35.2	8.0	1.2	12.4	2.5	18.3
LnGrp Delay(d),s/veh	341.2	52.5	53.9	106.8	252.0	270.6	407.0	64.5	54.3	156.7	61.0	267.4
LnGrp LOS	F	D	D	F	F	F	F	E	D	F	E	F
Approach Vol, veh/h		2313			3064			673			529	
Approach Delay, s/veh		70.6			260.6			290.5			199.1	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	28.0	6.1	95.9	26.0	22.0	12.0	90.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	24.0	4.0	90.0	22.0	18.0	8.0	86.0
Max Q Clear Time (g_c+I1), s	18.0	16.9	3.5	92.3	24.0	20.0	10.0	88.0
Green Ext Time (p_c), s	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	191.9
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	459	617	496	7	1195	413	643	1820	5	281	1256	1598
Future Volume (veh/h)	459	617	496	7	1195	413	643	1820	5	281	1256	1598
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	459	617	496	7	1195	413	643	1820	5	281	1256	1598
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	273	1208	376	23	839	261	364	2767	861	332	2719	847
Arrive On Green	0.08	0.24	0.24	0.01	0.17	0.17	0.11	0.55	0.55	0.10	0.54	0.54
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	459	617	496	7	1195	413	643	1820	5	281	1256	1598
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	12.0	15.9	36.0	0.3	25.0	25.0	16.0	38.3	0.2	12.2	22.9	81.0
Cycle Q Clear(g_c), s	12.0	15.9	36.0	0.3	25.0	25.0	16.0	38.3	0.2	12.2	22.9	81.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	273	1208	376	23	839	261	364	2767	861	332	2719	847
V/C Ratio(X)	1.68	0.51	1.32	0.30	1.42	1.58	1.77	0.66	0.01	0.85	0.46	1.89
Avail Cap(c_a), veh/h	273	1208	376	91	839	261	364	2767	861	432	2719	847
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.0	49.4	57.0	74.1	62.5	62.5	67.0	23.8	15.3	66.6	21.1	34.5
Incr Delay (d2), s/veh	323.0	0.4	161.0	7.2	197.6	278.8	357.0	0.6	0.0	11.7	0.1	403.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.9	7.4	32.4	0.2	26.9	31.1	25.5	17.8	0.1	6.3	10.6	129.8
LnGrp Delay(d),s/veh	392.0	49.7	218.0	81.4	260.1	341.3	424.0	24.4	15.3	78.3	21.3	438.3
LnGrp LOS	F	D	F	F	F	F	F	C	B	E	C	F
Approach Vol, veh/h		1572			1615			2468			3135	
Approach Delay, s/veh		202.8			280.1			128.5			238.9	
Approach LOS		F			F			F			F	

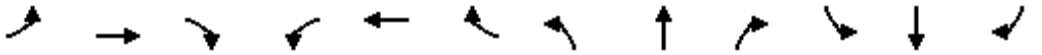
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.6	86.4	5.0	40.0	20.0	85.0	16.0	29.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	19.0	78.0	4.0	33.0	16.0	81.0	12.0	25.0
Max Q Clear Time (g_c+I1), s	14.2	40.3	2.3	38.0	18.0	83.0	14.0	27.0
Green Ext Time (p_c), s	0.4	37.1	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		209.0
HCM 2010 LOS		F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	579	272	403	1250	852	641	1107	238	370	326	0
Future Volume (veh/h)	0	579	272	403	1250	852	641	1107	238	370	326	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	0	579	272	403	1250	852	641	1107	238	370	326	0
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	4	999	311	501	2003	624	736	1147	513	402	804	359
Arrive On Green	0.00	0.20	0.20	0.15	0.40	0.40	0.22	0.33	0.33	0.12	0.23	0.00
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	0	579	272	403	1250	852	641	1107	238	370	326	0
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	0.0	8.0	12.9	8.7	15.2	30.4	13.9	23.7	9.2	8.2	6.0	0.0
Cycle Q Clear(g_c), s	0.0	8.0	12.9	8.7	15.2	30.4	13.9	23.7	9.2	8.2	6.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	4	999	311	501	2003	624	736	1147	513	402	804	359
V/C Ratio(X)	0.00	0.58	0.87	0.80	0.62	1.37	0.87	0.97	0.46	0.92	0.41	0.00
Avail Cap(c_a), veh/h	178	1055	328	625	2003	624	803	1147	513	402	804	359
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	27.7	29.7	31.5	18.4	23.0	28.9	25.3	20.4	33.3	25.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	21.4	6.1	0.6	174.9	9.7	18.7	0.7	26.4	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.8	7.4	4.5	7.1	43.3	7.5	14.4	4.1	5.3	2.9	0.0
LnGrp Delay(d),s/veh	0.0	28.5	51.1	37.6	19.0	197.9	38.6	44.0	21.0	59.7	25.3	0.0
LnGrp LOS		C	D	D	B	F	D	D	C	E	C	
Approach Vol, veh/h		851			2505			1986			696	
Approach Delay, s/veh		35.7			82.8			39.5			43.6	
Approach LOS		D			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	29.0	15.2	19.1	20.5	21.5	0.0	34.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	9.0	25.0	14.0	16.0	18.0	16.0	4.0	26.0
Max Q Clear Time (g_c+I1), s	10.2	25.7	10.7	14.9	15.9	8.0	0.0	32.4
Green Ext Time (p_c), s	0.0	0.0	0.5	0.3	0.6	5.8	0.0	0.0

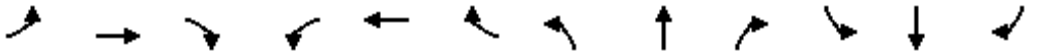
Intersection Summary	
HCM 2010 Ctrl Delay	57.4
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	73	19	159	407	974	112	979	82	347	438	240
Future Volume (veh/h)	48	73	19	159	407	974	112	979	82	347	438	240
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	48	73	19	159	407	974	112	979	82	347	438	240
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	91	1519	679	215	1647	737	165	941	421	343	1124	503
Arrive On Green	0.03	0.43	0.43	0.06	0.47	0.47	0.05	0.27	0.27	0.10	0.32	0.32
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	48	73	19	159	407	974	112	979	82	347	438	240
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	1.7	1.4	0.8	5.5	8.3	56.0	3.9	32.0	4.8	12.0	11.6	14.6
Cycle Q Clear(g_c), s	1.7	1.4	0.8	5.5	8.3	56.0	3.9	32.0	4.8	12.0	11.6	14.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	91	1519	679	215	1647	737	165	941	421	343	1124	503
V/C Ratio(X)	0.53	0.05	0.03	0.74	0.25	1.32	0.68	1.04	0.19	1.01	0.39	0.48
Avail Cap(c_a), veh/h	114	1519	679	286	1647	737	257	941	421	343	1124	503
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.3	19.5	19.4	54.9	18.9	31.6	55.8	43.6	33.6	53.6	31.4	32.5
Incr Delay (d2), s/veh	4.7	0.0	0.0	6.8	0.1	154.3	4.8	40.4	0.2	51.4	0.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.7	0.4	2.8	4.0	55.8	1.9	20.7	2.1	8.1	5.6	6.4
LnGrp Delay(d),s/veh	61.9	19.6	19.4	61.6	19.0	185.9	60.5	83.9	33.9	105.1	31.7	33.2
LnGrp LOS	E	B	B	E	B	F	E	F	C	F	C	C
Approach Vol, veh/h		140			1540			1173			1025	
Approach Delay, s/veh		34.1			129.0			78.2			56.9	
Approach LOS		C			F			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	36.0	11.5	55.6	9.8	42.2	7.2	60.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	12.0	32.0	10.0	50.0	9.0	35.0	4.0	56.0
Max Q Clear Time (g_c+I1), s	14.0	34.0	7.5	3.4	5.9	16.6	3.7	58.0
Green Ext Time (p_c), s	0.0	0.0	0.1	10.7	0.1	10.8	0.0	0.0

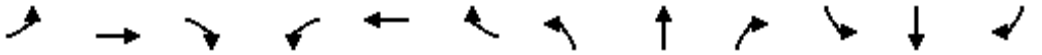
Intersection Summary	
HCM 2010 Ctrl Delay	91.1
HCM 2010 LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	362	105	31	846	267	252	573	28	81	327	298
Future Volume (veh/h)	124	362	105	31	846	267	252	573	28	81	327	298
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	124	362	105	31	846	267	252	573	28	81	327	298
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	207	1165	521	93	1048	469	357	1071	479	174	882	395
Arrive On Green	0.06	0.33	0.33	0.03	0.30	0.30	0.10	0.31	0.31	0.05	0.25	0.25
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	124	362	105	31	846	267	252	573	28	81	327	298
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	2.0	4.3	2.7	0.5	12.6	8.1	4.0	7.7	0.7	1.3	4.3	9.9
Cycle Q Clear(g_c), s	2.0	4.3	2.7	0.5	12.6	8.1	4.0	7.7	0.7	1.3	4.3	9.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	207	1165	521	93	1048	469	357	1071	479	174	882	395
V/C Ratio(X)	0.60	0.31	0.20	0.33	0.81	0.57	0.71	0.53	0.06	0.47	0.37	0.75
Avail Cap(c_a), veh/h	242	1165	521	242	1119	500	363	1071	479	302	994	445
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.8	14.0	13.5	26.9	18.3	16.7	24.4	16.3	13.8	26.0	17.4	19.5
Incr Delay (d2), s/veh	3.0	0.2	0.2	2.1	4.2	1.4	6.0	0.5	0.1	1.9	0.3	6.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	2.1	1.2	0.3	6.6	3.6	2.2	3.7	0.3	0.7	2.1	4.9
LnGrp Delay(d),s/veh	28.8	14.2	13.7	29.0	22.5	18.1	30.4	16.8	13.9	28.0	17.7	25.9
LnGrp LOS	C	B	B	C	C	B	C	B	B	C	B	C
Approach Vol, veh/h		591			1144			853			706	
Approach Delay, s/veh		17.2			21.7			20.7			22.3	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.9	21.2	5.5	22.7	9.9	18.2	7.4	20.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	17.0	4.0	18.0	6.0	16.0	4.0	18.0
Max Q Clear Time (g_c+I1), s	3.3	9.7	2.5	6.3	6.0	11.9	4.0	14.6
Green Ext Time (p_c), s	0.0	4.0	0.0	7.1	0.0	2.3	0.0	2.3

Intersection Summary	
HCM 2010 Ctrl Delay	20.7
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	766	119	25	1275	258	576	193	63	107	50	143
Future Volume (veh/h)	58	766	119	25	1275	258	576	193	63	107	50	143
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	58	766	119	25	1275	258	576	193	63	107	50	143
Adj No. of Lanes	1	2	1	1	2	1	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	66	1355	606	35	1292	578	581	676	574	134	206	175
Arrive On Green	0.04	0.39	0.39	0.02	0.37	0.37	0.33	0.37	0.37	0.08	0.11	0.11
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	58	766	119	25	1275	258	576	193	63	107	50	143
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	3.5	18.2	5.3	1.5	38.2	13.2	34.5	7.8	2.8	6.3	2.6	9.4
Cycle Q Clear(g_c), s	3.5	18.2	5.3	1.5	38.2	13.2	34.5	7.8	2.8	6.3	2.6	9.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	66	1355	606	35	1292	578	581	676	574	134	206	175
V/C Ratio(X)	0.87	0.57	0.20	0.72	0.99	0.45	0.99	0.29	0.11	0.80	0.24	0.82
Avail Cap(c_a), veh/h	66	1355	606	83	1292	578	581	676	574	216	279	237
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.7	25.5	21.5	51.6	33.2	25.2	35.3	23.7	22.1	48.1	42.9	45.9
Incr Delay (d2), s/veh	68.2	0.5	0.2	24.6	21.9	0.5	35.0	0.2	0.1	10.4	0.6	14.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	8.8	2.3	1.0	22.3	5.7	22.3	4.0	1.2	3.5	1.4	4.8
LnGrp Delay(d),s/veh	118.9	26.0	21.7	76.2	55.0	25.8	70.3	24.0	22.2	58.4	43.5	60.6
LnGrp LOS	F	C	C	E	E	C	E	C	C	E	D	E
Approach Vol, veh/h		943			1558			832			300	
Approach Delay, s/veh		31.2			50.5			55.9			57.0	
Approach LOS		C			D			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.1	42.8	6.1	44.9	39.0	15.8	8.0	43.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	13.0	38.0	5.0	38.0	35.0	16.0	4.0	39.0
Max Q Clear Time (g_c+I1), s	8.3	9.8	3.5	20.2	36.5	11.4	5.5	40.2
Green Ext Time (p_c), s	0.1	2.1	0.0	14.1	0.0	0.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	47.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	198	173	36	452	203	181	169	84	40	81	47
Future Volume (veh/h)	24	198	173	36	452	203	181	169	84	40	81	47
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	24	198	173	36	452	203	181	169	84	40	81	47
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	39	791	673	53	528	237	226	267	133	58	146	85
Arrive On Green	0.02	0.43	0.43	0.03	0.44	0.44	0.13	0.23	0.23	0.03	0.13	0.13
Sat Flow, veh/h	1757	1845	1568	1757	1207	542	1757	1164	579	1757	1096	636
Grp Volume(v), veh/h	24	198	173	36	0	655	181	0	253	40	0	128
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1749	1757	0	1743	1757	0	1732
Q Serve(g_s), s	0.8	3.9	4.1	1.2	0.0	19.4	5.7	0.0	7.5	1.3	0.0	4.0
Cycle Q Clear(g_c), s	0.8	3.9	4.1	1.2	0.0	19.4	5.7	0.0	7.5	1.3	0.0	4.0
Prop In Lane	1.00		1.00	1.00		0.31	1.00		0.33	1.00		0.37
Lane Grp Cap(c), veh/h	39	791	673	53	0	765	226	0	399	58	0	231
V/C Ratio(X)	0.62	0.25	0.26	0.67	0.00	0.86	0.80	0.00	0.63	0.69	0.00	0.55
Avail Cap(c_a), veh/h	122	899	764	153	0	883	275	0	607	184	0	513
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.8	10.5	10.5	27.6	0.0	14.5	24.3	0.0	20.0	27.5	0.0	23.3
Incr Delay (d2), s/veh	14.8	0.2	0.2	13.7	0.0	7.5	13.1	0.0	1.7	13.8	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.0	1.8	0.8	0.0	10.9	3.6	0.0	3.8	0.8	0.0	2.0
LnGrp Delay(d),s/veh	42.6	10.7	10.7	41.3	0.0	22.0	37.4	0.0	21.6	41.3	0.0	25.3
LnGrp LOS	D	B	B	D		C	D		C	D		C
Approach Vol, veh/h		395			691			434			168	
Approach Delay, s/veh		12.6			23.0			28.2			29.1	
Approach LOS		B			C			C			C	

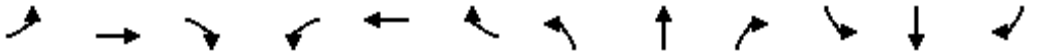
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.9	17.2	5.7	28.6	11.4	11.7	5.3	29.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	20.0	5.0	28.0	9.0	17.0	4.0	29.0
Max Q Clear Time (g_c+I1), s	3.3	9.5	3.2	6.1	7.7	6.0	2.8	21.4
Green Ext Time (p_c), s	0.0	1.7	0.0	6.8	0.1	1.7	0.0	3.8

Intersection Summary	
HCM 2010 Ctrl Delay	22.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	69	0	0	633	771	0	0	0	276	0	0
Future Volume (veh/h)	0	69	0	0	633	771	0	0	0	276	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	0	69	0	0	633	771	0	0	0	276	0	0
Adj No. of Lanes	2	2	1	1	2	1	1	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	12	2013	901	6	2013	901	6	6	5	514	278	236
Arrive On Green	0.00	0.57	0.00	0.00	0.57	0.57	0.00	0.00	0.00	0.15	0.00	0.00
Sat Flow, veh/h	3408	3505	1568	1757	3505	1568	1757	1845	1568	3408	1845	1568
Grp Volume(v), veh/h	0	69	0	0	633	771	0	0	0	276	0	0
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1757	1752	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	0.0	0.2	0.0	0.0	2.7	12.0	0.0	0.0	0.0	2.2	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.2	0.0	0.0	2.7	12.0	0.0	0.0	0.0	2.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	12	2013	901	6	2013	901	6	6	5	514	278	236
V/C Ratio(X)	0.00	0.03	0.00	0.00	0.31	0.86	0.00	0.00	0.00	0.54	0.00	0.00
Avail Cap(c_a), veh/h	469	2168	970	242	2168	970	242	1014	862	1874	1775	1509
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	2.7	0.0	0.0	3.2	5.2	0.0	0.0	0.0	11.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.1	7.3	0.0	0.0	0.0	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	0.0	1.3	6.8	0.0	0.0	0.0	1.1	0.0	0.0
LnGrp Delay(d),s/veh	0.0	2.7	0.0	0.0	3.3	12.4	0.0	0.0	0.0	12.3	0.0	0.0
LnGrp LOS		A			A	B				B		
Approach Vol, veh/h		69			1404			0			276	
Approach Delay, s/veh		2.7			8.3			0.0			12.3	
Approach LOS		A			A						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	0.0	0.0	20.7	0.0	8.4	0.0	20.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	16.0	4.0	18.0	4.0	28.0	4.0	18.0
Max Q Clear Time (g_c+I1), s	4.2	0.0	0.0	2.2	0.0	0.0	0.0	14.0
Green Ext Time (p_c), s	0.7	0.0	0.0	7.5	0.0	0.0	0.0	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	8.7
HCM 2010 LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	15	64	204	12	82	21	1513	53	109	655	24
Future Volume (veh/h)	119	15	64	204	12	82	21	1513	53	109	655	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	119	15	64	204	12	82	21	1513	53	109	655	24
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	151	129	110	241	224	190	25	1763	62	135	1977	72
Arrive On Green	0.09	0.07	0.07	0.14	0.12	0.12	0.01	0.51	0.51	0.08	0.57	0.57
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	3455	121	1757	3449	126
Grp Volume(v), veh/h	119	15	64	204	12	82	21	766	800	109	333	346
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1823	1757	1752	1822
Q Serve(g_s), s	5.2	0.6	3.1	8.8	0.4	3.8	0.9	29.6	29.8	4.8	7.8	7.8
Cycle Q Clear(g_c), s	5.2	0.6	3.1	8.8	0.4	3.8	0.9	29.6	29.8	4.8	7.8	7.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.07	1.00		0.07
Lane Grp Cap(c), veh/h	151	129	110	241	224	190	25	894	930	135	1005	1045
V/C Ratio(X)	0.79	0.12	0.58	0.84	0.05	0.43	0.85	0.86	0.86	0.81	0.33	0.33
Avail Cap(c_a), veh/h	248	355	302	248	355	302	113	944	983	135	1005	1045
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.9	34.0	35.1	32.8	30.3	31.7	38.3	16.6	16.7	35.4	8.8	8.8
Incr Delay (d2), s/veh	8.7	0.4	4.8	22.2	0.1	1.5	50.9	7.6	7.5	28.9	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.3	1.5	5.8	0.2	1.7	0.8	16.1	16.8	3.4	3.7	3.9
LnGrp Delay(d),s/veh	43.6	34.4	40.0	55.0	30.4	33.3	89.2	24.1	24.2	64.3	9.0	8.9
LnGrp LOS	D	C	D	E	C	C	F	C	C	E	A	A
Approach Vol, veh/h		198			298			1587			788	
Approach Delay, s/veh		41.7			48.1			25.0			16.6	
Approach LOS		D			D			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	43.8	14.7	9.5	5.1	48.7	10.7	13.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	42.0	11.0	15.0	5.0	43.0	11.0	15.0
Max Q Clear Time (g_c+I1), s	6.8	31.8	10.8	5.1	2.9	9.8	7.2	5.8
Green Ext Time (p_c), s	0.0	7.9	0.0	0.4	0.0	21.9	0.1	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	26.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	6	68	64	2	42	18	1294	89	83	879	72
Future Volume (veh/h)	68	6	68	64	2	42	18	1294	89	83	879	72
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	68	6	68	64	2	42	18	1294	89	83	879	72
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	85	141	120	80	136	115	23	1798	123	105	1926	158
Arrive On Green	0.05	0.08	0.08	0.05	0.07	0.07	0.01	0.54	0.54	0.06	0.59	0.59
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	3328	228	1757	3281	269
Grp Volume(v), veh/h	68	6	68	64	2	42	18	680	703	83	469	482
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1804	1757	1752	1797
Q Serve(g_s), s	2.2	0.2	2.4	2.1	0.1	1.5	0.6	16.8	16.9	2.7	8.7	8.7
Cycle Q Clear(g_c), s	2.2	0.2	2.4	2.1	0.1	1.5	0.6	16.8	16.9	2.7	8.7	8.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		0.15
Lane Grp Cap(c), veh/h	85	141	120	80	136	115	23	947	975	105	1029	1055
V/C Ratio(X)	0.80	0.04	0.57	0.80	0.01	0.36	0.79	0.72	0.72	0.79	0.46	0.46
Avail Cap(c_a), veh/h	122	513	436	122	513	436	92	1035	1066	153	1096	1124
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.1	24.6	25.7	27.2	24.7	25.4	28.3	9.9	10.0	26.7	6.7	6.7
Incr Delay (d2), s/veh	20.9	0.1	4.1	19.2	0.0	1.9	43.1	2.2	2.2	15.7	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.1	1.2	1.4	0.0	0.7	0.6	8.5	8.8	1.7	4.3	4.4
LnGrp Delay(d),s/veh	48.0	24.7	29.8	46.4	24.8	27.3	71.4	12.1	12.2	42.4	7.0	7.0
LnGrp LOS	D	C	C	D	C	C	E	B	B	D	A	A
Approach Vol, veh/h		142			108			1401			1034	
Approach Delay, s/veh		38.3			38.6			12.9			9.9	
Approach LOS		D			D			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.4	35.1	6.6	8.4	4.8	37.8	6.8	8.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	34.0	4.0	16.0	3.0	36.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	4.7	18.9	4.1	4.4	2.6	10.7	4.2	3.5
Green Ext Time (p_c), s	0.0	12.2	0.0	0.2	0.0	18.4	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	14.1
HCM 2010 LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	851	25	101	1599	73	193
Future Volume (veh/h)	851	25	101	1599	73	193
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1900	1845	1845	1845	1845
Adj Flow Rate, veh/h	851	25	101	1599	73	193
Adj No. of Lanes	2	0	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	2252	66	494	2271	304	272
Arrive On Green	0.65	0.65	0.65	0.65	0.17	0.17
Sat Flow, veh/h	3569	102	624	3597	1757	1568
Grp Volume(v), veh/h	429	447	101	1599	73	193
Grp Sat Flow(s),veh/h/ln	1752	1827	624	1752	1757	1568
Q Serve(g_s), s	5.1	5.1	4.0	13.2	1.6	5.2
Cycle Q Clear(g_c), s	5.1	5.1	9.1	13.2	1.6	5.2
Prop In Lane		0.06	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1135	1183	494	2271	304	272
V/C Ratio(X)	0.38	0.38	0.20	0.70	0.24	0.71
Avail Cap(c_a), veh/h	1216	1267	523	2431	629	561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.7	3.7	5.8	5.1	15.9	17.4
Incr Delay (d2), s/veh	0.2	0.2	0.2	0.9	0.4	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	2.5	0.7	6.5	0.8	2.5
LnGrp Delay(d),s/veh	3.9	3.9	6.0	6.0	16.3	20.9
LnGrp LOS	A	A	A	A	B	C
Approach Vol, veh/h	876			1700	266	
Approach Delay, s/veh	3.9			6.0	19.6	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		11.7		33.0				33.0
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		16.0		31.0				31.0
Max Q Clear Time (g_c+I1), s		7.2		7.1				15.2
Green Ext Time (p_c), s		0.6		19.7				13.7

Intersection Summary	
HCM 2010 Ctrl Delay	6.6
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	262	1883	0	68	3025	0	0	3	32	59	0	0
Future Volume (veh/h)	262	1883	0	68	3025	0	0	3	32	59	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	262	1883	0	68	3025	0	0	3	32	59	0	0
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	280	3761	0	87	3207	0	1	67	57	70	199	169
Arrive On Green	0.16	0.75	0.00	0.05	0.64	0.00	0.00	0.04	0.04	0.04	0.00	0.00
Sat Flow, veh/h	1757	5202	0	1757	5202	0	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	262	1883	0	68	3025	0	0	3	32	59	0	0
Grp Sat Flow(s),veh/h/ln	1757	1679	0	1757	1679	0	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	18.5	19.0	0.0	4.8	68.5	0.0	0.0	0.2	2.5	4.2	0.0	0.0
Cycle Q Clear(g_c), s	18.5	19.0	0.0	4.8	68.5	0.0	0.0	0.2	2.5	4.2	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	280	3761	0	87	3207	0	1	67	57	70	199	169
V/C Ratio(X)	0.94	0.50	0.00	0.78	0.94	0.00	0.00	0.04	0.56	0.84	0.00	0.00
Avail Cap(c_a), veh/h	280	3761	0	168	3291	0	42	250	212	70	279	237
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	52.1	6.4	0.0	59.0	20.7	0.0	0.0	58.4	59.5	59.8	0.0	0.0
Incr Delay (d2), s/veh	36.9	0.1	0.0	14.0	6.5	0.0	0.0	0.3	8.4	57.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.8	8.8	0.0	2.7	33.3	0.0	0.0	0.1	1.2	3.1	0.0	0.0
LnGrp Delay(d),s/veh	89.0	6.5	0.0	73.0	27.2	0.0	0.0	58.6	67.9	117.2	0.0	0.0
LnGrp LOS	F	A		E	C			E	E	F		
Approach Vol, veh/h		2145			3093			35			59	
Approach Delay, s/veh		16.6			28.2			67.1			117.2	
Approach LOS		B			C			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	8.6	10.2	97.7	0.0	17.6	24.0	83.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	17.0	12.0	90.0	3.0	19.0	20.0	82.0
Max Q Clear Time (g_c+I1), s	6.2	4.5	6.8	21.0	0.0	0.0	20.5	70.5
Green Ext Time (p_c), s	0.0	0.0	0.0	68.1	0.0	0.0	0.0	9.4

Intersection Summary	
HCM 2010 Ctrl Delay	24.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	9999	9999	9999	9999	9999	9999	9999	9999	9999	9999	9999	9999
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1845	1568	1757	1845	1568
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h												
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h												
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS												
Approach Vol, veh/h		0			0			0			0	
Approach Delay, s/veh		0.0			0.0			0.0			0.0	
Approach LOS												

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	17.0	3.0	16.0	3.0	17.0	3.0	16.0
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	0.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	1125	13	77	2050	2	134	0	0	4	1	57
Future Volume (veh/h)	19	1125	13	77	2050	2	134	0	0	4	1	57
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	19	1125	13	77	2050	2	134	0	0	4	1	57
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	24	2454	28	97	2701	3	170	308	262	6	136	115
Arrive On Green	0.01	0.48	0.48	0.06	0.52	0.52	0.10	0.00	0.00	0.00	0.07	0.07
Sat Flow, veh/h	1757	5132	59	1757	5196	5	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	19	736	402	77	1325	727	134	0	0	4	1	57
Grp Sat Flow(s),veh/h/ln	1757	1679	1834	1757	1679	1844	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	0.6	7.9	7.9	2.3	16.9	16.9	4.0	0.0	0.0	0.1	0.0	1.9
Cycle Q Clear(g_c), s	0.6	7.9	7.9	2.3	16.9	16.9	4.0	0.0	0.0	0.1	0.0	1.9
Prop In Lane	1.00		0.03	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	24	1605	877	97	1745	958	170	308	262	6	136	115
V/C Ratio(X)	0.79	0.46	0.46	0.79	0.76	0.76	0.79	0.00	0.00	0.70	0.01	0.49
Avail Cap(c_a), veh/h	98	1605	877	228	1803	990	195	649	552	98	546	464
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.6	9.4	9.4	25.2	10.3	10.3	23.9	0.0	0.0	26.9	23.2	24.1
Incr Delay (d2), s/veh	41.2	0.2	0.4	13.2	1.9	3.4	17.1	0.0	0.0	94.9	0.0	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.6	4.0	1.5	8.2	9.4	2.7	0.0	0.0	0.2	0.0	0.9
LnGrp Delay(d),s/veh	67.7	9.6	9.8	38.4	12.2	13.6	40.9	0.0	0.0	121.8	23.2	27.3
LnGrp LOS	E	A	A	D	B	B	D			F	C	C
Approach Vol, veh/h		1157			2129			134			62	
Approach Delay, s/veh		10.6			13.6			40.9			33.3	
Approach LOS		B			B			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.2	13.0	7.0	29.8	9.2	8.0	4.7	32.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	19.0	7.0	25.0	6.0	16.0	3.0	29.0
Max Q Clear Time (g_c+I1), s	2.1	0.0	4.3	9.9	6.0	3.9	2.6	18.9
Green Ext Time (p_c), s	0.0	0.0	0.0	14.1	0.0	0.1	0.0	9.2

Intersection Summary	
HCM 2010 Ctrl Delay	14.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	1049	28	108	1919	34	134	8	89	45	25	76
Future Volume (veh/h)	53	1049	28	108	1919	34	134	8	89	45	25	76
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	53	1049	28	108	1919	34	134	8	89	45	25	76
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	64	2118	56	139	2355	42	170	296	252	54	174	148
Arrive On Green	0.04	0.42	0.42	0.08	0.46	0.46	0.10	0.16	0.16	0.03	0.09	0.09
Sat Flow, veh/h	1757	5044	135	1757	5096	90	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	53	698	379	108	1264	689	134	8	89	45	25	76
Grp Sat Flow(s),veh/h/ln	1757	1679	1821	1757	1679	1829	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	1.5	7.9	7.9	3.1	16.8	16.8	3.8	0.2	2.6	1.3	0.6	2.4
Cycle Q Clear(g_c), s	1.5	7.9	7.9	3.1	16.8	16.8	3.8	0.2	2.6	1.3	0.6	2.4
Prop In Lane	1.00		0.07	1.00		0.05	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	64	1410	765	139	1552	845	170	296	252	54	174	148
V/C Ratio(X)	0.82	0.50	0.50	0.78	0.81	0.82	0.79	0.03	0.35	0.84	0.14	0.51
Avail Cap(c_a), veh/h	102	1410	765	272	1626	886	170	572	486	170	572	486
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.7	11.0	11.0	23.3	12.0	12.0	22.8	18.3	19.3	24.9	21.5	22.2
Incr Delay (d2), s/veh	24.7	0.3	0.5	9.1	3.2	5.7	21.5	0.0	0.8	27.1	0.4	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	3.6	4.0	1.8	8.2	9.8	2.9	0.1	1.2	1.0	0.3	1.1
LnGrp Delay(d),s/veh	49.4	11.2	11.5	32.4	15.2	17.7	44.3	18.3	20.1	52.0	21.8	25.0
LnGrp LOS	D	B	B	C	B	B	D	B	C	D	C	C
Approach Vol, veh/h		1130			2061			231			146	
Approach Delay, s/veh		13.1			16.9			34.1			32.7	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.6	12.3	8.1	25.7	9.0	8.9	5.9	27.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	16.0	8.0	20.0	5.0	16.0	3.0	25.0
Max Q Clear Time (g_c+I1), s	3.3	4.6	5.1	9.9	5.8	4.4	3.5	18.8
Green Ext Time (p_c), s	0.0	0.5	0.1	9.5	0.0	0.5	0.0	5.1

Intersection Summary	
HCM 2010 Ctrl Delay	17.5
HCM 2010 LOS	B



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	122	158	644	2612	1251	54
Future Volume (veh/h)	122	158	644	2612	1251	54
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	122	158	644	2612	1251	54
Adj No. of Lanes	1	1	1	3	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	223	199	691	3906	1652	71
Arrive On Green	0.13	0.13	0.39	0.78	0.33	0.33
Sat Flow, veh/h	1757	1568	1757	5202	5117	214
Grp Volume(v), veh/h	122	158	644	2612	848	457
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1679	1679	1807
Q Serve(g_s), s	5.3	8.0	28.8	19.8	18.5	18.5
Cycle Q Clear(g_c), s	5.3	8.0	28.8	19.8	18.5	18.5
Prop In Lane	1.00	1.00	1.00			0.12
Lane Grp Cap(c), veh/h	223	199	691	3906	1120	603
V/C Ratio(X)	0.55	0.79	0.93	0.67	0.76	0.76
Avail Cap(c_a), veh/h	321	287	814	4112	1120	603
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.6	34.8	23.8	4.3	24.4	24.4
Incr Delay (d2), s/veh	2.1	9.4	15.8	0.4	3.0	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	7.3	17.0	9.1	9.0	10.1
LnGrp Delay(d),s/veh	35.7	44.2	39.7	4.7	27.4	29.9
LnGrp LOS	D	D	D	A	C	C
Approach Vol, veh/h	280			3256	1305	
Approach Delay, s/veh	40.5			11.6	28.3	
Approach LOS	D			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		67.7		14.4	36.3	31.4		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		67.0		15.0	38.0	25.0		
Max Q Clear Time (g_c+I1), s		21.8		10.0	30.8	20.5		
Green Ext Time (p_c), s		41.8		0.4	1.5	4.5		

Intersection Summary	
HCM 2010 Ctrl Delay	17.8
HCM 2010 LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	116	16	185	1511	813	496
Future Volume (veh/h)	116	16	185	1511	813	496
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	116	16	185	1511	813	496
Adj No. of Lanes	1	1	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	155	138	234	2529	1038	626
Arrive On Green	0.09	0.09	0.13	0.72	0.49	0.49
Sat Flow, veh/h	1757	1568	1757	3597	2197	1269
Grp Volume(v), veh/h	116	16	185	1511	675	634
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1752	1752	1621
Q Serve(g_s), s	2.7	0.4	4.3	8.9	13.4	13.7
Cycle Q Clear(g_c), s	2.7	0.4	4.3	8.9	13.4	13.7
Prop In Lane	1.00	1.00	1.00			0.78
Lane Grp Cap(c), veh/h	155	138	234	2529	865	800
V/C Ratio(X)	0.75	0.12	0.79	0.60	0.78	0.79
Avail Cap(c_a), veh/h	209	186	292	2666	875	809
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.7	17.7	17.7	2.9	8.8	8.9
Incr Delay (d2), s/veh	9.7	0.4	11.1	0.3	4.6	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.4	2.8	4.1	7.5	7.2
LnGrp Delay(d),s/veh	28.4	18.0	28.7	3.2	13.3	14.2
LnGrp LOS	C	B	C	A	B	B
Approach Vol, veh/h	132			1696	1309	
Approach Delay, s/veh	27.1			6.0	13.8	
Approach LOS	C			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		34.4		7.7	9.6	24.8		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		32.0		5.0	7.0	21.0		
Max Q Clear Time (g_c+I1), s		10.9		4.7	6.3	15.7		
Green Ext Time (p_c), s		18.6		0.0	0.0	5.1		

Intersection Summary	
HCM 2010 Ctrl Delay	10.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1111	1049	8	669	987	0	132	2018	955	38	645	879
Future Volume (veh/h)	1111	1049	8	669	987	0	132	2018	955	38	645	879
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	1111	1049	8	669	987	0	132	2018	955	38	645	879
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	932	1122	502	682	865	387	136	1782	555	66	1679	523
Arrive On Green	0.27	0.32	0.32	0.20	0.25	0.00	0.04	0.35	0.35	0.02	0.33	0.33
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	1111	1049	8	669	987	0	132	2018	955	38	645	879
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	41.0	43.6	0.5	29.3	37.0	0.0	5.8	53.1	53.1	1.7	14.7	50.0
Cycle Q Clear(g_c), s	41.0	43.6	0.5	29.3	37.0	0.0	5.8	53.1	53.1	1.7	14.7	50.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	932	1122	502	682	865	387	136	1782	555	66	1679	523
V/C Ratio(X)	1.19	0.94	0.02	0.98	1.14	0.00	0.97	1.13	1.72	0.58	0.38	1.68
Avail Cap(c_a), veh/h	932	1122	502	682	865	387	136	1782	555	68	1679	523
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.5	49.5	34.9	59.7	56.5	0.0	71.9	48.5	48.5	72.9	38.2	50.0
Incr Delay (d2), s/veh	97.3	14.1	0.0	29.7	77.5	0.0	67.1	67.1	331.9	10.7	0.1	315.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	31.9	23.3	0.2	16.7	27.2	0.0	4.0	35.7	74.1	0.9	6.8	67.4
LnGrp Delay(d),s/veh	151.8	63.6	34.9	89.5	134.0	0.0	139.0	115.6	380.4	83.6	38.4	365.1
LnGrp LOS	F	E	C	F	F		F	F	F	F	D	F
Approach Vol, veh/h		2168			1656			3105			1562	
Approach Delay, s/veh		108.7			116.0			198.0			223.3	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.9	57.1	34.0	52.0	10.0	54.0	45.0	41.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	53.0	30.0	48.0	6.0	50.0	41.0	37.0
Max Q Clear Time (g_c+I1), s	3.7	55.1	31.3	45.6	7.8	52.0	43.0	39.0
Green Ext Time (p_c), s	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	163.9
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	747	28	24	835	0	92	0	87	0	0	0
Future Volume (veh/h)	0	747	28	24	835	0	92	0	87	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	0	747	28	24	835	0	92	0	87	0	0	0
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	6	1621	61	32	2167	0	113	226	192	6	6	5
Arrive On Green	0.00	0.47	0.47	0.02	0.62	0.00	0.06	0.00	0.12	0.00	0.00	0.00
Sat Flow, veh/h	1757	3445	129	1757	3597	0	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	0	380	395	24	835	0	92	0	87	0	0	0
Grp Sat Flow(s),veh/h/ln	1757	1752	1822	1757	1752	0	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	0.0	4.5	4.5	0.4	3.7	0.0	1.6	0.0	1.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	4.5	4.5	0.4	3.7	0.0	1.6	0.0	1.6	0.0	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	6	824	857	32	2167	0	113	226	192	6	6	5
V/C Ratio(X)	0.00	0.46	0.46	0.76	0.39	0.00	0.82	0.00	0.45	0.00	0.00	0.00
Avail Cap(c_a), veh/h	171	1080	1123	171	2167	0	342	1137	966	171	957	814
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	5.5	5.5	15.1	2.9	0.0	14.2	0.0	12.6	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.4	29.8	0.1	0.0	13.1	0.0	1.7	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.2	2.3	0.5	1.8	0.0	1.2	0.0	0.8	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	5.9	5.9	44.9	3.1	0.0	27.4	0.0	14.2	0.0	0.0	0.0
LnGrp LOS		A	A	D	A		C		B			
Approach Vol, veh/h		775			859			179			0	
Approach Delay, s/veh		5.9			4.2			21.0			0.0	
Approach LOS		A			A			C				

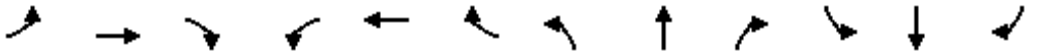
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	7.8	4.6	18.5	6.0	1.8	0.0	23.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	19.0	3.0	19.0	6.0	16.0	3.0	19.0
Max Q Clear Time (g_c+I1), s	0.0	3.6	2.4	6.5	3.6	0.0	0.0	5.7
Green Ext Time (p_c), s	0.0	0.2	0.0	8.0	0.0	0.0	0.0	8.4

Intersection Summary	
HCM 2010 Ctrl Delay	6.6
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	295	1669	144	79	2318	97	98	4	0	66	3	75
Future Volume (veh/h)	295	1669	144	79	2318	97	98	4	0	66	3	75
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	295	1669	144	79	2318	97	98	4	0	66	3	75
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	328	2957	255	102	2464	103	119	142	121	104	127	108
Arrive On Green	0.19	0.63	0.63	0.06	0.50	0.50	0.07	0.08	0.00	0.06	0.07	0.07
Sat Flow, veh/h	1757	4723	407	1757	4959	206	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	295	1186	627	79	1565	850	98	4	0	66	3	75
Grp Sat Flow(s),veh/h/ln	1757	1679	1773	1757	1679	1808	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	14.6	18.2	18.2	3.9	39.1	39.7	4.9	0.2	0.0	3.3	0.1	4.2
Cycle Q Clear(g_c), s	14.6	18.2	18.2	3.9	39.1	39.7	4.9	0.2	0.0	3.3	0.1	4.2
Prop In Lane	1.00		0.23	1.00		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	328	2102	1110	102	1668	899	119	142	121	104	127	108
V/C Ratio(X)	0.90	0.56	0.57	0.78	0.94	0.95	0.83	0.03	0.00	0.64	0.02	0.70
Avail Cap(c_a), veh/h	336	2102	1110	198	1737	935	119	311	264	119	311	264
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.3	9.6	9.6	41.3	21.1	21.2	41.0	38.0	0.0	40.9	38.6	40.5
Incr Delay (d2), s/veh	25.3	0.4	0.7	12.0	10.1	17.5	36.1	0.1	0.0	8.7	0.1	7.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	8.3	8.9	2.2	20.4	24.0	3.6	0.1	0.0	1.8	0.1	2.0
LnGrp Delay(d),s/veh	60.6	10.0	10.3	53.3	31.2	38.7	77.1	38.0	0.0	49.6	38.7	48.3
LnGrp LOS	E	A	B	D	C	D	E	D		D	D	D
Approach Vol, veh/h		2108			2494			102			144	
Approach Delay, s/veh		17.1			34.5			75.5			48.7	
Approach LOS		B			C			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.3	10.9	9.1	59.7	10.0	10.1	20.6	48.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	15.0	10.0	53.0	6.0	15.0	17.0	46.0
Max Q Clear Time (g_c+I1), s	5.3	2.2	5.9	20.2	6.9	6.2	16.6	41.7
Green Ext Time (p_c), s	0.0	0.2	0.0	31.8	0.0	0.1	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	28.2
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	325	948	632	23	1695	36	1181	808	21	45	811	575
Future Volume (veh/h)	325	948	632	23	1695	36	1181	808	21	45	811	575
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	325	948	632	23	1695	36	1181	808	21	45	811	575
Adj No. of Lanes	2	3	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	243	2023	630	43	1202	538	828	1573	704	77	801	358
Arrive On Green	0.07	0.40	0.40	0.01	0.34	0.34	0.24	0.45	0.45	0.02	0.23	0.23
Sat Flow, veh/h	3408	5036	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	325	948	632	23	1695	36	1181	808	21	45	811	575
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	10.0	19.4	56.2	0.9	48.0	2.2	34.0	23.1	1.0	1.8	32.0	32.0
Cycle Q Clear(g_c), s	10.0	19.4	56.2	0.9	48.0	2.2	34.0	23.1	1.0	1.8	32.0	32.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	243	2023	630	43	1202	538	828	1573	704	77	801	358
V/C Ratio(X)	1.34	0.47	1.00	0.53	1.41	0.07	1.43	0.51	0.03	0.58	1.01	1.60
Avail Cap(c_a), veh/h	243	2023	630	73	1202	538	828	1573	704	122	801	358
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.0	30.9	41.9	68.7	46.0	30.9	53.0	27.6	21.6	67.8	54.0	54.0
Incr Delay (d2), s/veh	176.0	0.2	36.8	9.8	189.8	0.1	199.1	0.3	0.0	6.8	34.9	284.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.7	9.1	30.7	0.5	54.9	0.9	38.9	11.3	0.5	0.9	19.3	42.2
LnGrp Delay(d),s/veh	241.0	31.0	78.6	78.5	235.8	31.0	252.1	27.9	21.6	74.6	88.9	338.7
LnGrp LOS	F	C	F	E	F	C	F	C	C	E	F	F
Approach Vol, veh/h		1905			1754			2010			1431	
Approach Delay, s/veh		82.7			229.5			159.6			188.8	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	66.8	5.8	60.2	38.0	36.0	14.0	52.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	61.0	3.0	55.0	34.0	32.0	10.0	48.0
Max Q Clear Time (g_c+I1), s	3.8	25.1	2.9	58.2	36.0	34.0	12.0	50.0
Green Ext Time (p_c), s	0.0	20.1	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	162.1
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	393	717	39	36	1046	227	140	996	182	126	314	435
Future Volume (veh/h)	393	717	39	36	1046	227	140	996	182	126	314	435
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	393	717	39	36	1046	227	140	996	182	126	314	435
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	426	1463	654	70	1096	491	212	1093	489	171	1050	470
Arrive On Green	0.13	0.42	0.42	0.02	0.31	0.31	0.06	0.31	0.31	0.05	0.30	0.30
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	393	717	39	36	1046	227	140	996	182	126	314	435
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	9.1	12.0	1.2	0.8	23.4	9.3	3.2	21.8	7.2	2.9	5.5	21.5
Cycle Q Clear(g_c), s	9.1	12.0	1.2	0.8	23.4	9.3	3.2	21.8	7.2	2.9	5.5	21.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	426	1463	654	70	1096	491	212	1093	489	171	1050	470
V/C Ratio(X)	0.92	0.49	0.06	0.51	0.95	0.46	0.66	0.91	0.37	0.74	0.30	0.93
Avail Cap(c_a), veh/h	426	1463	654	128	1096	491	213	1096	491	171	1053	471
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.6	17.1	13.9	38.7	26.9	22.1	36.6	26.4	21.4	37.4	21.5	27.1
Incr Delay (d2), s/veh	25.3	0.3	0.0	5.6	17.2	0.7	7.2	11.3	0.5	15.5	0.2	24.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	5.8	0.5	0.5	13.8	4.1	1.7	12.2	3.2	1.7	2.7	12.5
LnGrp Delay(d),s/veh	59.9	17.3	14.0	44.4	44.1	22.7	43.9	37.8	21.9	53.0	21.7	51.5
LnGrp LOS	E	B	B	D	D	C	D	D	C	D	C	D
Approach Vol, veh/h		1149			1309			1318			875	
Approach Delay, s/veh		31.8			40.4			36.2			41.0	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	28.9	5.7	37.3	9.0	27.9	14.0	29.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	25.0	3.0	32.0	5.0	24.0	10.0	25.0
Max Q Clear Time (g_c+I1), s	4.9	23.8	2.8	14.0	5.2	23.5	11.1	25.4
Green Ext Time (p_c), s	0.0	1.0	0.0	12.5	0.0	0.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	37.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	161	644	14	17	781	2	64	877	320	7	72	36
Future Volume (veh/h)	161	644	14	17	781	2	64	877	320	7	72	36
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	161	644	14	17	781	2	64	877	320	7	72	36
Adj No. of Lanes	2	1	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	248	767	652	55	1258	563	138	1058	473	140	1060	474
Arrive On Green	0.07	0.42	0.42	0.02	0.36	0.36	0.04	0.30	0.30	0.04	0.30	0.30
Sat Flow, veh/h	3408	1845	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	161	644	14	17	781	2	64	877	320	7	72	36
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	3.3	22.2	0.4	0.4	13.0	0.1	1.3	16.5	12.7	0.1	1.0	1.2
Cycle Q Clear(g_c), s	3.3	22.2	0.4	0.4	13.0	0.1	1.3	16.5	12.7	0.1	1.0	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	248	767	652	55	1258	563	138	1058	473	140	1060	474
V/C Ratio(X)	0.65	0.84	0.02	0.31	0.62	0.00	0.46	0.83	0.68	0.05	0.07	0.08
Avail Cap(c_a), veh/h	384	832	707	192	1383	619	240	1136	508	720	1630	729
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	18.6	12.2	34.5	18.8	14.6	33.3	23.1	21.7	32.7	17.6	17.7
Incr Delay (d2), s/veh	2.9	7.2	0.0	3.2	0.7	0.0	2.4	5.0	3.3	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	12.8	0.2	0.2	6.4	0.0	0.7	8.6	5.9	0.1	0.5	0.5
LnGrp Delay(d),s/veh	34.9	25.9	12.2	37.7	19.5	14.6	35.7	28.0	25.0	32.8	17.6	17.7
LnGrp LOS	C	C	B	D	B	B	D	C	C	C	B	B
Approach Vol, veh/h		819			800			1261			115	
Approach Delay, s/veh		27.4			19.9			27.7			18.6	
Approach LOS		C			B			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.9	25.4	5.1	33.5	6.9	25.5	9.2	29.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	15.0	23.0	4.0	32.0	5.0	33.0	8.0	28.0
Max Q Clear Time (g_c+I1), s	2.1	18.5	2.4	24.2	3.3	3.2	5.3	15.0
Green Ext Time (p_c), s	0.0	2.9	0.0	5.2	0.0	9.5	0.1	7.7

Intersection Summary	
HCM 2010 Ctrl Delay	25.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	1565	114	354	2409	9	8	1738	111	15	1399	70
Future Volume (veh/h)	95	1565	114	354	2409	9	8	1738	111	15	1399	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	95	1565	114	354	2409	9	8	1738	111	15	1399	70
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	92	1669	520	369	2078	647	26	1541	689	42	1558	697
Arrive On Green	0.03	0.33	0.33	0.11	0.41	0.41	0.01	0.44	0.44	0.01	0.44	0.44
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	95	1565	114	354	2409	9	8	1738	111	15	1399	70
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	4.0	44.6	7.7	15.3	61.0	0.5	0.3	65.0	6.3	0.6	54.6	3.8
Cycle Q Clear(g_c), s	4.0	44.6	7.7	15.3	61.0	0.5	0.3	65.0	6.3	0.6	54.6	3.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	92	1669	520	369	2078	647	26	1541	689	42	1558	697
V/C Ratio(X)	1.03	0.94	0.22	0.96	1.16	0.01	0.31	1.13	0.16	0.35	0.90	0.10
Avail Cap(c_a), veh/h	92	1669	520	369	2078	647	92	1541	689	92	1558	697
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.9	47.9	35.6	65.6	43.4	25.7	73.0	41.4	25.0	72.4	38.0	23.9
Incr Delay (d2), s/veh	102.2	10.6	0.2	36.3	77.5	0.0	6.6	66.5	0.1	4.9	7.4	0.1
Initial Q Delay(d3),s/veh	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	22.4	3.4	9.0	43.0	0.2	0.2	45.5	2.8	0.3	28.0	1.7
LnGrp Delay(d),s/veh	174.6	58.6	35.8	101.9	121.0	25.7	79.6	107.9	25.1	77.3	45.3	23.9
LnGrp LOS	F	E	D	F	F	C	E	F	C	E	D	C
Approach Vol, veh/h		1774			2772			1857			1484	
Approach Delay, s/veh		63.3			118.2			102.8			44.6	
Approach LOS		E			F			F			D	

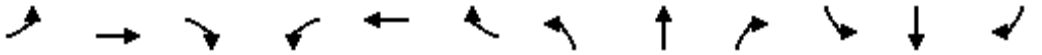
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.8	69.0	20.0	53.0	5.1	69.7	8.0	65.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	65.0	16.0	49.0	4.0	65.0	4.0	61.0
Max Q Clear Time (g_c+I1), s	2.6	67.0	17.3	46.6	2.3	56.6	6.0	63.0
Green Ext Time (p_c), s	0.0	0.0	0.0	2.4	0.0	8.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	88.4
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	488	1352	0	383	1346	0	0	333	512	0	192	246
Future Volume (veh/h)	488	1352	0	383	1346	0	0	333	512	0	192	246
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	488	1352	0	383	1346	0	0	333	512	0	192	246
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	510	1611	0	408	1408	0	168	373	317	82	373	317
Arrive On Green	0.29	0.46	0.00	0.23	0.40	0.00	0.00	0.20	0.20	0.00	0.20	0.20
Sat Flow, veh/h	1757	3597	0	1757	3597	0	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	488	1352	0	383	1346	0	0	333	512	0	192	246
Grp Sat Flow(s),veh/h/ln	1757	1752	0	1757	1752	0	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	31.0	38.6	0.0	24.3	42.4	0.0	0.0	20.0	23.0	0.0	10.5	16.9
Cycle Q Clear(g_c), s	31.0	38.6	0.0	24.3	42.4	0.0	0.0	20.0	23.0	0.0	10.5	16.9
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	510	1611	0	408	1408	0	168	373	317	82	373	317
V/C Ratio(X)	0.96	0.84	0.00	0.94	0.96	0.00	0.00	0.89	1.61	0.00	0.51	0.78
Avail Cap(c_a), veh/h	510	1611	0	417	1418	0	197	373	317	111	373	317
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	27.0	0.0	42.8	33.0	0.0	0.0	44.1	45.3	0.0	40.4	42.9
Incr Delay (d2), s/veh	29.2	4.1	0.0	28.6	14.6	0.0	0.0	22.6	290.5	0.0	1.2	11.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.2	19.5	0.0	15.1	23.2	0.0	0.0	12.5	35.5	0.0	5.5	8.3
LnGrp Delay(d),s/veh	68.8	31.1	0.0	71.5	47.6	0.0	0.0	66.8	335.9	0.0	41.6	54.3
LnGrp LOS	E	C		E	D			E	F		D	D
Approach Vol, veh/h		1840			1729			845			438	
Approach Delay, s/veh		41.1			52.9			229.8			48.7	
Approach LOS		D			D			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	27.0	30.4	56.3	0.0	27.0	37.0	49.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	2.0	23.0	27.0	52.0	2.0	23.0	33.0	46.0
Max Q Clear Time (g_c+I1), s	0.0	25.0	26.3	40.6	0.0	18.9	33.0	44.4
Green Ext Time (p_c), s	0.0	0.0	0.1	10.4	0.0	2.3	0.0	1.3

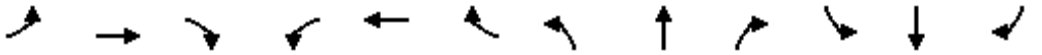
Intersection Summary	
HCM 2010 Ctrl Delay	78.9
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	235	668	0	1034	709	75	0	688	1213	120	772	240
Future Volume (veh/h)	235	668	0	1034	709	75	0	688	1213	120	772	240
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	235	668	0	1034	709	75	0	688	1213	120	772	240
Adj No. of Lanes	1	2	1	2	1	1	1	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	199	654	293	841	590	502	1	1519	679	91	1706	763
Arrive On Green	0.11	0.19	0.00	0.25	0.32	0.32	0.00	0.43	0.43	0.03	0.49	0.49
Sat Flow, veh/h	1757	3505	1568	3408	1845	1568	1757	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	235	668	0	1034	709	75	0	688	1213	120	772	240
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1704	1845	1568	1757	1752	1568	1704	1752	1568
Q Serve(g_s), s	17.0	28.0	0.0	37.0	48.0	5.1	0.0	20.8	65.0	4.0	21.8	13.9
Cycle Q Clear(g_c), s	17.0	28.0	0.0	37.0	48.0	5.1	0.0	20.8	65.0	4.0	21.8	13.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	199	654	293	841	590	502	1	1519	679	91	1706	763
V/C Ratio(X)	1.18	1.02	0.00	1.23	1.20	0.15	0.00	0.45	1.79	1.32	0.45	0.31
Avail Cap(c_a), veh/h	199	654	293	841	590	502	47	1519	679	91	1706	763
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.5	61.0	0.0	56.5	51.0	36.4	0.0	30.0	42.5	73.0	25.3	23.3
Incr Delay (d2), s/veh	120.9	40.6	0.0	113.9	106.0	0.1	0.0	0.2	359.3	202.3	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.9	17.2	0.0	30.7	41.8	2.2	0.0	10.1	95.9	4.4	10.6	6.0
LnGrp Delay(d),s/veh	187.4	101.6	0.0	170.4	157.0	36.6	0.0	30.2	401.8	275.3	25.5	23.6
LnGrp LOS	F	F		F	F	D		C	F	F	C	C
Approach Vol, veh/h		903			1818			1901			1132	
Approach Delay, s/veh		123.9			159.7			267.3			51.6	
Approach LOS		F			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	69.0	41.0	32.0	0.0	77.0	21.0	52.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	65.0	37.0	28.0	4.0	65.0	17.0	48.0
Max Q Clear Time (g_c+I1), s	6.0	67.0	39.0	30.0	0.0	23.8	19.0	50.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	29.6	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	168.4
HCM 2010 LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	8	33	94	8	95	21	304	38	17	260	79
Future Volume (veh/h)	47	8	33	94	8	95	21	304	38	17	260	79
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	47	8	33	94	8	95	21	304	38	17	260	79
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	58	158	134	113	217	184	28	844	105	23	708	211
Arrive On Green	0.03	0.09	0.09	0.06	0.12	0.12	0.02	0.27	0.27	0.01	0.27	0.27
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	3139	389	1757	2665	793
Grp Volume(v), veh/h	47	8	33	94	8	95	21	169	173	17	169	170
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1776	1757	1752	1705
Q Serve(g_s), s	0.7	0.1	0.6	1.5	0.1	1.6	0.3	2.2	2.2	0.3	2.2	2.3
Cycle Q Clear(g_c), s	0.7	0.1	0.6	1.5	0.1	1.6	0.3	2.2	2.2	0.3	2.2	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.22	1.00		0.46
Lane Grp Cap(c), veh/h	58	158	134	113	217	184	28	471	477	23	466	453
V/C Ratio(X)	0.82	0.05	0.25	0.83	0.04	0.52	0.74	0.36	0.36	0.73	0.36	0.37
Avail Cap(c_a), veh/h	312	1113	946	187	982	835	187	995	1008	187	995	968
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.5	11.8	12.0	13.0	11.0	11.7	13.8	8.3	8.4	13.9	8.4	8.4
Incr Delay (d2), s/veh	23.4	0.1	0.9	14.3	0.1	2.2	31.0	0.5	0.5	35.0	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.1	0.3	1.2	0.1	0.8	0.4	1.1	1.1	0.4	1.1	1.1
LnGrp Delay(d),s/veh	36.9	12.0	13.0	27.3	11.1	13.9	44.8	8.8	8.8	48.8	8.9	8.9
LnGrp LOS	D	B	B	C	B	B	D	A	A	D	A	A
Approach Vol, veh/h		88			197			363			356	
Approach Delay, s/veh		25.7			20.2			10.9			10.8	
Approach LOS		C			C			B			B	

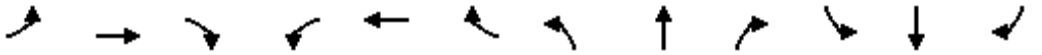
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.4	11.6	5.8	6.4	4.5	11.5	4.9	7.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	16.0	3.0	17.0	3.0	16.0	5.0	15.0
Max Q Clear Time (g_c+I1), s	2.3	4.2	3.5	2.6	2.3	4.3	2.7	3.6
Green Ext Time (p_c), s	0.0	3.2	0.0	0.4	0.0	3.2	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	14.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	0	0	0	0	0	0	0	0	0	0	16
Future Volume (veh/h)	22	0	0	0	0	0	0	0	0	0	0	16
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	22	0	0	0	0	0	0	0	0	0	0	16
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	31	33	28	16	16	14	16	939	0	16	469	420
Arrive On Green	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	3597	0	1757	1752	1568
Grp Volume(v), veh/h	22	0	0	0	0	0	0	0	0	0	0	16
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	0	1757	1752	1568
Q Serve(g_s), s	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	31	33	28	16	16	14	16	939	0	16	469	420
V/C Ratio(X)	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
Avail Cap(c_a), veh/h	2353	4448	3780	628	2636	2240	471	5947	0	628	3130	2800
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0
Incr Delay (d2), s/veh	25.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	30.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1
LnGrp LOS	C											A
Approach Vol, veh/h		22			0			0			16	
Approach Delay, s/veh		30.7			0.0			0.0			3.1	
Approach LOS		C									A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	7.0	0.0	4.2	0.0	7.0	4.2	0.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	19.0	4.0	27.0	3.0	20.0	15.0	16.0
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0	0.0	0.0	2.1	2.1	0.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	19.1
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	42	22	71	21	43	29	525	159	118	292	80
Future Volume (veh/h)	76	42	22	71	21	43	29	525	159	118	292	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	76	42	22	71	21	43	29	525	159	118	292	80
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	92	152	129	86	145	123	37	902	272	150	1104	297
Arrive On Green	0.05	0.08	0.08	0.05	0.08	0.08	0.02	0.34	0.34	0.09	0.40	0.40
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	2655	801	1757	2732	736
Grp Volume(v), veh/h	76	42	22	71	21	43	29	346	338	118	185	187
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1703	1757	1752	1715
Q Serve(g_s), s	1.5	0.8	0.5	1.4	0.4	0.9	0.6	5.8	5.9	2.4	2.5	2.6
Cycle Q Clear(g_c), s	1.5	0.8	0.5	1.4	0.4	0.9	0.6	5.8	5.9	2.4	2.5	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.47	1.00		0.43
Lane Grp Cap(c), veh/h	92	152	129	86	145	123	37	595	579	150	708	693
V/C Ratio(X)	0.82	0.28	0.17	0.83	0.15	0.35	0.79	0.58	0.58	0.79	0.26	0.27
Avail Cap(c_a), veh/h	244	768	653	244	768	653	146	827	803	341	1021	999
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.9	15.5	15.4	17.0	15.5	15.7	17.6	9.8	9.8	16.2	7.2	7.2
Incr Delay (d2), s/veh	16.1	1.0	0.6	17.7	0.5	1.7	29.8	0.9	0.9	8.8	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.4	0.2	1.1	0.2	0.5	0.6	2.9	2.9	1.5	1.2	1.3
LnGrp Delay(d),s/veh	33.0	16.5	16.0	34.7	15.9	17.4	47.3	10.7	10.7	25.0	7.4	7.4
LnGrp LOS	C	B	B	C	B	B	D	B	B	C	A	A
Approach Vol, veh/h		140			135			713			490	
Approach Delay, s/veh		25.4			26.3			12.2			11.6	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.1	16.2	5.8	7.0	4.8	18.6	5.9	6.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	17.0	5.0	15.0	3.0	21.0	5.0	15.0
Max Q Clear Time (g_c+I1), s	4.4	7.9	3.4	2.8	2.6	4.6	3.5	2.9
Green Ext Time (p_c), s	0.1	4.3	0.0	0.3	0.0	6.2	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	14.5
HCM 2010 LOS	B



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	46	24	689	32	8	309
Future Volume (veh/h)	46	24	689	32	8	309
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845
Adj Flow Rate, veh/h	46	24	689	32	8	309
Adj No. of Lanes	1	1	2	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	115	102	1733	80	661	1781
Arrive On Green	0.07	0.07	0.51	0.51	0.51	0.51
Sat Flow, veh/h	1757	1568	3503	158	722	3597
Grp Volume(v), veh/h	46	24	354	367	8	309
Grp Sat Flow(s),veh/h/ln	1757	1568	1752	1817	722	1752
Q Serve(g_s), s	0.5	0.3	2.3	2.3	0.1	0.9
Cycle Q Clear(g_c), s	0.5	0.3	2.3	2.3	2.5	0.9
Prop In Lane	1.00	1.00		0.09	1.00	
Lane Grp Cap(c), veh/h	115	102	890	923	661	1781
V/C Ratio(X)	0.40	0.23	0.40	0.40	0.01	0.17
Avail Cap(c_a), veh/h	1500	1338	1496	1551	910	2992
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.4	8.3	2.8	2.8	3.6	2.5
Incr Delay (d2), s/veh	2.3	1.2	0.3	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	1.2	1.2	0.0	0.4
LnGrp Delay(d),s/veh	10.7	9.5	3.1	3.1	3.6	2.5
LnGrp LOS	B	A	A	A	A	A
Approach Vol, veh/h	70		721			317
Approach Delay, s/veh	10.3		3.1			2.6
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		13.5				13.5		5.2
Change Period (Y+Rc), s		4.0				4.0		4.0
Max Green Setting (Gmax), s		16.0				16.0		16.0
Max Q Clear Time (g_c+I1), s		4.3				4.5		2.5
Green Ext Time (p_c), s		5.1				5.1		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	3.4
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	27	65	222	15	72	132	567	68	28	242	86
Future Volume (veh/h)	83	27	65	222	15	72	132	567	68	28	242	86
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	83	27	65	222	15	72	132	567	68	28	242	86
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	328	219	186	278	690	587	167	1361	163	362	612	212
Arrive On Green	0.12	0.12	0.12	0.16	0.37	0.37	0.10	0.43	0.43	0.24	0.24	0.24
Sat Flow, veh/h	1292	1845	1568	1757	1845	1568	1757	3153	377	782	2556	885
Grp Volume(v), veh/h	83	27	65	222	15	72	132	314	321	28	164	164
Grp Sat Flow(s),veh/h/ln	1292	1845	1568	1757	1845	1568	1757	1752	1778	782	1752	1688
Q Serve(g_s), s	2.5	0.5	1.6	5.0	0.2	1.2	3.0	5.1	5.1	1.2	3.2	3.4
Cycle Q Clear(g_c), s	2.5	0.5	1.6	5.0	0.2	1.2	3.0	5.1	5.1	1.2	3.2	3.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		0.52
Lane Grp Cap(c), veh/h	328	219	186	278	690	587	167	757	768	362	420	404
V/C Ratio(X)	0.25	0.12	0.35	0.80	0.02	0.12	0.79	0.42	0.42	0.08	0.39	0.41
Avail Cap(c_a), veh/h	645	671	571	341	1209	1027	213	1063	1079	478	680	656
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.1	16.2	16.7	16.7	8.1	8.5	18.2	8.1	8.1	12.4	13.1	13.2
Incr Delay (d2), s/veh	0.4	0.2	1.1	10.4	0.0	0.1	14.2	0.4	0.4	0.1	0.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.3	0.7	3.2	0.1	0.5	2.1	2.5	2.6	0.3	1.6	1.6
LnGrp Delay(d),s/veh	17.5	16.5	17.8	27.1	8.1	8.6	32.4	8.5	8.5	12.4	13.7	13.9
LnGrp LOS	B	B	B	C	A	A	C	A	A	B	B	B
Approach Vol, veh/h		175			309			767			356	
Approach Delay, s/veh		17.5			21.9			12.6			13.7	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6		8
Phs Duration (G+Y+Rc), s		21.8	10.5	8.9	7.9	13.9		19.4
Change Period (Y+Rc), s		4.0	4.0	4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s		25.0	8.0	15.0	5.0	16.0		27.0
Max Q Clear Time (g_c+I1), s		7.1	7.0	4.5	5.0	5.4		3.2
Green Ext Time (p_c), s		5.9	0.1	0.7	0.0	4.5		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	15.2
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	49.0
Intersection LOS	E

Approach	EB	WB	NB	SB
Entry Lanes	0	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	0	706	501	80
Demand Flow Rate, veh/h	0	727	516	82
Vehicles Circulating, veh/h	103	516	0	595
Vehicles Exiting, veh/h	574	0	103	648
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	82.6	8.3	7.5
Approach LOS	-	F	A	A

Lane	Left	Left	Left
Designated Moves	LTR	LT	TR
Assumed Moves	LTR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	727	516	82
Cap Entry Lane, veh/h	674	1130	623
Entry HV Adj Factor	0.971	0.971	0.974
Flow Entry, veh/h	706	501	80
Cap Entry, veh/h	655	1097	607
V/C Ratio	1.078	0.457	0.132
Control Delay, s/veh	82.6	8.3	7.5
LOS	F	A	A
95th %tile Queue, veh	20	2	0

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	0	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	196	0	531	256
Demand Flow Rate, veh/h	202	0	547	263
Vehicles Circulating, veh/h	263	516	351	0
Vehicles Exiting, veh/h	0	382	114	516
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.7	0.0	17.7	5.4
Approach LOS	A	-	C	A

Lane	Left	Left	Left
Designated Moves	LTR	TR	LT
Assumed Moves	LTR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	202	547	263
Cap Entry Lane, veh/h	869	795	1130
Entry HV Adj Factor	0.972	0.971	0.972
Flow Entry, veh/h	196	531	256
Cap Entry, veh/h	844	772	1099
V/C Ratio	0.233	0.688	0.233
Control Delay, s/veh	6.7	17.7	5.4
LOS	A	C	A
95th %tile Queue, veh	1	6	1

Intersection	
Intersection Delay, s/veh	297.2
Intersection LOS	F

Approach	EB	WB	NB	SB
Entry Lanes	0	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	0	570	2553	2237
Demand Flow Rate, veh/h	0	587	2629	2305
Vehicles Circulating, veh/h	2249	2629	0	669
Vehicles Exiting, veh/h	725	0	2249	2547
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	1077.0	103.1	320.0
Approach LOS	-	F	F	F

Lane	Left	Left	Right	Left	Right
Designated Moves	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Critical Headway, s	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	587	1236	1393	1083	1222
Cap Entry Lane, veh/h	179	1130	1130	684	707
Entry HV Adj Factor	0.971	0.971	0.971	0.971	0.970
Flow Entry, veh/h	570	1200	1353	1052	1186
Cap Entry, veh/h	174	1097	1097	664	686
V/C Ratio	3.272	1.094	1.233	1.583	1.727
Control Delay, s/veh	1077.0	74.8	128.2	286.7	349.6
LOS	F	F	F	F	F
95th %tile Queue, veh	53	29	44	56	69

Intersection	
Intersection Delay, s/veh	191.0
Intersection LOS	F

Approach	EB	WB	NB	SB
Entry Lanes	1	0	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	527	0	2468	2183
Demand Flow Rate, veh/h	542	0	2542	2248
Vehicles Circulating, veh/h	2248	2629	340	0
Vehicles Exiting, veh/h	0	253	2450	2629
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	638.7	0.0	221.6	48.4
Approach LOS	F	-	F	E

Lane	Left	Left	Right	Left	Right
Designated Moves	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Critical Headway, s	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	542	1195	1347	1057	1191
Cap Entry Lane, veh/h	234	876	891	1130	1130
Entry HV Adj Factor	0.972	0.971	0.971	0.970	0.971
Flow Entry, veh/h	527	1160	1308	1026	1157
Cap Entry, veh/h	228	850	865	1097	1097
V/C Ratio	2.314	1.365	1.512	0.935	1.054
Control Delay, s/veh	638.7	187.9	251.4	33.3	61.7
LOS	F	F	F	D	F
95th %tile Queue, veh	42	48	63	16	25

Intersection	
Intersection Delay, s/veh	11.4
Intersection LOS	B

Approach	WB	NB	SB
Entry Lanes	1	2	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	476	742	1005
Demand Flow Rate, veh/h	490	764	1035
Vehicles Circulating, veh/h	633	273	151
Vehicles Exiting, veh/h	404	913	972
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	18.4	8.9	10.0
Approach LOS	C	A	B

Lane	Left	Left	Right	Left	Right
Designated Moves	LR	LT	TR	LT	TR
Assumed Moves	LR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Critical Headway, s	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	490	359	405	486	549
Cap Entry Lane, veh/h	725	921	933	1009	1017
Entry HV Adj Factor	0.971	0.971	0.970	0.972	0.970
Flow Entry, veh/h	476	349	393	472	533
Cap Entry, veh/h	705	894	906	980	986
V/C Ratio	0.675	0.390	0.434	0.482	0.540
Control Delay, s/veh	18.4	8.5	9.2	9.4	10.6
LOS	C	A	A	A	B
95th %tile Queue, veh	5	2	2	3	3

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	2	2	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	221	816	887
Demand Flow Rate, veh/h	228	841	914
Vehicles Circulating, veh/h	638	173	101
Vehicles Exiting, veh/h	376	842	765
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	7.0	8.5	8.4
Approach LOS	A	A	A

Lane	Left	Right	Left	Right	Left	Right
Designated Moves	L	TR	LT	TR	LT	TR
Assumed Moves	L	TR	LT	TR	LT	TR
RT Channelized						
Lane Util	0.443	0.557	0.470	0.530	0.470	0.530
Critical Headway, s	4.293	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	101	127	395	446	430	484
Cap Entry Lane, veh/h	700	723	992	1001	1048	1053
Entry HV Adj Factor	0.970	0.969	0.971	0.970	0.970	0.972
Flow Entry, veh/h	98	123	384	433	417	470
Cap Entry, veh/h	679	700	964	971	1016	1023
V/C Ratio	0.144	0.176	0.398	0.446	0.410	0.460
Control Delay, s/veh	6.9	7.1	8.2	8.9	8.0	8.8
LOS	A	A	A	A	A	A
95th %tile Queue, veh	1	1	2	2	2	2

Intersection	
Intersection Delay, s/veh	9.0
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	2	2	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	309	829	817
Demand Flow Rate, veh/h	318	854	842
Vehicles Circulating, veh/h	741	198	218
Vehicles Exiting, veh/h	311	862	841
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	9.3	8.9	9.0
Approach LOS	A	A	A

Lane	Left	Right	Left	Right	Left	Right
Designated Moves	L	TR	LT	TR	LT	TR
Assumed Moves	L	TR	LT	TR	LT	TR
RT Channelized						
Lane Util	0.686	0.314	0.470	0.530	0.470	0.530
Critical Headway, s	4.293	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	218	100	401	453	396	446
Cap Entry Lane, veh/h	648	673	974	984	960	970
Entry HV Adj Factor	0.972	0.970	0.972	0.970	0.970	0.971
Flow Entry, veh/h	212	97	390	440	384	433
Cap Entry, veh/h	630	652	947	955	931	942
V/C Ratio	0.336	0.149	0.412	0.461	0.413	0.460
Control Delay, s/veh	10.3	7.2	8.5	9.3	8.6	9.3
LOS	B	A	A	A	A	A
95th %tile Queue, veh	1	1	2	2	2	2

Intersection	
Int Delay, s/veh	2.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	47	118	726	44	122	479
Future Vol, veh/h	47	118	726	44	122	479
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	70	0	-	-	85	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	4	4	3	3	3	3
Mvmt Flow	47	118	726	44	122	479

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1232	385	0	0	770	0
Stage 1	748	-	-	-	-	-
Stage 2	484	-	-	-	-	-
Critical Hdwy	6.88	6.98	-	-	4.16	-
Critical Hdwy Stg 1	5.88	-	-	-	-	-
Critical Hdwy Stg 2	5.88	-	-	-	-	-
Follow-up Hdwy	3.54	3.34	-	-	2.23	-
Pot Cap-1 Maneuver	167	608	-	-	834	-
Stage 1	423	-	-	-	-	-
Stage 2	580	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	143	608	-	-	834	-
Mov Cap-2 Maneuver	273	-	-	-	-	-
Stage 1	423	-	-	-	-	-
Stage 2	495	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.7	0	2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	273	608	834	-
HCM Lane V/C Ratio	-	-	0.172	0.194	0.146	-
HCM Control Delay (s)	-	-	20.9	12.3	10.1	-
HCM Lane LOS	-	-	C	B	B	-
HCM 95th %tile Q(veh)	-	-	0.6	0.7	0.5	-

Intersection	
Int Delay, s/veh	20.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	165	36	1888	289	85	646
Future Vol, veh/h	165	36	1888	289	85	646
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	4	4	4	4
Mvmt Flow	165	36	1888	289	85	646

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2461	1089	0	0	2177	0
Stage 1	2033	-	-	-	-	-
Stage 2	428	-	-	-	-	-
Critical Hdwy	5.76	7.16	-	-	5.38	-
Critical Hdwy Stg 1	6.66	-	-	-	-	-
Critical Hdwy Stg 2	6.06	-	-	-	-	-
Follow-up Hdwy	3.83	3.93	-	-	3.14	-
Pot Cap-1 Maneuver	~ 52	180	-	-	99	-
Stage 1	~ 53	-	-	-	-	-
Stage 2	569	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	0	180	-	-	99	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	~ 53	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	154.9	0	43.3
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	180	99	-
HCM Lane V/C Ratio	-	-	1.117	0.859	-
HCM Control Delay (s)	-	-	154.9	132.3	31.6
HCM Lane LOS	-	-	F	F	D
HCM 95th %tile Q(veh)	-	-	10.1	4.8	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	101.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	27	2471	2961	34	10	93
Future Vol, veh/h	27	2471	2961	34	10	93
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	190	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	6	6	6	6	3	3
Mvmt Flow	27	2471	2961	34	10	93

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2995	0	-	0	4268	1498
Stage 1	-	-	-	-	2978	-
Stage 2	-	-	-	-	1290	-
Critical Hdwy	4.22	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.26	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	106	-	-	-	~ 1	110
Stage 1	-	-	-	-	25	-
Stage 2	-	-	-	-	220	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	106	-	-	-	~ 1	110
Mov Cap-2 Maneuver	-	-	-	-	~ 1	-
Stage 1	-	-	-	-	25	-
Stage 2	-	-	-	-	164	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	$ 5508.6
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	106	-	-	-	9
HCM Lane V/C Ratio	0.255	-	-	-	11.444
HCM Control Delay (s)	50.2	-	-	-	$ 5508.6
HCM Lane LOS	F	-	-	-	F
HCM 95th %tile Q(veh)	0.9	-	-	-	14.4

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	3	1	0	3	1	6	0	1084	1	1	912	1
Future Vol, veh/h	3	1	0	3	1	6	0	1084	1	1	912	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	3	1	0	3	1	6	0	1084	1	1	912	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2003	2000	913	2000	2000	1085	913	0	0	1085	0	0
Stage 1	915	915	-	1085	1085	-	-	-	-	-	-	-
Stage 2	1088	1085	-	915	915	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	44	60	330	44	60	262	742	-	-	639	-	-
Stage 1	325	350	-	261	292	-	-	-	-	-	-	-
Stage 2	260	292	-	325	350	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	42	60	330	43	60	262	742	-	-	639	-	-
Mov Cap-2 Maneuver	42	60	-	43	60	-	-	-	-	-	-	-
Stage 1	325	349	-	261	292	-	-	-	-	-	-	-
Stage 2	253	292	-	323	349	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	92.7	49.4	0	0
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	742	-	-	45	91	639	-	-
HCM Lane V/C Ratio	-	-	-	0.089	0.11	0.002	-	-
HCM Control Delay (s)	0	-	-	92.7	49.4	10.6	0	-
HCM Lane LOS	A	-	-	F	E	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.4	0	-	-

Intersection	
Int Delay, s/veh	5.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	77	58	26	917	947	73
Future Vol, veh/h	77	58	26	917	947	73
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	77	58	26	917	947	73

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1495	510	1020	0	-	0
Stage 1	984	-	-	-	-	-
Stage 2	511	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	-	-
Pot Cap-1 Maneuver	113	506	670	-	-	-
Stage 1	320	-	-	-	-	-
Stage 2	564	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	109	506	670	-	-	-
Mov Cap-2 Maneuver	109	-	-	-	-	-
Stage 1	320	-	-	-	-	-
Stage 2	542	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	85.7	0.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	670	-	164	-	-
HCM Lane V/C Ratio	0.039	-	0.823	-	-
HCM Control Delay (s)	10.6	-	85.7	-	-
HCM Lane LOS	B	-	F	-	-
HCM 95th %tile Q(veh)	0.1	-	5.5	-	-

Intersection	
Int Delay, s/veh	356.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	719	289	484	755	148	749
Future Vol, veh/h	719	289	484	755	148	749
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	0	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	719	289	484	755	148	749

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1008	0	2210	504
Stage 1	-	-	-	-	864	-
Stage 2	-	-	-	-	1346	-
Critical Hdwy	-	-	4.16	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	2.23	-	3.53	3.33
Pot Cap-1 Maneuver	-	-	677	-	~ 37	~ 510
Stage 1	-	-	-	-	371	-
Stage 2	-	-	-	-	205	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	677	-	~ 11	~ 510
Mov Cap-2 Maneuver	-	-	-	-	~ 11	-
Stage 1	-	-	-	-	371	-
Stage 2	-	-	-	-	~ 58	-

Approach	EB	WB	NB
HCM Control Delay, s	0	8.8	$ 1237.6
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	11	510	-	-	677	-
HCM Lane V/C Ratio	13.455	1.469	-	-	0.715	-
HCM Control Delay (s)	$ 6270.5	243.1	-	-	22.5	-
HCM Lane LOS	F	F	-	-	C	-
HCM 95th %tile Q(veh)	19.9	37.4	-	-	6	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	322	418	1	1	638	7	7	308	0	0	161	236
Future Vol, veh/h	322	418	1	1	638	7	7	308	0	0	161	236
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	8	8	8	10	10	10	8	8	8	8	8	8
Mvmt Flow	322	418	1	1	638	7	7	308	0	0	161	236

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	645	0	0	419	0	0	1905	1710	419	1861	1707	642
Stage 1	-	-	-	-	-	-	1063	1063	-	644	644	-
Stage 2	-	-	-	-	-	-	842	647	-	1217	1063	-
Critical Hdwy	4.18	-	-	4.2	-	-	7.18	6.58	6.28	7.18	6.58	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Follow-up Hdwy	2.272	-	-	2.29	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	912	-	-	1098	-	-	50	~ 88	621	54	~ 88	464
Stage 1	-	-	-	-	-	-	263	~ 293	-	451	459	-
Stage 2	-	-	-	-	-	-	350	457	-	215	293	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	912	-	-	1098	-	-	-	~ 47	621	-	~ 47	464
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 47	-	-	~ 47	-
Stage 1	-	-	-	-	-	-	142	~ 158	-	244	459	-
Stage 2	-	-	-	-	-	-	112	457	-	-	~ 158	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.8	0		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	912	-	-	1098	-	-	-
HCM Lane V/C Ratio	-	0.353	-	-	0.001	-	-	-
HCM Control Delay (s)	-	11.1	0	-	8.3	0	-	-
HCM Lane LOS	-	B	A	-	A	A	-	-
HCM 95th %tile Q(veh)	-	1.6	-	-	0	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	84	36	35	179	80
Future Vol, veh/h	14	84	36	35	179	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	14	84	36	35	179	80

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	326	219	259	0	-	0
Stage 1	219	-	-	-	-	-
Stage 2	107	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	666	818	1300	-	-	-
Stage 1	815	-	-	-	-	-
Stage 2	915	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	647	818	1300	-	-	-
Mov Cap-2 Maneuver	647	-	-	-	-	-
Stage 1	815	-	-	-	-	-
Stage 2	889	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1300	-	788	-	-
HCM Lane V/C Ratio	0.028	-	0.124	-	-
HCM Control Delay (s)	7.8	0	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	5	23	92	233	10
Future Vol, veh/h	3	5	23	92	233	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	3	5	23	92	233	10

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	376	238	243	0	-	0
Stage 1	238	-	-	-	-	-
Stage 2	138	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	623	798	1317	-	-	-
Stage 1	799	-	-	-	-	-
Stage 2	886	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	612	798	1317	-	-	-
Mov Cap-2 Maneuver	612	-	-	-	-	-
Stage 1	799	-	-	-	-	-
Stage 2	870	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	1.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1317	-	716	-	-
HCM Lane V/C Ratio	0.017	-	0.011	-	-
HCM Control Delay (s)	7.8	0	10.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0	-	-

Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	121	177	82	81	229	206
Future Vol, veh/h	121	177	82	81	229	206
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	121	177	82	81	229	206

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	577	332	435	0	-	0
Stage 1	332	-	-	-	-	-
Stage 2	245	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	477	707	1119	-	-	-
Stage 1	725	-	-	-	-	-
Stage 2	793	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	440	707	1119	-	-	-
Mov Cap-2 Maneuver	440	-	-	-	-	-
Stage 1	725	-	-	-	-	-
Stage 2	732	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.2	4.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1119	-	567	-	-
HCM Lane V/C Ratio	0.073	-	0.526	-	-
HCM Control Delay (s)	8.5	0	18.2	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.2	-	3	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	50	24	6	219	194	75
Future Vol, veh/h	50	24	6	219	194	75
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	150	0	150	-	-	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	50	24	6	219	194	75

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	425	194	194	0	-	0
Stage 1	194	-	-	-	-	-
Stage 2	231	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	584	845	1373	-	-	-
Stage 1	836	-	-	-	-	-
Stage 2	805	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	581	845	1373	-	-	-
Mov Cap-2 Maneuver	581	-	-	-	-	-
Stage 1	836	-	-	-	-	-
Stage 2	801	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11	0.2	0
HCM LOS	B		

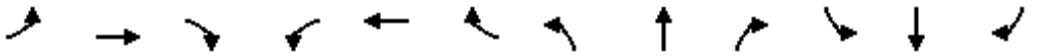
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1373	-	581	845	-	-
HCM Lane V/C Ratio	0.004	-	0.086	0.028	-	-
HCM Control Delay (s)	7.6	-	11.8	9.4	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.3	0.1	-	-

CEQA Cumulative

Plus All Projects

(Proposed Project)

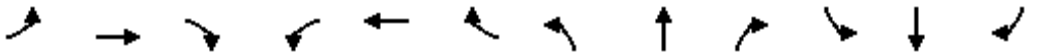
PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	363	0	500	397	276	1047	0	2068	567	0	2911	490
Future Volume (vph)	363	0	500	397	276	1047	0	2068	567	0	2911	490
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00		0.88	0.86	0.81	0.91		0.91	1.00		0.86	1.00
Frt	1.00		0.85	1.00	0.91	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00	1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)	1752		2760	2985	2676	1413		4988	1553		6285	1553
Flt Permitted	0.95		1.00	0.95	1.00	1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)	1752		2760	2985	2676	1413		4988	1553		6285	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	363	0	500	397	276	1047	0	2068	567	0	2911	490
RTOR Reduction (vph)	0	0	98	0	14	36	0	0	0	0	0	114
Lane Group Flow (vph)	363	0	402	357	826	487	0	2068	567	0	2911	376
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot		Perm	Split	NA	Perm		NA	Free		NA	Perm
Protected Phases	4			8	8			2			6	
Permitted Phases			4			8			Free			6
Actuated Green, G (s)	19.0		19.0	31.0	31.0	31.0		48.0	110.0		48.0	48.0
Effective Green, g (s)	19.0		19.0	31.0	31.0	31.0		48.0	110.0		48.0	48.0
Actuated g/C Ratio	0.17		0.17	0.28	0.28	0.28		0.44	1.00		0.44	0.44
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0		4.0			4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	302		476	841	754	398		2176	1553		2742	677
v/s Ratio Prot	c0.21			0.12	0.31			0.41			c0.46	
v/s Ratio Perm			0.15			c0.34			0.37			0.24
v/c Ratio	1.20		0.84	0.42	1.34dr	1.22		0.95	0.37		1.06	0.56
Uniform Delay, d1	45.5		44.1	32.2	39.5	39.5		29.9	0.0		31.0	23.1
Progression Factor	1.00		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	118.2		12.8	0.3	61.8	121.3		10.1	0.7		36.4	1.0
Delay (s)	163.7		56.9	32.6	101.3	160.8		39.9	0.7		67.4	24.1
Level of Service	F		E	C	F	F		D	A		E	C
Approach Delay (s)		101.8			105.1			31.5			61.1	
Approach LOS		F			F			C			E	

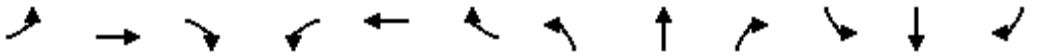
Intersection Summary			
HCM 2000 Control Delay	64.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	113.3%	ICU Level of Service	H
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



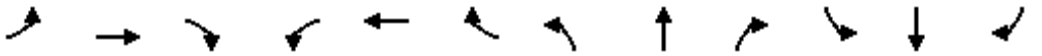
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	770	0	1311	0	0	0	0	1865	598	0	1887	1284
Future Volume (vph)	770	0	1311	0	0	0	0	1865	598	0	1887	1284
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	4.0		4.0	4.0
Lane Util. Factor	0.97		0.88					0.91	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3367		2733					4988	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3367		2733					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	770	0	1311	0	0	0	0	1865	598	0	1887	1284
RTOR Reduction (vph)	0	0	8	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	770	0	1303	0	0	0	0	1865	598	0	1887	1284
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	33.0		33.0					29.0	70.0		29.0	70.0
Effective Green, g (s)	33.0		33.0					29.0	70.0		29.0	70.0
Actuated g/C Ratio	0.47		0.47					0.41	1.00		0.41	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	1587		1288					2066	1553		2066	1553
v/s Ratio Prot								0.37			0.38	
v/s Ratio Perm	0.23		c0.48						0.39			c0.83
v/c Ratio	0.49		1.01					0.90	0.39		0.91	0.83
Uniform Delay, d1	12.7		18.5					19.2	0.0		19.3	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.2		27.9					6.0	0.7		6.7	5.2
Delay (s)	12.9		46.4					25.2	0.7		26.0	5.2
Level of Service	B		D					C	A		C	A
Approach Delay (s)		34.0			0.0			19.2			17.6	
Approach LOS		C			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	22.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	89.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



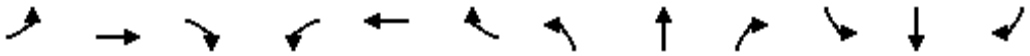
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	258	671	258	152	959	962	469	1242	38	1284	1880	150
Future Volume (vph)	258	671	258	152	959	962	469	1242	38	1284	1880	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		0.97	0.95	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	3327		3367	3471	2733	3367	4988	1553	3367	4988	1553
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	3327		3367	3471	2733	3367	4988	1553	3367	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	258	671	258	152	959	962	469	1242	38	1284	1880	150
RTOR Reduction (vph)	0	29	0	0	0	686	0	0	29	0	0	58
Lane Group Flow (vph)	258	900	0	152	959	276	469	1242	9	1284	1880	92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	9.0	36.0		7.0	34.0	34.0	21.6	33.0	33.0	48.0	59.4	59.4
Effective Green, g (s)	9.0	36.0		7.0	34.0	34.0	21.6	33.0	33.0	48.0	59.4	59.4
Actuated g/C Ratio	0.06	0.26		0.05	0.24	0.24	0.15	0.24	0.24	0.34	0.42	0.42
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	216	855		168	842	663	519	1175	366	1154	2116	658
v/s Ratio Prot	0.08	c0.27		0.05	c0.28		0.14	c0.25		c0.38	0.38	
v/s Ratio Perm						0.10			0.01			0.06
v/c Ratio	1.19	1.05		0.90	1.14	0.42	0.90	1.06	0.02	1.11	0.89	0.14
Uniform Delay, d1	65.5	52.0		66.2	53.0	44.6	58.2	53.5	41.1	46.0	37.2	24.7
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	123.7	45.6		42.8	76.8	0.4	19.0	42.7	0.0	63.1	5.0	0.1
Delay (s)	189.2	97.6		109.0	129.8	45.1	77.2	96.2	41.2	109.1	42.2	24.8
Level of Service	F	F		F	F	D	E	F	D	F	D	C
Approach Delay (s)		117.5			88.9			89.9			67.3	
Approach LOS		F			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	84.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	107.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	419	1540	12	648	19	1163	6	3	14	14	58
Future Volume (vph)	38	419	1540	12	648	19	1163	6	3	14	14	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.98	1.00
Satd. Flow (prot)	1736	3471	1553	1736	3471	1553	1618	1623	1524		1800	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.98	1.00
Satd. Flow (perm)	1736	3471	1553	1736	3471	1553	1618	1623	1524		1800	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	38	419	1540	12	648	19	1163	6	3	14	14	58
RTOR Reduction (vph)	0	0	245	0	0	15	0	0	1	0	0	54
Lane Group Flow (vph)	38	419	1295	12	648	4	581	588	2	0	28	4
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4	2	3	8		2	2		6	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	2.2	19.2	62.7	0.7	17.7	17.7	43.5	43.5	43.5		5.5	5.5
Effective Green, g (s)	2.2	19.2	62.7	0.7	17.7	17.7	43.5	43.5	43.5		5.5	5.5
Actuated g/C Ratio	0.03	0.23	0.74	0.01	0.21	0.21	0.51	0.51	0.51		0.06	0.06
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	44	784	1220	14	723	323	829	831	780		116	101
v/s Ratio Prot	c0.02	0.12	c0.54	0.01	0.19		0.36	0.36			c0.02	
v/s Ratio Perm			0.29			0.00			0.00			0.00
v/c Ratio	0.86	0.53	1.06	0.86	0.90	0.01	0.70	0.71	0.00		0.24	0.04
Uniform Delay, d1	41.2	28.9	11.1	42.1	32.7	26.7	15.7	15.8	10.1		37.7	37.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	84.6	0.7	43.8	164.6	13.7	0.0	2.7	2.8	0.0		1.1	0.2
Delay (s)	125.8	29.6	54.9	206.7	46.4	26.7	18.4	18.6	10.1		38.8	37.4
Level of Service	F	C	D	F	D	C	B	B	B		D	D
Approach Delay (s)		50.9			48.7			18.5			37.8	
Approach LOS		D			D			B			D	

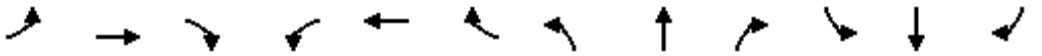
Intersection Summary			
HCM 2000 Control Delay	40.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	84.9	Sum of lost time (s)	20.0
Intersection Capacity Utilization	112.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	344	154	365	430	110	210	221	361	131	234	37
Future Volume (vph)	38	344	154	365	430	110	210	221	361	131	234	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		0.95	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85		0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1752	3505	1568	1752	3398		1665	1745	1568		3401	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.98	
Satd. Flow (perm)	1752	3505	1568	1752	3398		1665	1745	1568		3401	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	38	344	154	365	430	110	210	221	361	131	234	37
RTOR Reduction (vph)	0	0	125	0	24	0	0	0	294	0	8	0
Lane Group Flow (vph)	38	344	29	365	516	0	189	242	67	0	394	0
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4						2			
Actuated Green, G (s)	3.3	14.9	14.9	19.8	31.4		14.7	14.7	14.7		13.7	
Effective Green, g (s)	3.3	14.9	14.9	19.8	31.4		14.7	14.7	14.7		13.7	
Actuated g/C Ratio	0.04	0.19	0.19	0.25	0.40		0.19	0.19	0.19		0.17	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	73	660	295	438	1348		309	324	291		589	
v/s Ratio Prot	0.02	c0.10		c0.21	0.15		0.11	c0.14			c0.12	
v/s Ratio Perm			0.02						0.04			
v/c Ratio	0.52	0.52	0.10	0.83	0.38		0.61	0.75	0.23		0.67	
Uniform Delay, d1	37.1	28.9	26.5	28.1	17.0		29.6	30.4	27.4		30.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	6.5	0.7	0.1	12.8	0.2		3.6	9.1	0.4		2.9	
Delay (s)	43.7	29.6	26.7	40.9	17.1		33.1	39.5	27.8		33.5	
Level of Service	D	C	C	D	B		C	D	C		C	
Approach Delay (s)		29.8			26.7			32.6			33.5	
Approach LOS		C			C			C			C	

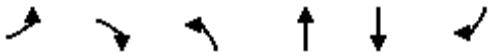
Intersection Summary			
HCM 2000 Control Delay	30.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	79.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	66.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	2366	294	149	2269	5	93	30	92	4	32	23
Future Volume (vph)	14	2366	294	149	2269	5	93	30	92	4	32	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	6.4	6.4	3.5	6.4	6.4	4.4	4.4	4.4	3.5	3.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1703	3406	1524	1703	3406	1524	1752	1845	1568	1752	1729	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1703	3406	1524	1703	3406	1524	1752	1845	1568	1752	1729	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	14	2366	294	149	2269	5	93	30	92	4	32	23
RTOR Reduction (vph)	0	0	47	0	0	1	0	0	82	0	19	0
Lane Group Flow (vph)	14	2366	247	149	2269	4	93	30	10	4	36	0
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			
Actuated Green, G (s)	1.6	94.5	94.5	11.5	104.4	104.4	7.6	15.9	15.9	0.8	9.1	
Effective Green, g (s)	1.6	94.5	94.5	11.5	104.4	104.4	7.6	15.9	15.9	0.8	9.1	
Actuated g/C Ratio	0.01	0.67	0.67	0.08	0.74	0.74	0.05	0.11	0.11	0.01	0.06	
Clearance Time (s)	3.5	6.4	6.4	3.5	6.4	6.4	4.4	4.4	4.4	3.5	3.5	
Vehicle Extension (s)	2.4	4.5	4.5	2.4	4.5	4.5	2.4	2.8	2.8	2.4	2.8	
Lane Grp Cap (vph)	19	2290	1025	139	2530	1132	94	208	177	9	111	
v/s Ratio Prot	0.01	c0.69		c0.09	0.67		c0.05	0.02		0.00	c0.02	
v/s Ratio Perm			0.16			0.00			0.01			
v/c Ratio	0.74	1.03	0.24	1.07	0.90	0.00	0.99	0.14	0.06	0.44	0.33	
Uniform Delay, d1	69.2	23.0	9.0	64.5	13.9	4.6	66.4	56.2	55.6	69.6	62.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	83.7	28.0	0.2	96.9	4.9	0.0	88.4	0.3	0.1	21.2	1.5	
Delay (s)	152.9	51.0	9.2	161.4	18.8	4.7	154.9	56.5	55.7	90.9	64.3	
Level of Service	F	D	A	F	B	A	F	E	E	F	E	
Approach Delay (s)		46.9			27.5			98.7			66.1	
Approach LOS		D			C			F			E	

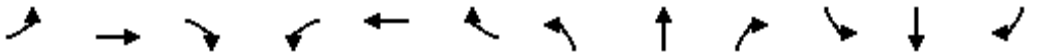
Intersection Summary			
HCM 2000 Control Delay	40.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	140.5	Sum of lost time (s)	17.8
Intersection Capacity Utilization	97.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	753	166	151	1355	1512	709
Future Volume (vph)	753	166	151	1355	1512	709
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	0.97	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3400	1568	3400	3505	3505	1568
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3400	1568	3400	3505	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	753	166	151	1355	1512	709
RTOR Reduction (vph)	0	110	0	0	0	359
Lane Group Flow (vph)	753	56	151	1355	1512	350
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	16.4	16.4	3.0	33.3	26.3	26.3
Effective Green, g (s)	16.4	16.4	3.0	33.3	26.3	26.3
Actuated g/C Ratio	0.28	0.28	0.05	0.58	0.46	0.46
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	966	445	176	2022	1597	714
v/s Ratio Prot	c0.22		0.04	c0.39	c0.43	
v/s Ratio Perm		0.04				0.22
v/c Ratio	0.78	0.13	0.86	0.67	0.95	0.49
Uniform Delay, d1	19.0	15.3	27.1	8.4	15.0	11.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.0	0.1	31.5	0.9	12.1	0.5
Delay (s)	23.0	15.5	58.6	9.3	27.1	11.5
Level of Service	C	B	E	A	C	B
Approach Delay (s)	21.7			14.2	22.1	
Approach LOS	C			B	C	

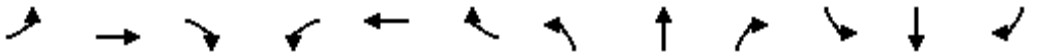
Intersection Summary			
HCM 2000 Control Delay	19.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	57.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



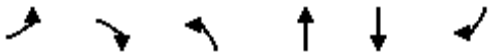
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	720	853	164	833	40	521	160	108	36	80	31
Future Volume (vph)	34	720	853	164	833	40	521	160	108	36	80	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	3.9	3.9	5.5	4.0	4.0	4.3	4.3		5.1	5.1	5.1
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1568	3400	3505	1568	3367	3261		1752	3505	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	3505	1568	3400	3505	1568	3367	3261		1752	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	34	720	853	164	833	40	521	160	108	36	80	31
RTOR Reduction (vph)	0	0	520	0	0	22	0	84	0	0	0	29
Lane Group Flow (vph)	34	720	333	164	833	18	521	184	0	36	80	2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	3%	3%	3%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		8	8		4	4	
Permitted Phases			6			2						4
Actuated Green, G (s)	1.7	29.1	29.1	6.0	33.3	33.3	16.3	16.3		4.3	4.3	4.3
Effective Green, g (s)	1.7	29.1	29.1	6.0	33.3	33.3	16.3	16.3		4.3	4.3	4.3
Actuated g/C Ratio	0.02	0.39	0.39	0.08	0.45	0.45	0.22	0.22		0.06	0.06	0.06
Clearance Time (s)	5.5	3.9	3.9	5.5	4.0	4.0	4.3	4.3		5.1	5.1	5.1
Vehicle Extension (s)	1.0	4.9	4.9	1.0	4.1	4.1	2.0	2.0		1.0	1.0	1.0
Lane Grp Cap (vph)	39	1369	612	273	1566	700	736	713		101	202	90
v/s Ratio Prot	0.02	0.21		c0.05	c0.24		c0.15	0.06		0.02	c0.02	
v/s Ratio Perm			0.21			0.01						0.00
v/c Ratio	0.87	0.53	0.54	0.60	0.53	0.03	0.71	0.26		0.36	0.40	0.02
Uniform Delay, d1	36.3	17.4	17.6	33.1	14.9	11.5	26.9	24.1		33.8	33.8	33.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	92.4	0.7	1.7	2.5	0.5	0.0	2.6	0.1		0.8	0.5	0.0
Delay (s)	128.7	18.1	19.3	35.6	15.4	11.5	29.5	24.2		34.6	34.3	33.1
Level of Service	F	B	B	D	B	B	C	C		C	C	C
Approach Delay (s)		21.1			18.5			27.7			34.1	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	22.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	74.5	Sum of lost time (s)	22.9
Intersection Capacity Utilization	73.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	455	0	1458	0	0	0	0	1878	1036	0	1957	521
Future Volume (vph)	455	0	1458	0	0	0	0	1878	1036	0	1957	521
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4		6.4					5.1	4.0		4.6	4.0
Lane Util. Factor	0.97		0.88					0.91	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3367		2733					4988	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3367		2733					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	455	0	1458	0	0	0	0	1878	1036	0	1957	521
RTOR Reduction (vph)	0	0	9	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	455	0	1449	0	0	0	0	1878	1036	0	1957	521
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	60.6		60.6					47.9	120.0		48.4	120.0
Effective Green, g (s)	60.6		60.6					47.9	120.0		48.4	120.0
Actuated g/C Ratio	0.51		0.51					0.40	1.00		0.40	1.00
Clearance Time (s)	6.4		6.4					5.1			4.6	
Vehicle Extension (s)	1.0		1.0					1.0			1.0	
Lane Grp Cap (vph)	1700		1380					1991	1553		2011	1553
v/s Ratio Prot								0.38			c0.39	
v/s Ratio Perm	0.14		c0.53						0.67			0.34
v/c Ratio	0.27		1.05					0.94	0.67		0.97	0.34
Uniform Delay, d1	17.0		29.7					34.7	0.0		35.2	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0		38.4					9.7	2.3		14.1	0.6
Delay (s)	17.0		68.1					44.5	2.3		49.3	0.6
Level of Service	B		E					D	A		D	A
Approach Delay (s)		56.0			0.0			29.5			39.1	
Approach LOS		E			A			C			D	

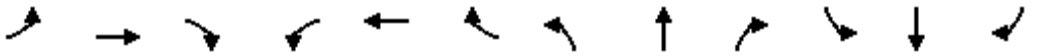
Intersection Summary			
HCM 2000 Control Delay	39.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	98.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1183	24	42	360	800	837
Future Volume (vph)	1183	24	42	360	800	837
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1752	1568	1752	1845	3505	1568
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1752	1568	1752	1845	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1183	24	42	360	800	837
RTOR Reduction (vph)	0	9	0	0	0	556
Lane Group Flow (vph)	1183	15	42	360	800	281
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	54.1	54.1	2.4	27.4	21.0	21.0
Effective Green, g (s)	54.1	54.1	2.4	27.4	21.0	21.0
Actuated g/C Ratio	0.60	0.60	0.03	0.31	0.23	0.23
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1059	947	46	564	822	367
v/s Ratio Prot	c0.68		0.02	c0.20	c0.23	
v/s Ratio Perm		0.01				0.18
v/c Ratio	1.12	0.02	0.91	0.64	0.97	0.77
Uniform Delay, d1	17.7	7.1	43.4	26.8	34.0	32.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	65.7	0.0	99.4	2.4	24.8	9.2
Delay (s)	83.4	7.1	142.8	29.2	58.8	41.2
Level of Service	F	A	F	C	E	D
Approach Delay (s)	81.9			41.0	49.8	
Approach LOS	F			D	D	

Intersection Summary			
HCM 2000 Control Delay	60.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	89.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.0%	ICU Level of Service	G
Analysis Period (min)	15		

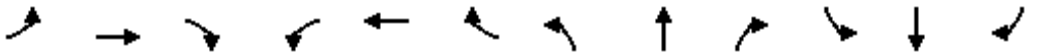
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	201	3	35	0	1	1	21	233	1	1	473	277
Future Volume (vph)	201	3	35	0	1	1	21	233	1	1	473	277
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00		1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85		0.93		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.95	1.00		1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1665	1671	1568		1706		1752	3503		1752	3505	1568
Flt Permitted	0.95	0.95	1.00		1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1665	1671	1568		1706		1752	3503		1752	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	201	3	35	0	1	1	21	233	1	1	473	277
RTOR Reduction (vph)	0	0	29	0	1	0	0	1	0	0	0	160
Lane Group Flow (vph)	103	101	6	0	1	0	21	233	0	1	473	117
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	6.8	6.8	6.8		0.7		0.5	17.6		0.5	17.6	17.6
Effective Green, g (s)	6.8	6.8	6.8		0.7		0.5	17.6		0.5	17.6	17.6
Actuated g/C Ratio	0.16	0.16	0.16		0.02		0.01	0.42		0.01	0.42	0.42
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	272	273	256		28		21	1482		21	1482	663
v/s Ratio Prot	c0.06	0.06			c0.00		c0.01	0.07		0.00	c0.13	
v/s Ratio Perm			0.00									0.07
v/c Ratio	0.38	0.37	0.02		0.04		1.00	0.16		0.05	0.32	0.18
Uniform Delay, d1	15.5	15.5	14.6		20.1		20.6	7.4		20.3	8.0	7.5
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.9	0.8	0.0		0.5		196.4	0.0		0.9	0.1	0.1
Delay (s)	16.4	16.3	14.6		20.7		216.9	7.5		21.3	8.1	7.6
Level of Service	B	B	B		C		F	A		C	A	A
Approach Delay (s)		16.1			20.7			24.7			8.0	
Approach LOS		B			C			C			A	

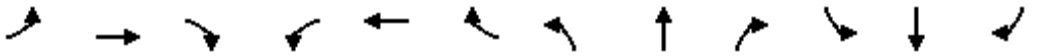
Intersection Summary			
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	41.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	36.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



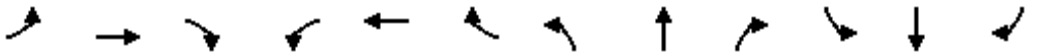
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	586	0	355	0	1186	1388	0	1009	439
Future Volume (vph)	0	0	0	586	0	355	0	1186	1388	0	1009	439
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.9	4.9			4.8	4.0		4.8	4.0
Lane Util. Factor				0.95	0.95			0.91	1.00		0.91	1.00
Frt				1.00	0.88			1.00	0.85		1.00	0.85
Flt Protected				0.95	0.99			1.00	1.00		1.00	1.00
Satd. Flow (prot)				1649	1514			4988	1553		4988	1553
Flt Permitted				0.95	0.99			1.00	1.00		1.00	1.00
Satd. Flow (perm)				1649	1514			4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	586	0	355	0	1186	1388	0	1009	439
RTOR Reduction (vph)	0	0	0	0	27	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	492	422	0	0	1186	1388	0	1009	439
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type				Perm	NA			NA	Free		NA	Free
Protected Phases					8			2			6	
Permitted Phases				8					Free			Free
Actuated Green, G (s)				14.4	14.4			13.2	37.3		13.2	37.3
Effective Green, g (s)				14.4	14.4			13.2	37.3		13.2	37.3
Actuated g/C Ratio				0.39	0.39			0.35	1.00		0.35	1.00
Clearance Time (s)				4.9	4.9			4.8			4.8	
Vehicle Extension (s)				1.0	1.0			1.0			1.0	
Lane Grp Cap (vph)				636	584			1765	1553		1765	1553
v/s Ratio Prot								0.24			0.20	
v/s Ratio Perm				0.30	0.28				c0.89			0.28
v/c Ratio				0.77	0.72			0.67	0.89		0.57	0.28
Uniform Delay, d1				10.0	9.7			10.2	0.0		9.8	0.0
Progression Factor				1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2				5.3	3.7			0.8	8.3		0.3	0.5
Delay (s)				15.4	13.5			11.0	8.3		10.0	0.5
Level of Service				B	B			B	A		B	A
Approach Delay (s)		0.0			14.5			9.6			7.1	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	37.3	Sum of lost time (s)	9.7
Intersection Capacity Utilization	58.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



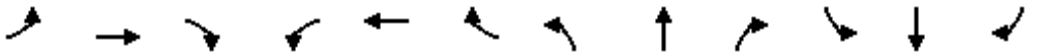
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	531	0	794	0	0	0	0	2080	1196	0	1296	299
Future Volume (vph)	531	0	794	0	0	0	0	2080	1196	0	1296	299
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	5.1					4.9	4.0		4.8	4.0
Lane Util. Factor	0.95	0.91	0.95					0.91	1.00		0.91	1.00
Frt	1.00	0.87	0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95	0.99	1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	1649	1441	1475					4988	1553		4988	1553
Flt Permitted	0.95	0.99	1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	1649	1441	1475					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	531	0	794	0	0	0	0	2080	1196	0	1296	299
RTOR Reduction (vph)	0	25	25	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	462	409	404	0	0	0	0	2080	1196	0	1296	299
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA	Perm					NA	Free		NA	Free
Protected Phases		4						2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	17.1	17.1	17.1					24.8	51.9		24.9	51.9
Effective Green, g (s)	17.1	17.1	17.1					24.8	51.9		24.9	51.9
Actuated g/C Ratio	0.33	0.33	0.33					0.48	1.00		0.48	1.00
Clearance Time (s)	5.1	5.1	5.1					4.9			4.8	
Vehicle Extension (s)	1.0	1.0	1.0					1.0			1.0	
Lane Grp Cap (vph)	543	474	485					2383	1553		2393	1553
v/s Ratio Prot								0.42			0.26	
v/s Ratio Perm	0.28	0.28	0.27						c0.77			0.19
v/c Ratio	0.85	0.86	0.83					0.87	0.77		0.54	0.19
Uniform Delay, d1	16.2	16.3	16.1					12.1	0.0		9.5	0.0
Progression Factor	1.00	1.00	1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	11.7	14.4	11.1					3.7	3.7		0.1	0.3
Delay (s)	28.0	30.7	27.2					15.9	3.7		9.6	0.3
Level of Service	C	C	C					B	A		A	A
Approach Delay (s)		28.6			0.0			11.4			7.9	
Approach LOS		C			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	51.9	Sum of lost time (s)	10.0
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	909	0	411	0	1660	1967	0	1260	645
Future Volume (vph)	0	0	0	909	0	411	0	1660	1967	0	1260	645
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.8		6.8		4.6	4.0		4.6	4.0
Lane Util. Factor				0.97		1.00		0.91	1.00		0.91	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3400		1568		5036	1568		5036	1568
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3400		1568		5036	1568		5036	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	909	0	411	0	1660	1967	0	1260	645
RTOR Reduction (vph)	0	0	0	0	0	24	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	909	0	387	0	1660	1967	0	1260	645
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				Perm		Perm		NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases				8		8			Free			Free
Actuated Green, G (s)				14.8		14.8		19.0	45.2		19.0	45.2
Effective Green, g (s)				14.8		14.8		19.0	45.2		19.0	45.2
Actuated g/C Ratio				0.33		0.33		0.42	1.00		0.42	1.00
Clearance Time (s)				6.8		6.8		4.6			4.6	
Vehicle Extension (s)				1.0		1.0		1.0			1.0	
Lane Grp Cap (vph)				1113		513		2116	1568		2116	1568
v/s Ratio Prot								0.33			0.25	
v/s Ratio Perm				0.27		0.25			c1.25			0.41
v/c Ratio				0.82		0.76		0.78	1.25		0.60	0.41
Uniform Delay, d1				14.0		13.6		11.3	22.6		10.1	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				4.5		5.6		1.8	119.9		0.3	0.8
Delay (s)				18.5		19.1		13.2	142.5		10.4	0.8
Level of Service				B		B		B	F		B	A
Approach Delay (s)		0.0			18.7			83.3			7.2	
Approach LOS		A			B			F			A	

Intersection Summary			
HCM 2000 Control Delay	49.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.68		
Actuated Cycle Length (s)	45.2	Sum of lost time (s)	11.4
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

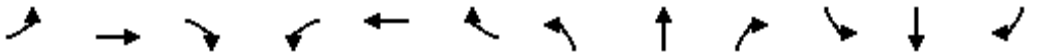


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	533	19	1013	0	0	589	0	3418	8	0	2010	157
Future Volume (vph)	533	19	1013	0	0	589	0	3418	8	0	2010	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0		4.0			4.0	4.0
Lane Util. Factor	0.91	0.86	0.91			0.88		0.86			0.91	1.00
Frt	1.00	0.89	0.85			0.85		1.00			1.00	0.85
Flt Protected	0.95	0.99	1.00			1.00		1.00			1.00	1.00
Satd. Flow (prot)	1595	2789	1427			2733		6343			5036	1568
Flt Permitted	0.95	0.99	1.00			1.00		1.00			1.00	1.00
Satd. Flow (perm)	1595	2789	1427			2733		6343			5036	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	533	19	1013	0	0	589	0	3418	8	0	2010	157
RTOR Reduction (vph)	0	13	28	0	0	46	0	0	0	0	0	44
Lane Group Flow (vph)	373	673	478	0	0	543	0	3426	0	0	2010	113
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Turn Type	Split	NA	Perm			Prot		NA			NA	custom
Protected Phases	4	4				1		2			6	
Permitted Phases			4									2
Actuated Green, G (s)	39.0	39.0	39.0			22.0		67.0			93.0	67.0
Effective Green, g (s)	39.0	39.0	39.0			22.0		67.0			93.0	67.0
Actuated g/C Ratio	0.28	0.28	0.28			0.16		0.48			0.66	0.48
Clearance Time (s)	4.0	4.0	4.0			4.0		4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	444	776	397			429		3035			3345	750
v/s Ratio Prot	0.23	0.24				c0.20		c0.54			0.40	
v/s Ratio Perm			c0.33									0.07
v/c Ratio	0.84	1.24dr	1.20			1.26		1.13			0.60	0.15
Uniform Delay, d1	47.6	48.0	50.5			59.0		36.5			13.1	20.5
Progression Factor	1.00	1.00	1.00			1.00		1.00			1.00	1.00
Incremental Delay, d2	13.4	10.1	113.3			136.7		62.8			0.3	0.1
Delay (s)	60.9	58.1	163.8			195.7		99.3			13.4	20.6
Level of Service	E	E	F			F		F			B	C
Approach Delay (s)		93.0			195.7			99.3			14.0	
Approach LOS		F			F			F			B	

Intersection Summary			
HCM 2000 Control Delay	81.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.2%	ICU Level of Service	F
Analysis Period (min)	15		

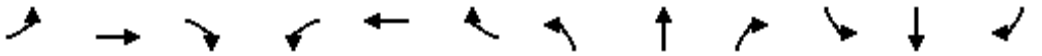
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	70	0	629	0	3368	691	0	1932	1141
Future Volume (vph)	0	0	0	70	0	629	0	3368	691	0	1932	1141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.5		3.5		4.8	4.0		5.1	4.0
Lane Util. Factor				0.97		0.88		0.91	1.00		0.91	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3303		2682		4988	1553		4988	1553
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3303		2682		4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	70	0	629	0	3368	691	0	1932	1141
RTOR Reduction (vph)	0	0	0	0	0	18	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	70	0	611	0	3368	691	0	1932	1141
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	4%	4%	4%	4%	4%	4%
Turn Type				Perm		Perm		NA	Free		NA	Free
Protected Phases								6			2	
Permitted Phases				8		8			Free			Free
Actuated Green, G (s)				22.5		22.5		69.2	100.0		68.9	100.0
Effective Green, g (s)				22.5		22.5		69.2	100.0		68.9	100.0
Actuated g/C Ratio				0.22		0.22		0.69	1.00		0.69	1.00
Clearance Time (s)				3.5		3.5		4.8			5.1	
Vehicle Extension (s)				1.0		1.0		1.0			1.0	
Lane Grp Cap (vph)				743		603		3451	1553		3436	1553
v/s Ratio Prot								c0.68			0.39	
v/s Ratio Perm				0.02		c0.23			0.44			0.73
v/c Ratio				0.09		1.01		0.98	0.44		0.56	0.73
Uniform Delay, d1				30.7		38.8		14.6	0.0		7.9	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				0.0		40.1		10.3	0.9		0.1	3.1
Delay (s)				30.7		78.8		24.9	0.9		8.0	3.1
Level of Service				C		E		C	A		A	A
Approach Delay (s)		0.0			74.0			20.8			6.2	
Approach LOS		A			E			C			A	

Intersection Summary			
HCM 2000 Control Delay	19.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.6
Intersection Capacity Utilization	94.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



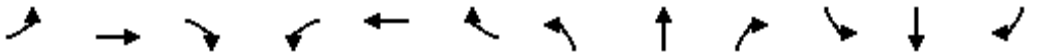
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1608	0	489	0	0	0	0	2451	255	0	1516	485
Future Volume (vph)	1608	0	489	0	0	0	0	2451	255	0	1516	485
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		3.5					4.8	4.0		5.1	4.0
Lane Util. Factor	0.94		0.88					0.86	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	4894		2733					6285	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	4894		2733					6285	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1608	0	489	0	0	0	0	2451	255	0	1516	485
RTOR Reduction (vph)	0	0	26	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	1608	0	463	0	0	0	0	2451	255	0	1516	485
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								6			2	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	19.7		19.7					24.6	52.6		24.3	52.6
Effective Green, g (s)	19.7		19.7					24.6	52.6		24.3	52.6
Actuated g/C Ratio	0.37		0.37					0.47	1.00		0.46	1.00
Clearance Time (s)	3.5		3.5					4.8			5.1	
Vehicle Extension (s)	1.0		1.0					1.0			1.0	
Lane Grp Cap (vph)	1832		1023					2939	1553		2304	1553
v/s Ratio Prot								c0.39			0.30	
v/s Ratio Perm	c0.33		0.17						0.16			0.31
v/c Ratio	0.88		0.45					0.83	0.16		0.66	0.31
Uniform Delay, d1	15.3		12.4					12.2	0.0		10.9	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	5.0		0.1					2.1	0.2		0.5	0.5
Delay (s)	20.3		12.5					14.3	0.2		11.5	0.5
Level of Service	C		B					B	A		B	A
Approach Delay (s)		18.5			0.0			13.0			8.8	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	52.6	Sum of lost time (s)	8.6
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



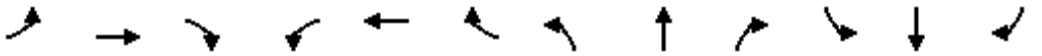
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	163	178	1242	458	238	2026
Future Volume (vph)	163	178	1242	458	238	2026
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.0	5.0	5.5	5.0
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3400	1568	4988	1553	3367	3471
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3400	1568	4988	1553	3367	3471
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	163	178	1242	458	238	2026
RTOR Reduction (vph)	0	161	0	252	0	0
Lane Group Flow (vph)	163	17	1242	206	238	2026
Heavy Vehicles (%)	3%	3%	4%	4%	4%	4%
Turn Type	Prot	Prot	NA	Perm	Prot	NA
Protected Phases	4	4	6		5	2
Permitted Phases				6		
Actuated Green, G (s)	4.9	4.9	22.9	22.9	7.2	35.6
Effective Green, g (s)	4.9	4.9	22.9	22.9	7.2	35.6
Actuated g/C Ratio	0.10	0.10	0.45	0.45	0.14	0.70
Clearance Time (s)	5.5	5.5	5.0	5.0	5.5	5.0
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lane Grp Cap (vph)	326	150	2239	697	475	2422
v/s Ratio Prot	c0.05	0.01	0.25		0.07	c0.58
v/s Ratio Perm				0.13		
v/c Ratio	0.50	0.11	0.55	0.30	0.50	0.84
Uniform Delay, d1	21.9	21.1	10.3	8.9	20.2	5.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.1	0.2	0.1	0.3	2.6
Delay (s)	22.3	21.2	10.5	9.0	20.5	8.1
Level of Service	C	C	B	A	C	A
Approach Delay (s)	21.7		10.1			9.4
Approach LOS	C		B			A

Intersection Summary			
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	51.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	69.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



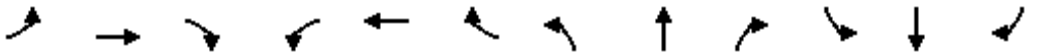
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	547	1011	9	2	722	6	7	15	2	5	21	1089
Future Volume (vph)	547	1011	9	2	722	6	7	15	2	5	21	1089
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.9	6.9	5.5	6.0			6.1			6.2	5.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00			0.99			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (prot)	1703	3406	1524	1719	3434			1798			1810	1553
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (perm)	1703	3406	1524	1719	3434			1798			1810	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	547	1011	9	2	722	6	7	15	2	5	21	1089
RTOR Reduction (vph)	0	0	2	0	0	0	0	2	0	0	0	33
Lane Group Flow (vph)	547	1011	7	2	728	0	0	22	0	0	26	1056
Heavy Vehicles (%)	6%	6%	6%	5%	5%	5%	3%	3%	3%	4%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	pm+ov
Protected Phases	1	6		5	2		8	8		4	4	1
Permitted Phases			6									4
Actuated Green, G (s)	71.0	104.9	104.9	0.6	35.4			1.7			3.6	74.6
Effective Green, g (s)	71.0	104.9	104.9	0.6	35.4			1.7			3.6	74.6
Actuated g/C Ratio	0.52	0.77	0.77	0.00	0.26			0.01			0.03	0.55
Clearance Time (s)	5.5	6.9	6.9	5.5	6.0			6.1			6.2	5.5
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0			1.0			1.0	1.0
Lane Grp Cap (vph)	892	2636	1179	7	897			22			48	855
v/s Ratio Prot	0.32	0.30		0.00	c0.21			c0.01			0.01	c0.65
v/s Ratio Perm			0.00									0.03
v/c Ratio	0.61	0.38	0.01	0.29	0.81			1.00			0.54	1.23
Uniform Delay, d1	22.6	4.9	3.5	67.2	46.9			66.9			65.1	30.5
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.9	0.0	0.0	8.0	5.4			192.2			6.5	115.8
Delay (s)	23.5	4.9	3.5	75.3	52.3			259.1			71.7	146.2
Level of Service	C	A	A	E	D			F			E	F
Approach Delay (s)		11.4			52.3			259.1			144.5	
Approach LOS		B			D			F			F	

Intersection Summary			
HCM 2000 Control Delay	65.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	135.5	Sum of lost time (s)	24.7
Intersection Capacity Utilization	105.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	401	39	205	721	236	3823	0	0	4167	61
Future Volume (vph)	0	0	401	39	205	721	236	3823	0	0	4167	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.6		6.2	6.2	4.6	5.0			5.3	5.3
Lane Util. Factor			1.00		1.00	0.88	0.97	0.91			0.86	1.00
Frt			0.86		1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected			1.00		0.99	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)			1596		1778	2682	3303	4893			6166	1524
Flt Permitted			1.00		0.99	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)			1596		1778	2682	3303	4893			6166	1524
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	401	39	205	721	236	3823	0	0	4167	61
RTOR Reduction (vph)	0	0	193	0	0	40	0	0	0	0	0	25
Lane Group Flow (vph)	0	0	208	0	244	681	236	3823	0	0	4167	36
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type			Over	Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases			1	4	4		1	6			2	
Permitted Phases						4						2
Actuated Green, G (s)			20.0		29.8	29.8	20.0	109.0			84.1	84.1
Effective Green, g (s)			20.0		29.8	29.8	20.0	109.0			84.1	84.1
Actuated g/C Ratio			0.13		0.20	0.20	0.13	0.73			0.56	0.56
Clearance Time (s)			4.6		6.2	6.2	4.6	5.0			5.3	5.3
Vehicle Extension (s)			3.0		3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)			212		353	532	440	3555			3457	854
v/s Ratio Prot			0.13		0.14		0.07	c0.78			c0.68	
v/s Ratio Perm						c0.25						0.02
v/c Ratio			0.98		0.69	1.28	0.54	1.08			1.21	0.04
Uniform Delay, d1			64.8		55.8	60.1	60.7	20.5			33.0	14.8
Progression Factor			1.00		1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2			55.3		5.7	139.9	1.3	40.0			95.4	0.0
Delay (s)			120.1		61.6	200.0	61.9	60.5			128.3	14.8
Level of Service			F		E	F	E	E			F	B
Approach Delay (s)		120.1			165.0			60.6			126.7	
Approach LOS		F			F			E			F	

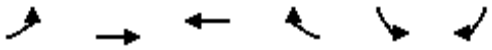
Intersection Summary			
HCM 2000 Control Delay	102.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.1
Intersection Capacity Utilization	111.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2738	0	151	0	0	0	0	1723	222	0	318	1981
Future Volume (vph)	2738	0	151	0	0	0	0	1723	222	0	318	1981
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0			4.0	4.0
Lane Util. Factor	0.94		0.88					0.91			0.91	1.00
Frt	1.00		0.85					0.98			1.00	0.85
Flt Protected	0.95		1.00					1.00			1.00	1.00
Satd. Flow (prot)	4942		2760					4950			5036	1568
Flt Permitted	0.95		1.00					1.00			1.00	1.00
Satd. Flow (perm)	4942		2760					4950			5036	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2738	0	151	0	0	0	0	1723	222	0	318	1981
RTOR Reduction (vph)	0	0	56	0	0	0	0	15	0	0	0	0
Lane Group Flow (vph)	2738	0	95	0	0	0	0	1930	0	0	318	1981
Turn Type	Prot		Perm					NA			NA	Free
Protected Phases	4							2			6	
Permitted Phases			4									Free
Actuated Green, G (s)	60.0		60.0					42.0			42.0	110.0
Effective Green, g (s)	60.0		60.0					42.0			42.0	110.0
Actuated g/C Ratio	0.55		0.55					0.38			0.38	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	2695		1505					1890			1922	1568
v/s Ratio Prot	0.55							0.39			0.06	
v/s Ratio Perm			0.03									c1.26
v/c Ratio	1.02		0.06					1.02			0.17	1.26
Uniform Delay, d1	25.0		11.8					34.0			22.4	55.0
Progression Factor	1.00		1.00					1.00			1.00	1.00
Incremental Delay, d2	21.4		0.0					26.2			0.0	123.8
Delay (s)	46.4		11.8					60.2			22.5	178.8
Level of Service	D		B					E			C	F
Approach Delay (s)		44.6			0.0			60.2			157.2	
Approach LOS		D			A			E			F	

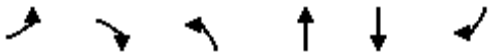
Intersection Summary			
HCM 2000 Control Delay	85.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	97.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	812	1439	1321	38	30	1099
Future Volume (vph)	812	1439	1321	38	30	1099
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	0.88
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3242	3343	3343	1495	3400	2760
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3242	3343	3343	1495	3400	2760
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	812	1439	1321	38	30	1099
RTOR Reduction (vph)	0	0	0	15	0	610
Lane Group Flow (vph)	812	1439	1321	23	30	489
Heavy Vehicles (%)	8%	8%	8%	8%	3%	3%
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	23.0	63.1	36.1	36.1	17.6	17.6
Effective Green, g (s)	23.0	63.1	36.1	36.1	17.6	17.6
Actuated g/C Ratio	0.26	0.71	0.41	0.41	0.20	0.20
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	840	2378	1360	608	674	547
v/s Ratio Prot	c0.25	0.43	c0.40		0.01	
v/s Ratio Perm				0.02		c0.18
v/c Ratio	0.97	0.61	0.97	0.04	0.04	0.89
Uniform Delay, d1	32.5	6.5	25.8	15.8	28.8	34.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	23.0	0.4	17.9	0.0	0.0	16.9
Delay (s)	55.4	6.9	43.7	15.9	28.8	51.5
Level of Service	E	A	D	B	C	D
Approach Delay (s)		24.4	42.9		50.9	
Approach LOS		C	D		D	

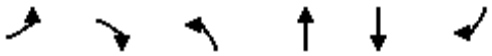
Intersection Summary			
HCM 2000 Control Delay	36.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	88.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	883	153	11	1388	1814	605
Future Volume (vph)	883	153	11	1388	1814	605
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3400	1568	1752	3505	3505	1568
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3400	1568	1752	3505	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	883	153	11	1388	1814	605
RTOR Reduction (vph)	0	8	0	0	0	108
Lane Group Flow (vph)	883	145	11	1388	1814	497
Turn Type	Prot	pm+ov	Prot	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4				6
Actuated Green, G (s)	24.0	28.0	4.0	58.0	50.0	74.0
Effective Green, g (s)	24.0	28.0	4.0	58.0	50.0	74.0
Actuated g/C Ratio	0.27	0.31	0.04	0.64	0.56	0.82
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	906	557	77	2258	1947	1358
v/s Ratio Prot	c0.26	0.01	0.01	c0.40	c0.52	0.10
v/s Ratio Perm		0.08				0.22
v/c Ratio	0.97	0.26	0.14	0.61	0.93	0.37
Uniform Delay, d1	32.7	23.2	41.4	9.4	18.4	2.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	23.7	0.2	0.9	0.5	8.7	0.2
Delay (s)	56.3	23.5	42.2	9.9	27.1	2.2
Level of Service	E	C	D	A	C	A
Approach Delay (s)	51.5			10.2	20.9	
Approach LOS	D			B	C	

Intersection Summary			
HCM 2000 Control Delay	24.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.0%	ICU Level of Service	E
Analysis Period (min)	15		

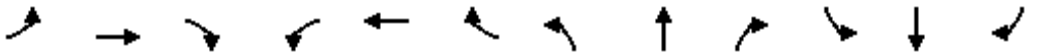
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	244	829	852	1167	1631	287
Future Volume (vph)	244	829	852	1167	1631	287
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.97	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1752	1568	3400	3505	3505	1568
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1752	1568	3400	3505	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	244	829	852	1167	1631	287
RTOR Reduction (vph)	0	281	0	0	0	143
Lane Group Flow (vph)	244	548	852	1167	1631	144
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	28.0	28.0	24.0	74.0	46.0	46.0
Effective Green, g (s)	28.0	28.0	24.0	74.0	46.0	46.0
Actuated g/C Ratio	0.25	0.25	0.22	0.67	0.42	0.42
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	445	399	741	2357	1465	655
v/s Ratio Prot	0.14		c0.25	0.33	c0.47	
v/s Ratio Perm		c0.35				0.09
v/c Ratio	0.55	1.37	1.15	0.50	1.11	0.22
Uniform Delay, d1	35.5	41.0	43.0	8.8	32.0	20.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	183.2	82.6	0.2	61.1	0.2
Delay (s)	36.9	224.2	125.6	9.0	93.1	20.7
Level of Service	D	F	F	A	F	C
Approach Delay (s)	181.6			58.2	82.2	
Approach LOS	F			E	F	

Intersection Summary			
HCM 2000 Control Delay	93.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	103.1%	ICU Level of Service	G
Analysis Period (min)	15		

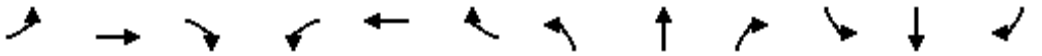
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	759	0	836	0	0	0	0	3544	627	0	1888	1108
Future Volume (vph)	759	0	836	0	0	0	0	3544	627	0	1888	1108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0					4.0	4.0		4.0	4.0
Lane Util. Factor	0.97		0.88					0.86	1.00		0.86	0.86
Frt	1.00		0.85					1.00	0.85		0.97	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3400		2760					6346	1568		4626	1348
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3400		2760					6346	1568		4626	1348
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	759	0	836	0	0	0	0	3544	627	0	1888	1108
RTOR Reduction (vph)	0	0	19	0	0	0	0	0	0	0	48	0
Lane Group Flow (vph)	759	0	817	0	0	0	0	3544	627	0	2272	676
Turn Type	Prot		Perm					NA	Free		NA	Free
Protected Phases	4							2			6	
Permitted Phases			4						Free			Free
Actuated Green, G (s)	20.0		20.0					42.0	70.0		42.0	70.0
Effective Green, g (s)	20.0		20.0					42.0	70.0		42.0	70.0
Actuated g/C Ratio	0.29		0.29					0.60	1.00		0.60	1.00
Clearance Time (s)	4.0		4.0					4.0			4.0	
Vehicle Extension (s)	3.0		3.0					3.0			3.0	
Lane Grp Cap (vph)	971		788					3807	1568		2775	1348
v/s Ratio Prot	0.22							c0.56			0.49	
v/s Ratio Perm			c0.30						0.40			0.50
v/c Ratio	0.78		1.04					0.93	0.40		0.82	0.50
Uniform Delay, d1	23.0		25.0					12.7	0.0		11.0	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	4.2		42.1					4.9	0.8		2.0	1.3
Delay (s)	27.1		67.1					17.6	0.8		13.0	1.3
Level of Service	C		E					B	A		B	A
Approach Delay (s)		48.1			0.0			15.0			10.4	
Approach LOS		D			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	342	0	1123	0	2690	1619	0	4218	386
Future Volume (vph)	0	0	0	342	0	1123	0	2690	1619	0	4218	386
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0		4.0		4.0	4.0		4.0	4.0
Lane Util. Factor				0.97		0.76		0.86	0.86		0.81	0.81
Frt				1.00		0.85		0.97	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3400		3575		4621	1348		5968	1270
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3400		3575		4621	1348		5968	1270
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	342	0	1123	0	2690	1619	0	4218	386
RTOR Reduction (vph)	0	0	0	0	0	6	0	26	0	0	1	0
Lane Group Flow (vph)	0	0	0	342	0	1117	0	3312	971	0	4256	347
Turn Type				Prot		Perm		NA	Free		NA	Free
Protected Phases				8				2			6	
Permitted Phases						8			Free			Free
Actuated Green, G (s)				39.0		39.0		93.0	140.0		93.0	140.0
Effective Green, g (s)				39.0		39.0		93.0	140.0		93.0	140.0
Actuated g/C Ratio				0.28		0.28		0.66	1.00		0.66	1.00
Clearance Time (s)				4.0		4.0		4.0			4.0	
Vehicle Extension (s)				3.0		3.0		3.0			3.0	
Lane Grp Cap (vph)				947		995		3069	1348		3964	1270
v/s Ratio Prot				0.10				c0.72			0.71	
v/s Ratio Perm						c0.31			0.72			0.27
v/c Ratio				0.36		1.12		1.08	0.72		1.07	0.27
Uniform Delay, d1				40.5		50.5		23.5	0.0		23.5	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				0.2		68.3		42.4	3.4		38.8	0.5
Delay (s)				40.7		118.8		65.9	3.4		62.3	0.5
Level of Service				D		F		E	A		E	A
Approach Delay (s)		0.0			100.6			51.8			57.7	
Approach LOS		A			F			D			E	

Intersection Summary			
HCM 2000 Control Delay	61.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	96.9%	ICU Level of Service	F
Analysis Period (min)	15		

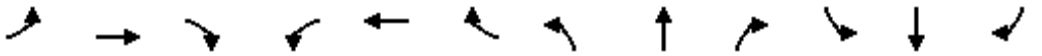
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	798	325	360	1152	521	442
Future Volume (vph)	798	325	360	1152	521	442
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3154	1411	1577	3154	3060	1411
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3154	1411	1577	3154	3060	1411
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	798	325	360	1152	521	442
RTOR Reduction (vph)	0	175	0	0	0	338
Lane Group Flow (vph)	798	150	360	1152	521	104
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	19.0	19.0	17.2	40.2	14.8	14.8
Effective Green, g (s)	19.0	19.0	17.2	40.2	14.8	14.8
Actuated g/C Ratio	0.30	0.30	0.27	0.64	0.23	0.23
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	951	425	430	2012	718	331
v/s Ratio Prot	c0.25		c0.23	0.37	c0.17	
v/s Ratio Perm		0.11				0.07
v/c Ratio	0.84	0.35	0.84	0.57	0.73	0.31
Uniform Delay, d1	20.6	17.2	21.6	6.5	22.2	19.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.6	0.5	13.3	0.4	3.7	0.5
Delay (s)	27.2	17.7	34.8	6.9	25.9	20.5
Level of Service	C	B	C	A	C	C
Approach Delay (s)	24.4			13.6	23.4	
Approach LOS	C			B	C	

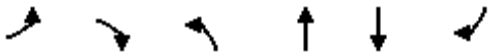
Intersection Summary			
HCM 2000 Control Delay	19.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	63.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	309	396	1	0	465	48	0	0	0	161	0	247
Future Volume (vph)	309	396	1	0	465	48	0	0	0	161	0	247
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0					4.0	4.0	4.0
Lane Util. Factor	1.00	0.95			0.95					0.95	0.95	1.00
Frt	1.00	1.00			0.99					1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00					0.95	0.95	1.00
Satd. Flow (prot)	1736	3470			3422					1665	1665	1568
Flt Permitted	0.95	1.00			1.00					0.95	0.95	1.00
Satd. Flow (perm)	1736	3470			3422					1665	1665	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	309	396	1	0	465	48	0	0	0	161	0	247
RTOR Reduction (vph)	0	0	0	0	9	0	0	0	0	0	0	210
Lane Group Flow (vph)	309	397	0	0	504	0	0	0	0	80	81	37
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA					Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases												6
Actuated Green, G (s)	15.2	33.0			13.8					8.9	8.9	8.9
Effective Green, g (s)	15.2	33.0			13.8					8.9	8.9	8.9
Actuated g/C Ratio	0.26	0.55			0.23					0.15	0.15	0.15
Clearance Time (s)	4.0	4.0			4.0					4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0					3.0	3.0	3.0
Lane Grp Cap (vph)	443	1924			793					249	249	234
v/s Ratio Prot	c0.18	0.11			c0.15					0.05	c0.05	
v/s Ratio Perm												0.02
v/c Ratio	0.70	0.21			0.64					0.32	0.33	0.16
Uniform Delay, d1	20.1	6.7			20.6					22.6	22.6	22.0
Progression Factor	1.00	1.00			1.00					1.00	1.00	1.00
Incremental Delay, d2	4.7	0.1			1.7					0.8	0.8	0.3
Delay (s)	24.8	6.7			22.3					23.4	23.4	22.4
Level of Service	C	A			C					C	C	C
Approach Delay (s)		14.6			22.3			0.0			22.8	
Approach LOS		B			C			A			C	

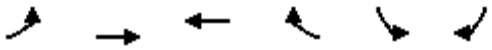
Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	59.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	354	47	22	1335	1718	455
Future Volume (vph)	354	47	22	1335	1718	455
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1568	1752	3505	3395	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1752	1568	1752	3505	3395	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	354	47	22	1335	1718	455
RTOR Reduction (vph)	0	37	0	0	25	0
Lane Group Flow (vph)	354	10	22	1335	2148	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	18.0	18.0	1.5	62.4	56.9	
Effective Green, g (s)	18.0	18.0	1.5	62.4	56.9	
Actuated g/C Ratio	0.20	0.20	0.02	0.71	0.64	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	356	319	29	2474	2185	
v/s Ratio Prot	c0.20		0.01	c0.38	c0.63	
v/s Ratio Perm		0.01				
v/c Ratio	0.99	0.03	0.76	0.54	0.98	
Uniform Delay, d1	35.1	28.2	43.3	6.2	15.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	45.9	0.0	71.7	0.2	15.4	
Delay (s)	81.1	28.2	115.0	6.4	30.6	
Level of Service	F	C	F	A	C	
Approach Delay (s)	74.9			8.2	30.6	
Approach LOS	E			A	C	

Intersection Summary			
HCM 2000 Control Delay	27.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	88.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	1200	801	1662	1901	0
Future Volume (vph)	2	1200	801	1662	1901	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	
Frt	1.00	1.00	1.00	0.85	1.00	
Flt Protected	0.95	1.00	1.00	1.00	0.95	
Satd. Flow (prot)	1752	3505	3505	1568	3400	
Flt Permitted	0.95	1.00	1.00	1.00	0.95	
Satd. Flow (perm)	1752	3505	3505	1568	3400	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2	1200	801	1662	1901	0
RTOR Reduction (vph)	0	0	0	72	0	0
Lane Group Flow (vph)	2	1200	801	1590	1901	0
Turn Type	Prot	NA	NA	custom	Prot	
Protected Phases	4	5	5	2	6	
Permitted Phases						
Actuated Green, G (s)	1.2	46.0	46.0	126.1	76.1	
Effective Green, g (s)	1.2	46.0	46.0	126.1	76.1	
Actuated g/C Ratio	0.01	0.34	0.34	0.93	0.56	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	15	1191	1191	1461	1912	
v/s Ratio Prot	c0.00	0.34	0.23	c1.01	0.56	
v/s Ratio Perm						
v/c Ratio	0.13	1.01	0.67	1.09	0.99	
Uniform Delay, d1	66.5	44.7	38.2	4.6	29.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.0	27.9	1.5	51.4	19.1	
Delay (s)	70.6	72.6	39.7	56.0	48.5	
Level of Service	E	E	D	E	D	
Approach Delay (s)		72.6	50.7		48.5	
Approach LOS		E	D		D	

Intersection Summary			
HCM 2000 Control Delay	54.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	135.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	112.9%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0
Turn Type			Prot		Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases						2
Actuated Green, G (s)						
Effective Green, g (s)						
Actuated g/C Ratio						
Clearance Time (s)						
Vehicle Extension (s)						
Lane Grp Cap (vph)						
v/s Ratio Prot						
v/s Ratio Perm						
v/c Ratio						
Uniform Delay, d1						
Progression Factor						
Incremental Delay, d2						
Delay (s)						
Level of Service						
Approach Delay (s)	0.0			0.0	0.0	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	0.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.00		
Actuated Cycle Length (s)	24.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		

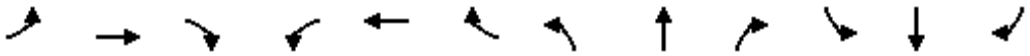
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	2336	0	1205	0
Future Volume (vph)	0	0	2336	0	1205	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	4.0	4.0	
Lane Util. Factor			0.95	0.95	0.97	
Frt			1.00	1.00	1.00	
Flt Protected			0.95	0.95	0.95	
Satd. Flow (prot)			1665	1665	3400	
Flt Permitted			0.95	0.95	0.95	
Satd. Flow (perm)			1665	1665	3400	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	2336	0	1205	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	1168	1168	1205	0
Turn Type			Split	NA	Prot	
Protected Phases			4	4	2	
Permitted Phases						
Actuated Green, G (s)			94.0	94.0	48.0	
Effective Green, g (s)			94.0	94.0	48.0	
Actuated g/C Ratio			0.63	0.63	0.32	
Clearance Time (s)			4.0	4.0	4.0	
Vehicle Extension (s)			3.0	3.0	3.0	
Lane Grp Cap (vph)			1043	1043	1088	
v/s Ratio Prot			c0.70	0.70	c0.35	
v/s Ratio Perm						
v/c Ratio			1.12	1.12	1.11	
Uniform Delay, d1			28.0	28.0	51.0	
Progression Factor			1.00	1.00	1.00	
Incremental Delay, d2			66.9	66.9	61.7	
Delay (s)			94.9	94.9	112.7	
Level of Service			F	F	F	
Approach Delay (s)	0.0			94.9	112.7	
Approach LOS	A			F	F	

Intersection Summary			
HCM 2000 Control Delay	101.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	194.3%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	812	0	0	0	0	1205	1921	0	2336	0
Future Volume (vph)	0	0	812	0	0	0	0	1205	1921	0	2336	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0					4.0	4.0		4.0	
Lane Util. Factor		0.95	0.95					0.91	0.91		0.95	
Frt		0.85	0.85					0.93	0.85		1.00	
Flt Protected		1.00	1.00					1.00	1.00		1.00	
Satd. Flow (prot)		1490	1490					3136	1427		3505	
Flt Permitted		1.00	1.00					1.00	1.00		1.00	
Satd. Flow (perm)		1490	1490					3136	1427		3505	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	812	0	0	0	0	1205	1921	0	2336	0
RTOR Reduction (vph)	0	32	0	0	0	0	0	89	286	0	0	0
Lane Group Flow (vph)	0	374	406	0	0	0	0	2057	694	0	2336	0
Turn Type		NA	Free					NA	Perm	Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases			Free						2			
Actuated Green, G (s)		30.0	130.0					92.0	92.0		92.0	
Effective Green, g (s)		30.0	130.0					92.0	92.0		92.0	
Actuated g/C Ratio		0.23	1.00					0.71	0.71		0.71	
Clearance Time (s)		4.0						4.0	4.0		4.0	
Vehicle Extension (s)		3.0						3.0	3.0		3.0	
Lane Grp Cap (vph)		343	1490					2219	1009		2480	
v/s Ratio Prot		c0.25						0.66			c0.67	
v/s Ratio Perm			0.27						0.49			
v/c Ratio		1.09	0.27					0.93	0.69		0.94	
Uniform Delay, d1		50.0	0.0					16.1	10.8		16.7	
Progression Factor		1.00	1.00					1.00	1.00		1.00	
Incremental Delay, d2		74.7	0.5					7.3	2.0		8.1	
Delay (s)		124.7	0.5					23.5	12.8		24.8	
Level of Service		F	A					C	B		C	
Approach Delay (s)		62.6			0.0			20.1			24.8	
Approach LOS		E			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	27.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	150.7%	ICU Level of Service	H
Analysis Period (min)	15		

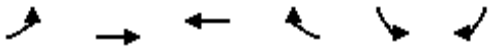
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	343	141	2901	237	99	3193
Future Volume (vph)	343	141	2901	237	99	3193
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.91
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3400	1568	5036	1568	3400	5036
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3400	1568	5036	1568	3400	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	343	141	2901	237	99	3193
RTOR Reduction (vph)	0	71	0	81	0	0
Lane Group Flow (vph)	343	70	2901	156	99	3193
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Actuated Green, G (s)	12.8	12.8	50.1	50.1	3.2	57.3
Effective Green, g (s)	12.8	12.8	50.1	50.1	3.2	57.3
Actuated g/C Ratio	0.16	0.16	0.64	0.64	0.04	0.73
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	557	256	3230	1005	139	3694
v/s Ratio Prot	c0.10		0.58		0.03	c0.63
v/s Ratio Perm		0.04		0.10		
v/c Ratio	0.62	0.27	0.90	0.16	0.71	0.86
Uniform Delay, d1	30.4	28.6	11.8	5.6	37.0	7.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.0	0.6	3.7	0.1	15.8	2.3
Delay (s)	32.4	29.2	15.6	5.6	52.8	9.9
Level of Service	C	C	B	A	D	A
Approach Delay (s)	31.4		14.8			11.2
Approach LOS	C		B			B

Intersection Summary			
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	78.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	319	1737	1340	99	75	249
Future Volume (vph)	319	1737	1340	99	75	249
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1752	3505	3505	1568	1752	1568
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1752	3505	3505	1568	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	319	1737	1340	99	75	249
RTOR Reduction (vph)	0	0	0	54	0	217
Lane Group Flow (vph)	319	1737	1340	45	75	32
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	15.3	49.5	30.2	30.2	8.5	8.5
Effective Green, g (s)	15.3	49.5	30.2	30.2	8.5	8.5
Actuated g/C Ratio	0.23	0.75	0.46	0.46	0.13	0.13
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	406	2628	1603	717	225	201
v/s Ratio Prot	c0.18	0.50	c0.38		c0.04	
v/s Ratio Perm				0.03		0.02
v/c Ratio	0.79	0.66	0.84	0.06	0.33	0.16
Uniform Delay, d1	23.8	4.1	15.7	10.0	26.2	25.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	9.6	0.6	4.0	0.0	0.9	0.4
Delay (s)	33.4	4.7	19.7	10.0	27.0	25.9
Level of Service	C	A	B	B	C	C
Approach Delay (s)		9.2	19.0		26.2	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	66.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		

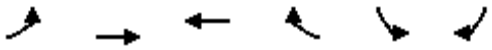
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1163	129	79	690	92	137
Future Volume (vph)	1163	129	79	690	92	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	0.97	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3505	1568	3400	3505	1752	1568
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3505	1568	3400	3505	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1163	129	79	690	92	137
RTOR Reduction (vph)	0	67	0	0	0	111
Lane Group Flow (vph)	1163	62	79	690	92	26
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	20.5	20.5	2.0	26.5	7.9	7.9
Effective Green, g (s)	20.5	20.5	2.0	26.5	7.9	7.9
Actuated g/C Ratio	0.48	0.48	0.05	0.63	0.19	0.19
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1694	758	160	2190	326	292
v/s Ratio Prot	c0.33		0.02	c0.20	c0.05	
v/s Ratio Perm		0.04				0.02
v/c Ratio	0.69	0.08	0.49	0.32	0.28	0.09
Uniform Delay, d1	8.5	5.9	19.7	3.7	14.8	14.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.2	0.0	2.4	0.1	0.5	0.1
Delay (s)	9.6	5.9	22.1	3.8	15.3	14.4
Level of Service	A	A	C	A	B	B
Approach Delay (s)	9.3			5.7	14.8	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	8.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	42.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		

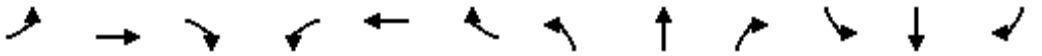
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	289	415	277	39	22	240
Future Volume (vph)	289	415	277	39	22	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	
Frt		1.00	0.98		0.88	
Flt Protected		0.98	1.00		1.00	
Satd. Flow (prot)		1808	1814		1610	
Flt Permitted		0.73	1.00		1.00	
Satd. Flow (perm)		1347	1814		1610	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	289	415	277	39	22	240
RTOR Reduction (vph)	0	0	7	0	200	0
Lane Group Flow (vph)	0	704	309	0	62	0
Turn Type	Perm	NA	NA		Prot	
Protected Phases		4	8		6	
Permitted Phases	4					
Actuated Green, G (s)		30.1	30.1		7.6	
Effective Green, g (s)		30.1	30.1		7.6	
Actuated g/C Ratio		0.66	0.66		0.17	
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		887	1194		267	
v/s Ratio Prot			0.17		c0.04	
v/s Ratio Perm		c0.52				
v/c Ratio		0.79	0.26		0.23	
Uniform Delay, d1		5.6	3.2		16.5	
Progression Factor		1.00	1.00		1.00	
Incremental Delay, d2		4.9	0.1		0.4	
Delay (s)		10.5	3.3		17.0	
Level of Service		B	A		B	
Approach Delay (s)		10.5	3.3		17.0	
Approach LOS		B	A		B	

Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	45.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.8%	ICU Level of Service	D
Analysis Period (min)	15		

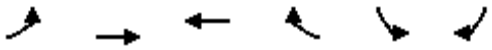
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	258	113	537	148	83	226	253	1647	85	98	1508	371
Future Volume (vph)	258	113	537	148	83	226	253	1647	85	98	1508	371
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1845	1568	3400	3505	1568	3400	3505	1568	3400	3505	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1752	1845	1568	3400	3505	1568	3400	3505	1568	3400	3505	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	258	113	537	148	83	226	253	1647	85	98	1508	371
RTOR Reduction (vph)	0	0	72	0	0	119	0	0	44	0	0	151
Lane Group Flow (vph)	258	113	465	148	83	107	253	1647	41	98	1508	220
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	16.0	27.0	27.0	5.0	16.0	16.0	8.0	48.0	48.0	4.0	44.0	44.0
Effective Green, g (s)	16.0	27.0	27.0	5.0	16.0	16.0	8.0	48.0	48.0	4.0	44.0	44.0
Actuated g/C Ratio	0.16	0.27	0.27	0.05	0.16	0.16	0.08	0.48	0.48	0.04	0.44	0.44
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	280	498	423	170	560	250	272	1682	752	136	1542	689
v/s Ratio Prot	c0.15	0.06		0.04	0.02		c0.07	c0.47		0.03	0.43	
v/s Ratio Perm			c0.30			0.07			0.03			0.14
v/c Ratio	0.92	0.23	1.10	0.87	0.15	0.43	0.93	0.98	0.05	0.72	0.98	0.32
Uniform Delay, d1	41.4	28.4	36.5	47.2	36.1	37.9	45.7	25.5	13.9	47.4	27.5	18.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	33.7	0.2	73.7	35.2	0.1	1.2	36.3	17.0	0.0	17.1	17.7	0.3
Delay (s)	75.1	28.6	110.2	82.4	36.3	39.0	82.0	42.5	13.9	64.5	45.2	18.5
Level of Service	E	C	F	F	D	D	F	D	B	E	D	B
Approach Delay (s)		90.1			52.6			46.3			41.2	
Approach LOS		F			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	52.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	89.2%	ICU Level of Service	E
Analysis Period (min)	15		

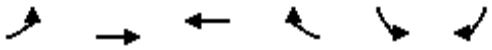
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	242	1215	829	120	250	397
Future Volume (vph)	242	1215	829	120	250	397
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3400	3505	3438		1752	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3400	3505	3438		1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	242	1215	829	120	250	397
RTOR Reduction (vph)	0	0	20	0	0	219
Lane Group Flow (vph)	242	1215	929	0	250	178
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	6.1	27.5	17.4		12.4	12.4
Effective Green, g (s)	6.1	27.5	17.4		12.4	12.4
Actuated g/C Ratio	0.13	0.57	0.36		0.26	0.26
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	432	2012	1248		453	405
v/s Ratio Prot	0.07	c0.35	c0.27		c0.14	
v/s Ratio Perm						0.11
v/c Ratio	0.56	0.60	0.74		0.55	0.44
Uniform Delay, d1	19.6	6.6	13.3		15.3	14.8
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.7	0.5	2.4		1.5	0.8
Delay (s)	21.3	7.2	15.8		16.8	15.6
Level of Service	C	A	B		B	B
Approach Delay (s)		9.5	15.8		16.1	
Approach LOS		A	B		B	

Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	47.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	146	1336	888	476	733	187
Future Volume (vph)	146	1336	888	476	733	187
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1752	3505	3505	1568	1752	1568
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1752	3505	3505	1568	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	146	1336	888	476	733	187
RTOR Reduction (vph)	0	0	0	349	0	106
Lane Group Flow (vph)	146	1336	888	127	733	81
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	6.0	26.0	16.0	16.0	26.0	26.0
Effective Green, g (s)	6.0	26.0	16.0	16.0	26.0	26.0
Actuated g/C Ratio	0.10	0.43	0.27	0.27	0.43	0.43
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	175	1518	934	418	759	679
v/s Ratio Prot	0.08	c0.38	0.25		c0.42	
v/s Ratio Perm				0.08		0.05
v/c Ratio	0.83	0.88	0.95	0.30	0.97	0.12
Uniform Delay, d1	26.5	15.6	21.6	17.6	16.6	10.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	27.5	6.3	18.6	0.4	24.3	0.1
Delay (s)	54.0	21.9	40.2	18.0	40.9	10.2
Level of Service	D	C	D	B	D	B
Approach Delay (s)		25.0	32.5		34.6	
Approach LOS		C	C		C	

Intersection Summary			
HCM 2000 Control Delay	30.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.2%	ICU Level of Service	E
Analysis Period (min)	15		

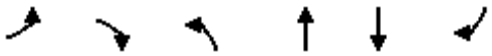
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2461	66	55	2431	33	27
Future Volume (vph)	2461	66	55	2431	33	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3491		1752	3505	1752	1568
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3491		1752	3505	1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2461	66	55	2431	33	27
RTOR Reduction (vph)	1	0	0	0	0	25
Lane Group Flow (vph)	2526	0	55	2431	33	2
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases						2
Actuated Green, G (s)	78.0		4.0	86.0	7.4	7.4
Effective Green, g (s)	78.0		4.0	86.0	7.4	7.4
Actuated g/C Ratio	0.77		0.04	0.85	0.07	0.07
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2685		69	2972	127	114
v/s Ratio Prot	c0.72		0.03	c0.69	c0.02	
v/s Ratio Perm						0.00
v/c Ratio	0.94		0.80	0.82	0.26	0.02
Uniform Delay, d1	9.8		48.3	3.8	44.4	43.6
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	7.5		45.5	1.9	1.1	0.1
Delay (s)	17.3		93.8	5.7	45.5	43.7
Level of Service	B		F	A	D	D
Approach Delay (s)	17.3			7.6	44.7	
Approach LOS	B			A	D	

Intersection Summary			
HCM 2000 Control Delay	12.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	101.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	15	81	87	1589	1708	136
Future Volume (vph)	15	81	87	1589	1708	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1568	1752	1845	3466	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1752	1568	1752	1845	3466	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	81	87	1589	1708	136
RTOR Reduction (vph)	0	77	0	0	3	0
Lane Group Flow (vph)	15	4	87	1589	1841	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	7.3	7.3	11.9	127.0	111.1	
Effective Green, g (s)	7.3	7.3	11.9	127.0	111.1	
Actuated g/C Ratio	0.05	0.05	0.08	0.89	0.78	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	89	80	146	1646	2706	
v/s Ratio Prot	c0.01		0.05	c0.86	0.53	
v/s Ratio Perm		0.00				
v/c Ratio	0.17	0.05	0.60	0.97	0.68	
Uniform Delay, d1	64.6	64.2	62.9	5.9	7.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.9	0.3	6.4	14.7	0.7	
Delay (s)	65.5	64.5	69.3	20.6	8.0	
Level of Service	E	E	E	C	A	
Approach Delay (s)	64.6			23.2	8.0	
Approach LOS	E			C	A	

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	142.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)	15		

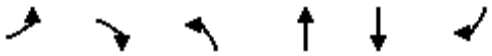
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	55	226	2147	29	520	2066
Future Volume (vph)	55	226	2147	29	520	2066
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.91		0.97	0.91
Frt	1.00	0.85	1.00		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	1568	5026		3400	5036
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	1568	5026		3400	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	55	226	2147	29	520	2066
RTOR Reduction (vph)	0	201	1	0	0	0
Lane Group Flow (vph)	55	25	2175	0	520	2066
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Actuated Green, G (s)	8.1	8.1	38.1		14.4	56.5
Effective Green, g (s)	8.1	8.1	38.1		14.4	56.5
Actuated g/C Ratio	0.11	0.11	0.52		0.20	0.78
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	195	174	2637		674	3919
v/s Ratio Prot	c0.03		c0.43		c0.15	0.41
v/s Ratio Perm		0.02				
v/c Ratio	0.28	0.14	0.82		0.77	0.53
Uniform Delay, d1	29.6	29.1	14.5		27.5	3.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.8	0.4	2.2		5.5	0.1
Delay (s)	30.4	29.5	16.7		33.0	3.2
Level of Service	C	C	B		C	A
Approach Delay (s)	29.7		16.7			9.2
Approach LOS	C		B			A

Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	72.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.3%	ICU Level of Service	C
Analysis Period (min)	15		

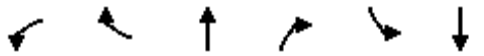
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	621	28	129	1003	1282	534
Future Volume (vph)	621	28	129	1003	1282	534
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	0.96	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1568	1752	3505	3350	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1752	1568	1752	3505	3350	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	621	28	129	1003	1282	534
RTOR Reduction (vph)	0	5	0	0	38	0
Lane Group Flow (vph)	621	23	129	1003	1778	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	40.0	40.0	8.0	72.0	60.0	
Effective Green, g (s)	40.0	40.0	8.0	72.0	60.0	
Actuated g/C Ratio	0.33	0.33	0.07	0.60	0.50	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	584	522	116	2103	1675	
v/s Ratio Prot	c0.35		c0.07	0.29	c0.53	
v/s Ratio Perm		0.01				
v/c Ratio	1.06	0.04	1.11	0.48	1.06	
Uniform Delay, d1	40.0	27.1	56.0	13.4	30.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	55.2	0.0	116.9	0.2	40.4	
Delay (s)	95.2	27.1	172.9	13.6	70.4	
Level of Service	F	C	F	B	E	
Approach Delay (s)	92.3			31.8	70.4	
Approach LOS	F			C	E	

Intersection Summary			
HCM 2000 Control Delay	62.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	104.1%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	86	1729	47	168	2820
Future Volume (vph)	0	86	1729	47	168	2820
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	0.91		1.00	0.91
Frt		0.85	1.00		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		1568	5016		1752	5036
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		1568	5016		1752	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	86	1729	47	168	2820
RTOR Reduction (vph)	0	80	4	0	0	0
Lane Group Flow (vph)	0	6	1772	0	168	2820
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		6		5	2
Permitted Phases		8				
Actuated Green, G (s)		3.3	28.1		7.9	40.0
Effective Green, g (s)		3.3	28.1		7.9	40.0
Actuated g/C Ratio		0.06	0.55		0.15	0.78
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		100	2747		269	3926
v/s Ratio Prot			0.35		0.10	c0.56
v/s Ratio Perm		c0.00				
v/c Ratio		0.06	0.65		0.62	0.72
Uniform Delay, d1		22.5	8.1		20.3	2.8
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.2	0.5		4.5	0.6
Delay (s)		22.8	8.6		24.8	3.5
Level of Service		C	A		C	A
Approach Delay (s)	22.8		8.6			4.7
Approach LOS	C		A			A

Intersection Summary			
HCM 2000 Control Delay	6.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	51.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	87	0	1687	55	40	2856
Future Volume (vph)	87	0	1687	55	40	2856
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0	4.0
Lane Util. Factor	1.00		0.91		1.00	0.91
Frt	1.00		1.00		1.00	1.00
Flt Protected	0.95		1.00		0.95	1.00
Satd. Flow (prot)	1752		5012		1752	5036
Flt Permitted	0.95		1.00		0.95	1.00
Satd. Flow (perm)	1752		5012		1752	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	87	0	1687	55	40	2856
RTOR Reduction (vph)	0	0	3	0	0	0
Lane Group Flow (vph)	87	0	1739	0	40	2856
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8				
Actuated Green, G (s)	5.6		41.4		1.7	47.1
Effective Green, g (s)	5.6		41.4		1.7	47.1
Actuated g/C Ratio	0.09		0.68		0.03	0.78
Clearance Time (s)	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	161		3418		49	3907
v/s Ratio Prot	c0.05		0.35		0.02	c0.57
v/s Ratio Perm						
v/c Ratio	0.54		0.51		0.82	0.73
Uniform Delay, d1	26.3		4.7		29.3	3.5
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	3.7		0.1		64.0	0.7
Delay (s)	30.0		4.8		93.4	4.2
Level of Service	C		A		F	A
Approach Delay (s)	30.0		4.8			5.5
Approach LOS	C		A			A

Intersection Summary			
HCM 2000 Control Delay	5.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	60.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.7%	ICU Level of Service	C
Analysis Period (min)	15		

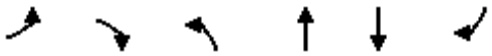
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	412	668	1143	343	461	2720
Future Volume (vph)	412	668	1143	343	461	2720
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.91		1.00	0.91
Frt	1.00	0.85	0.97		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	1568	4862		1752	5036
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	1568	4862		1752	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	412	668	1143	343	461	2720
RTOR Reduction (vph)	0	334	77	0	0	0
Lane Group Flow (vph)	412	334	1409	0	461	2720
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		3				
Actuated Green, G (s)	17.0	17.0	22.0		19.0	45.0
Effective Green, g (s)	17.0	17.0	22.0		19.0	45.0
Actuated g/C Ratio	0.24	0.24	0.31		0.27	0.64
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	425	380	1528		475	3237
v/s Ratio Prot	c0.24		0.29		c0.26	c0.54
v/s Ratio Perm		0.21				
v/c Ratio	0.97	0.88	0.92		0.97	0.84
Uniform Delay, d1	26.2	25.5	23.2		25.2	9.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	35.3	20.0	9.5		33.6	2.1
Delay (s)	61.5	45.5	32.7		58.8	11.8
Level of Service	E	D	C		E	B
Approach Delay (s)	51.6		32.7			18.6
Approach LOS	D		C			B

Intersection Summary			
HCM 2000 Control Delay	28.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.1%	ICU Level of Service	E
Analysis Period (min)	15		

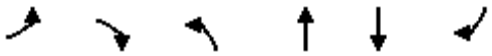
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	106	118	134	1195	2752	140
Future Volume (vph)	106	118	134	1195	2752	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1568	1752	5036	4999	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1752	1568	1752	5036	4999	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	106	118	134	1195	2752	140
RTOR Reduction (vph)	0	104	0	0	6	0
Lane Group Flow (vph)	106	14	134	1195	2886	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	10.6	10.6	8.0	69.4	57.4	
Effective Green, g (s)	10.6	10.6	8.0	69.4	57.4	
Actuated g/C Ratio	0.12	0.12	0.09	0.79	0.65	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	211	188	159	3971	3260	
v/s Ratio Prot	c0.06		c0.08	0.24	c0.58	
v/s Ratio Perm		0.01				
v/c Ratio	0.50	0.08	0.84	0.30	0.89	
Uniform Delay, d1	36.2	34.4	39.4	2.6	12.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.9	0.2	31.3	0.0	3.2	
Delay (s)	38.1	34.5	70.7	2.6	15.8	
Level of Service	D	C	E	A	B	
Approach Delay (s)	36.2			9.5	15.8	
Approach LOS	D			A	B	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.6%	ICU Level of Service	D
Analysis Period (min)	15		

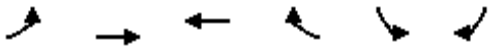
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	295	471	252	1237	1553	161
Future Volume (vph)	295	471	252	1237	1553	161
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1568	1752	3505	3455	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1752	1568	1752	3505	3455	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	295	471	252	1237	1553	161
RTOR Reduction (vph)	0	215	0	0	9	0
Lane Group Flow (vph)	295	256	252	1237	1705	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	16.0	16.0	14.0	65.9	47.9	
Effective Green, g (s)	16.0	16.0	14.0	65.9	47.9	
Actuated g/C Ratio	0.18	0.18	0.16	0.73	0.53	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	311	279	272	2569	1840	
v/s Ratio Prot	c0.17		c0.14	0.35	c0.49	
v/s Ratio Perm		0.16				
v/c Ratio	0.95	0.92	0.93	0.48	0.93	
Uniform Delay, d1	36.5	36.3	37.4	5.0	19.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	37.1	32.5	35.2	0.1	8.6	
Delay (s)	73.6	68.7	72.7	5.1	27.9	
Level of Service	E	E	E	A	C	
Approach Delay (s)	70.6			16.5	27.9	
Approach LOS	E			B	C	

Intersection Summary			
HCM 2000 Control Delay	31.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		

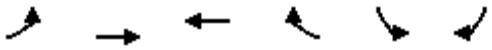
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	819	2149	1723	71	132	772
Future Volume (vph)	819	2149	1723	71	132	772
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	0.95	0.91		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3400	3505	5006		1752	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3400	3505	5006		1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	819	2149	1723	71	132	772
RTOR Reduction (vph)	0	0	5	0	0	326
Lane Group Flow (vph)	819	2149	1789	0	132	446
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	22.0	58.0	32.0		24.0	24.0
Effective Green, g (s)	22.0	58.0	32.0		24.0	24.0
Actuated g/C Ratio	0.24	0.64	0.36		0.27	0.27
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	831	2258	1779		467	418
v/s Ratio Prot	0.24	c0.61	0.36		0.08	
v/s Ratio Perm						c0.28
v/c Ratio	0.99	0.95	1.01		0.28	1.07
Uniform Delay, d1	33.8	14.7	29.0		26.2	33.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	27.4	9.9	22.7		0.3	62.7
Delay (s)	61.3	24.6	51.7		26.5	95.7
Level of Service	E	C	D		C	F
Approach Delay (s)		34.7	51.7		85.6	
Approach LOS		C	D		F	

Intersection Summary			
HCM 2000 Control Delay	48.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.3%	ICU Level of Service	E
Analysis Period (min)	15		

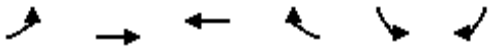
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	294	1988	1299	76	260	216
Future Volume (vph)	294	1988	1299	76	260	216
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3400	3505	3505	1568	3400	1568
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3400	3505	3505	1568	3400	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	294	1988	1299	76	260	216
RTOR Reduction (vph)	0	0	0	40	0	178
Lane Group Flow (vph)	294	1988	1299	36	260	38
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	7.0	36.7	25.7	25.7	9.6	9.6
Effective Green, g (s)	7.0	36.7	25.7	25.7	9.6	9.6
Actuated g/C Ratio	0.13	0.68	0.47	0.47	0.18	0.18
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	438	2368	1658	742	601	277
v/s Ratio Prot	0.09	c0.57	0.37		c0.08	
v/s Ratio Perm				0.02		0.02
v/c Ratio	0.67	0.84	0.78	0.05	0.43	0.14
Uniform Delay, d1	22.6	6.6	12.0	7.7	19.9	18.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.0	2.8	2.5	0.0	0.5	0.2
Delay (s)	26.6	9.4	14.5	7.7	20.4	19.1
Level of Service	C	A	B	A	C	B
Approach Delay (s)		11.6	14.1		19.8	
Approach LOS		B	B		B	

Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	54.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	120	2130	1284	2	3	118
Future Volume (vph)	120	2130	1284	2	3	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3504		1752	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3504		1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	120	2130	1284	2	3	118
RTOR Reduction (vph)	0	0	0	0	0	104
Lane Group Flow (vph)	120	2130	1286	0	3	14
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	5.6	42.8	33.2		6.6	6.6
Effective Green, g (s)	5.6	42.8	33.2		6.6	6.6
Actuated g/C Ratio	0.10	0.75	0.58		0.11	0.11
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	170	2613	2026		201	180
v/s Ratio Prot	0.07	c0.61	0.37		0.00	
v/s Ratio Perm						c0.01
v/c Ratio	0.71	0.82	0.63		0.01	0.08
Uniform Delay, d1	25.1	4.7	8.1		22.5	22.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	12.5	2.1	0.7		0.0	0.2
Delay (s)	37.6	6.8	8.7		22.5	22.9
Level of Service	D	A	A		C	C
Approach Delay (s)		8.4	8.7		22.8	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	9.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	57.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1281	172	418	919	165	286
Future Volume (vph)	1281	172	418	919	165	286
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3505	1568	3400	3505	3400	1568
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3505	1568	3400	3505	3400	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1281	172	418	919	165	286
RTOR Reduction (vph)	0	95	0	0	0	240
Lane Group Flow (vph)	1281	77	418	919	165	46
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	23.7	23.7	9.0	36.7	8.5	8.5
Effective Green, g (s)	23.7	23.7	9.0	36.7	8.5	8.5
Actuated g/C Ratio	0.45	0.45	0.17	0.69	0.16	0.16
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1561	698	575	2417	543	250
v/s Ratio Prot	c0.37		c0.12	0.26	c0.05	
v/s Ratio Perm		0.05				0.03
v/c Ratio	0.82	0.11	0.73	0.38	0.30	0.18
Uniform Delay, d1	12.9	8.6	20.9	3.5	19.7	19.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.6	0.1	4.6	0.1	0.3	0.4
Delay (s)	16.5	8.7	25.5	3.6	20.1	19.7
Level of Service	B	A	C	A	C	B
Approach Delay (s)	15.6			10.4	19.8	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	53.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.0%	ICU Level of Service	B
Analysis Period (min)	15		

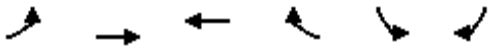
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1567	0	133	1337	0	206
Future Volume (vph)	1567	0	133	1337	0	206
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0		4.0
Lane Util. Factor	0.95		1.00	0.95		1.00
Frt	1.00		1.00	1.00		0.85
Flt Protected	1.00		0.95	1.00		1.00
Satd. Flow (prot)	3505		1752	3505		1568
Flt Permitted	1.00		0.12	1.00		1.00
Satd. Flow (perm)	3505		225	3505		1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1567	0	133	1337	0	206
RTOR Reduction (vph)	0	0	0	0	0	53
Lane Group Flow (vph)	1567	0	133	1337	0	153
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	53.0		53.0	53.0		12.1
Effective Green, g (s)	53.0		53.0	53.0		12.1
Actuated g/C Ratio	0.73		0.73	0.73		0.17
Clearance Time (s)	4.0		4.0	4.0		4.0
Vehicle Extension (s)	3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	2541		163	2541		259
v/s Ratio Prot	0.45			0.38		
v/s Ratio Perm			c0.59			c0.10
v/c Ratio	0.62		0.82	0.53		0.59
Uniform Delay, d1	5.0		6.8	4.5		28.2
Progression Factor	1.00		1.00	1.00		1.00
Incremental Delay, d2	0.5		25.9	0.2		3.6
Delay (s)	5.4		32.7	4.7		31.8
Level of Service	A		C	A		C
Approach Delay (s)	5.4			7.2	31.8	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	7.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	73.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		

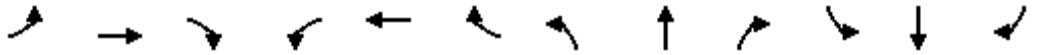
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	197	1909	1123	93	275	174
Future Volume (vph)	197	1909	1123	93	275	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3465		1752	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3465		1752	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	197	1909	1123	93	275	174
RTOR Reduction (vph)	0	0	7	0	0	137
Lane Group Flow (vph)	197	1909	1209	0	275	37
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	10.3	61.5	47.2		16.5	16.5
Effective Green, g (s)	10.3	61.5	47.2		16.5	16.5
Actuated g/C Ratio	0.12	0.72	0.55		0.19	0.19
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	209	2506	1901		336	300
v/s Ratio Prot	c0.11	c0.54	0.35		c0.16	
v/s Ratio Perm						0.02
v/c Ratio	0.94	0.76	0.64		0.82	0.12
Uniform Delay, d1	37.6	7.7	13.4		33.3	28.8
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	46.0	1.4	0.7		14.3	0.2
Delay (s)	83.5	9.1	14.1		47.6	28.9
Level of Service	F	A	B		D	C
Approach Delay (s)		16.0	14.1		40.4	
Approach LOS		B	B		D	

Intersection Summary			
HCM 2000 Control Delay	18.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	86.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	670	242	219	721	518	243	895	182	775	1677	99
Future Volume (veh/h)	81	670	242	219	721	518	243	895	182	775	1677	99
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1827	1827	1827	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	81	670	242	219	721	518	243	895	182	775	1677	99
Adj No. of Lanes	1	2	0	1	1	1	1	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	4	4	4	4	4	4
Cap, veh/h	106	685	247	224	621	527	224	773	156	522	1781	555
Arrive On Green	0.06	0.27	0.27	0.13	0.34	0.34	0.13	0.19	0.19	0.30	0.36	0.36
Sat Flow, veh/h	1757	2525	912	1740	1827	1553	1740	4161	842	1740	4988	1553
Grp Volume(v), veh/h	81	465	447	219	721	518	243	714	363	775	1677	99
Grp Sat Flow(s),veh/h/ln	1757	1752	1684	1740	1827	1553	1740	1663	1678	1740	1663	1553
Q Serve(g_s), s	6.4	36.8	36.9	17.6	47.6	21.2	18.0	26.0	26.0	42.0	45.6	6.1
Cycle Q Clear(g_c), s	6.4	36.8	36.9	17.6	47.6	21.2	18.0	26.0	26.0	42.0	45.6	6.1
Prop In Lane	1.00		0.54	1.00		1.00	1.00		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	106	476	457	224	621	527	224	618	312	522	1781	555
V/C Ratio(X)	0.76	0.98	0.98	0.98	1.16	0.98	1.09	1.16	1.16	1.48	0.94	0.18
Avail Cap(c_a), veh/h	201	476	457	224	621	527	224	618	312	522	1781	555
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.8	50.6	50.6	60.8	46.2	9.7	61.0	57.0	57.0	49.0	43.6	30.9
Incr Delay (d2), s/veh	10.8	35.4	36.3	54.0	89.7	34.5	85.1	87.9	102.9	228.2	10.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	22.5	21.7	11.8	39.4	14.0	13.9	19.5	20.9	53.2	22.7	2.7
LnGrp Delay(d),s/veh	75.6	85.9	86.8	114.8	136.0	44.1	146.1	144.9	159.9	277.2	54.1	31.1
LnGrp LOS	E	F	F	F	F	D	F	F	F	F	D	C
Approach Vol, veh/h		993			1458			1320			2551	
Approach Delay, s/veh		85.5			100.1			149.2			121.0	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	46.0	30.0	22.0	42.0	22.0	54.0	12.4	51.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	42.0	26.0	18.0	38.0	18.0	50.0	16.0	40.0
Max Q Clear Time (g_c+I1), s	44.0	28.0	19.6	38.9	20.0	47.6	8.4	49.6
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	2.2	0.1	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		116.5
HCM 2010 LOS		F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	609	107	168	850	217	100	829	25	519	1226	455
Future Volume (veh/h)	260	609	107	168	850	217	100	829	25	519	1226	455
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	260	609	107	168	850	217	100	829	25	519	1226	455
Adj No. of Lanes	1	2	0	1	2	1	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	254	850	149	202	896	401	150	916	28	525	1310	586
Arrive On Green	0.14	0.29	0.29	0.12	0.26	0.26	0.04	0.27	0.27	0.16	0.38	0.38
Sat Flow, veh/h	1757	2982	523	1757	3505	1568	3375	3440	104	3375	3471	1553
Grp Volume(v), veh/h	260	357	359	168	850	217	100	418	436	519	1226	455
Grp Sat Flow(s),veh/h/ln	1757	1752	1752	1757	1752	1568	1688	1736	1809	1688	1736	1553
Q Serve(g_s), s	13.0	16.5	16.5	8.4	21.4	10.8	2.6	20.9	21.0	13.8	30.6	23.2
Cycle Q Clear(g_c), s	13.0	16.5	16.5	8.4	21.4	10.8	2.6	20.9	21.0	13.8	30.6	23.2
Prop In Lane	1.00		0.30	1.00		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	254	500	500	202	896	401	150	462	481	525	1310	586
V/C Ratio(X)	1.02	0.72	0.72	0.83	0.95	0.54	0.67	0.91	0.91	0.99	0.94	0.78
Avail Cap(c_a), veh/h	254	500	500	254	896	401	150	463	483	525	1312	587
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.5	28.9	28.9	38.9	32.9	28.9	42.3	31.9	31.9	37.9	27.0	24.7
Incr Delay (d2), s/veh	62.8	4.8	4.9	16.7	18.8	1.5	10.6	21.1	20.5	36.0	12.5	6.5
Initial Q Delay(d3),s/veh	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.7	8.6	8.7	5.0	12.7	4.8	1.4	12.7	13.1	9.0	16.9	10.9
LnGrp Delay(d),s/veh	101.4	33.7	33.8	55.7	51.7	30.4	53.0	53.0	52.4	73.9	39.5	31.1
LnGrp LOS	F	C	C	E	D	C	D	D	D	E	D	C
Approach Vol, veh/h		976			1235			954			2200	
Approach Delay, s/veh		51.8			48.5			52.7			45.9	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	27.9	14.4	29.6	8.0	37.9	17.0	27.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	14.0	24.0	13.0	23.0	4.0	34.0	13.0	23.0
Max Q Clear Time (g_c+I1), s	15.8	23.0	10.4	18.5	4.6	32.6	15.0	23.4
Green Ext Time (p_c), s	0.0	1.0	0.1	3.5	0.0	1.3	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	48.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	1607	108	204	1290	132	61	704	237	67	305	3
Future Volume (veh/h)	22	1607	108	204	1290	132	61	704	237	67	305	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1900	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	22	1607	108	204	1290	132	61	704	237	67	305	3
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	32	1551	694	209	1745	178	78	701	314	78	712	7
Arrive On Green	0.02	0.46	0.46	0.12	0.56	0.56	0.04	0.20	0.20	0.04	0.20	0.20
Sat Flow, veh/h	1707	3406	1524	1707	3121	318	1757	3505	1568	1757	3556	35
Grp Volume(v), veh/h	22	1607	108	204	702	720	61	704	237	67	150	158
Grp Sat Flow(s),veh/h/ln	1707	1703	1524	1707	1703	1736	1757	1752	1568	1757	1752	1838
Q Serve(g_s), s	1.2	41.0	3.7	10.7	27.8	28.1	3.1	18.0	12.8	3.4	6.7	6.8
Cycle Q Clear(g_c), s	1.2	41.0	3.7	10.7	27.8	28.1	3.1	18.0	12.8	3.4	6.7	6.8
Prop In Lane	1.00		1.00	1.00		0.18	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	32	1551	694	209	952	971	78	701	314	78	351	368
V/C Ratio(X)	0.69	1.04	0.16	0.98	0.74	0.74	0.78	1.00	0.76	0.86	0.43	0.43
Avail Cap(c_a), veh/h	76	1551	694	209	952	971	117	701	314	78	351	368
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.9	24.5	14.4	39.4	14.9	15.0	42.6	36.0	33.9	42.7	31.5	31.5
Incr Delay (d2), s/veh	22.7	32.7	0.1	55.7	3.0	3.1	17.6	35.1	10.0	57.2	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	26.2	1.6	8.3	13.7	14.2	1.9	12.1	6.4	2.9	3.3	3.5
LnGrp Delay(d),s/veh	66.6	57.2	14.5	95.1	17.9	18.1	60.1	71.1	44.0	99.9	32.3	32.3
LnGrp LOS	E	F	B	F	B	B	E	F	D	F	C	C
Approach Vol, veh/h		1737			1626			1002			375	
Approach Delay, s/veh		54.6			27.7			64.0			44.4	
Approach LOS		D			C			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	22.0	15.0	45.0	8.0	22.0	5.7	54.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	18.0	11.0	41.0	6.0	16.0	4.0	48.0
Max Q Clear Time (g_c+I1), s	5.4	20.0	12.7	43.0	5.1	8.8	3.2	30.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	4.1	0.0	16.5

Intersection Summary	
HCM 2010 Ctrl Delay	46.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	753	526	76	733	126	101	703	210	84	512	75
Future Volume (veh/h)	38	753	526	76	733	126	101	703	210	84	512	75
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	38	753	526	76	733	126	101	703	210	84	512	75
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	56	1075	481	96	985	169	129	1016	454	106	971	434
Arrive On Green	0.03	0.31	0.31	0.05	0.33	0.33	0.07	0.29	0.29	0.06	0.28	0.28
Sat Flow, veh/h	1757	3505	1568	1757	2992	514	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	38	753	526	76	429	430	101	703	210	84	512	75
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1754	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	1.2	10.5	17.0	2.4	12.1	12.1	3.1	9.9	6.1	2.6	6.9	2.0
Cycle Q Clear(g_c), s	1.2	10.5	17.0	2.4	12.1	12.1	3.1	9.9	6.1	2.6	6.9	2.0
Prop In Lane	1.00		1.00	1.00		0.29	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	56	1075	481	96	577	577	129	1016	454	106	971	434
V/C Ratio(X)	0.68	0.70	1.09	0.80	0.74	0.74	0.78	0.69	0.46	0.79	0.53	0.17
Avail Cap(c_a), veh/h	127	1075	481	127	577	577	190	1138	509	158	1075	481
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	17.0	19.2	25.9	16.5	16.5	25.3	17.5	16.1	25.7	17.0	15.2
Incr Delay (d2), s/veh	13.3	2.0	68.9	22.0	5.2	5.2	12.0	1.6	0.7	14.6	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	5.3	16.5	1.7	6.6	6.6	1.9	5.0	2.7	1.7	3.3	0.9
LnGrp Delay(d),s/veh	39.8	19.0	88.1	47.9	21.7	21.7	37.2	19.1	16.9	40.3	17.4	15.4
LnGrp LOS	D	B	F	D	C	C	D	B	B	D	B	B
Approach Vol, veh/h		1317			935			1014			671	
Approach Delay, s/veh		47.2			23.9			20.4			20.0	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.4	20.1	7.0	21.0	8.1	19.4	5.8	22.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	18.0	4.0	17.0	6.0	17.0	4.0	17.0
Max Q Clear Time (g_c+I1), s	4.6	11.9	4.4	19.0	5.1	8.9	3.2	14.1
Green Ext Time (p_c), s	0.0	4.2	0.0	0.0	0.0	5.3	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	30.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	775	81	195	882	174	86	287	146	229	975	46
Future Volume (veh/h)	99	775	81	195	882	174	86	287	146	229	975	46
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	99	775	81	195	882	174	86	287	146	229	975	46
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	126	864	387	230	1071	479	102	857	383	255	1163	520
Arrive On Green	0.07	0.25	0.25	0.13	0.31	0.31	0.06	0.24	0.24	0.15	0.33	0.33
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	99	775	81	195	882	174	86	287	146	229	975	46
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1568	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	3.8	14.7	2.8	7.5	16.1	6.0	3.3	4.6	5.3	8.8	17.7	1.4
Cycle Q Clear(g_c), s	3.8	14.7	2.8	7.5	16.1	6.0	3.3	4.6	5.3	8.8	17.7	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	126	864	387	230	1071	479	102	857	383	255	1163	520
V/C Ratio(X)	0.79	0.90	0.21	0.85	0.82	0.36	0.84	0.33	0.38	0.90	0.84	0.09
Avail Cap(c_a), veh/h	128	867	388	230	1071	479	102	917	410	255	1223	547
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.4	25.1	20.6	29.2	22.2	18.6	32.1	21.4	21.6	28.9	21.3	15.8
Incr Delay (d2), s/veh	26.5	12.0	0.3	24.5	5.3	0.5	43.6	0.2	0.6	30.7	5.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	8.5	1.2	5.2	8.5	2.6	2.8	2.3	2.4	6.4	9.4	0.6
LnGrp Delay(d),s/veh	57.9	37.1	20.8	53.7	27.5	19.1	75.7	21.6	22.3	59.6	26.4	15.9
LnGrp LOS	E	D	C	D	C	B	E	C	C	E	C	B
Approach Vol, veh/h		955			1251			519			1250	
Approach Delay, s/veh		37.9			30.4			30.7			32.1	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	20.8	13.0	21.0	8.0	26.8	8.9	25.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	18.0	9.0	17.0	4.0	24.0	5.0	21.0
Max Q Clear Time (g_c+I1), s	10.8	7.3	9.5	16.7	5.3	19.7	5.8	18.1
Green Ext Time (p_c), s	0.0	6.5	0.0	0.2	0.0	3.1	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	32.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	253	469	138	509	487	776	125	3141	276	687	3065	408
Future Volume (veh/h)	253	469	138	509	487	776	125	3141	276	687	3065	408
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	253	469	138	509	487	776	125	3141	276	687	3065	408
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	170	869	389	260	962	602	101	2147	669	370	2545	792
Arrive On Green	0.05	0.25	0.25	0.08	0.27	0.27	0.03	0.43	0.43	0.11	0.51	0.51
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	253	469	138	509	487	776	125	3141	276	687	3065	408
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	7.5	17.5	10.9	11.5	17.6	41.3	4.5	64.8	18.5	16.5	76.8	26.3
Cycle Q Clear(g_c), s	7.5	17.5	10.9	11.5	17.6	41.3	4.5	64.8	18.5	16.5	76.8	26.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	170	869	389	260	962	602	101	2147	669	370	2545	792
V/C Ratio(X)	1.49	0.54	0.36	1.95	0.51	1.29	1.24	1.46	0.41	1.86	1.20	0.51
Avail Cap(c_a), veh/h	170	869	389	260	962	602	101	2147	669	370	2545	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.5	49.1	46.7	69.5	46.0	46.4	73.0	42.8	29.7	67.0	36.8	24.5
Incr Delay (d2), s/veh	248.9	0.4	0.2	443.2	0.2	142.1	166.9	210.8	0.2	395.7	95.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	8.5	4.7	21.4	8.5	48.8	4.4	71.5	8.0	28.0	57.7	11.2
LnGrp Delay(d),s/veh	320.4	49.5	46.9	512.7	46.2	188.4	239.9	253.7	29.8	462.7	132.8	24.7
LnGrp LOS	F	D	D	F	D	F	F	F	C	F	F	C
Approach Vol, veh/h		860			1772			3542			4160	
Approach Delay, s/veh		128.8			242.5			235.7			176.7	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	81.6	13.0	45.9	22.0	69.6	17.0	41.9
Change Period (Y+Rc), s	5.5	4.8	5.5	* 4.6	5.5	* 4.8	5.5	4.6
Max Green Setting (Gmax), s	4.5	76.6	7.5	* 41	16.5	* 65	11.5	37.0
Max Q Clear Time (g_c+I1), s	6.5	78.8	9.5	43.3	18.5	66.8	13.5	19.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1

Intersection Summary	
HCM 2010 Ctrl Delay	204.2
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	0	1	78	0	66	0	2763	34	24	3182	4
Future Volume (veh/h)	1	0	1	78	0	66	0	2763	34	24	3182	4
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	1	0	1	78	0	66	0	2763	34	24	3182	4
Adj No. of Lanes	0	1	0	1	0	2	1	3	1	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	1	0	1	109	0	194	2	3606	1123	29	4049	5
Arrive On Green	0.00	0.00	0.00	0.06	0.00	0.06	0.00	0.72	0.72	0.02	0.79	0.79
Sat Flow, veh/h	828	0	828	1757	0	3136	1740	4988	1553	1740	5144	6
Grp Volume(v), veh/h	2	0	0	78	0	66	0	2763	34	24	2056	1130
Grp Sat Flow(s),veh/h/ln	1657	0	0	1757	0	1568	1740	1663	1553	1740	1663	1826
Q Serve(g_s), s	0.1	0.0	0.0	4.7	0.0	2.2	0.0	36.8	0.7	1.5	36.9	37.0
Cycle Q Clear(g_c), s	0.1	0.0	0.0	4.7	0.0	2.2	0.0	36.8	0.7	1.5	36.9	37.0
Prop In Lane	0.50		0.50	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	3	0	0	109	0	194	2	3606	1123	29	2617	1437
V/C Ratio(X)	0.75	0.00	0.00	0.72	0.00	0.34	0.00	0.77	0.03	0.83	0.79	0.79
Avail Cap(c_a), veh/h	46	0	0	197	0	351	49	3778	1176	49	2617	1437
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.4	0.0	0.0	49.3	0.0	48.1	0.0	9.2	4.2	52.5	6.4	6.4
Incr Delay (d2), s/veh	88.8	0.0	0.0	3.3	0.0	0.4	0.0	1.4	0.0	19.8	2.2	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	2.4	0.0	0.9	0.0	17.1	0.3	0.9	17.3	19.7
LnGrp Delay(d),s/veh	142.2	0.0	0.0	52.6	0.0	48.5	0.0	10.6	4.2	72.3	8.5	10.2
LnGrp LOS	F			D		D		B	A	E	A	B
Approach Vol, veh/h		2			144			2797			3210	
Approach Delay, s/veh		142.2			50.7			10.5			9.6	
Approach LOS		F			D			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	89.3		5.7	6.9	82.4		12.1
Change Period (Y+Rc), s	* 4.6	5.0		5.5	* 5.1	* 5		5.5
Max Green Setting (Gmax), s	* 3	81.4		3.0	* 3	* 81		12.0
Max Q Clear Time (g_c+I1), s	0.0	39.0		2.1	3.5	38.8		6.7
Green Ext Time (p_c), s	0.0	42.3		0.0	0.0	38.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	11.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	585	23	206	193	715	9	2261	139	749	2580	3
Future Volume (veh/h)	0	585	23	206	193	715	9	2261	139	749	2580	3
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1845	1845	1845	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	0	585	23	206	193	715	9	2261	139	749	2580	3
Adj No. of Lanes	2	2	1	2	2	1	2	3	0	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	2	631	282	173	945	714	21	2083	127	627	3153	4
Arrive On Green	0.00	0.18	0.18	0.05	0.27	0.27	0.01	0.43	0.43	0.19	0.61	0.61
Sat Flow, veh/h	3375	3471	1553	3408	3505	1568	3375	4807	293	3375	5145	6
Grp Volume(v), veh/h	0	585	23	206	193	715	9	1558	842	749	1667	916
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1704	1752	1568	1688	1663	1775	1688	1663	1826
Q Serve(g_s), s	0.0	24.6	1.8	7.5	6.3	39.9	0.4	64.2	64.2	27.5	57.7	57.7
Cycle Q Clear(g_c), s	0.0	24.6	1.8	7.5	6.3	39.9	0.4	64.2	64.2	27.5	57.7	57.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.17	1.00		0.00
Lane Grp Cap(c), veh/h	2	631	282	173	945	714	21	1441	769	627	2038	1119
V/C Ratio(X)	0.00	0.93	0.08	1.19	0.20	1.00	0.43	1.08	1.09	1.20	0.82	0.82
Avail Cap(c_a), veh/h	68	680	304	173	945	714	68	1441	769	627	2038	1119
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	59.6	50.3	70.3	41.8	40.3	73.3	42.0	42.0	60.3	22.3	22.3
Incr Delay (d2), s/veh	0.0	17.6	0.0	130.2	0.0	34.1	4.9	49.0	61.2	102.9	2.6	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	13.3	0.8	6.6	3.1	35.8	0.2	39.2	44.5	21.7	27.1	30.4
LnGrp Delay(d),s/veh	0.0	77.2	50.4	200.5	41.9	74.5	78.3	90.9	103.1	163.2	24.8	26.9
LnGrp LOS		E	D	F	D	F	E	F	F	F	C	C
Approach Vol, veh/h		608			1114			2409			3332	
Approach Delay, s/veh		76.2			92.1			95.2			56.5	
Approach LOS		E			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	96.1	0.0	45.6	33.0	69.5	13.0	32.6
Change Period (Y+Rc), s	5.5	5.3	5.5	* 5.7	5.5	* 5.3	5.5	* 5.7
Max Green Setting (Gmax), s	3.0	88.6	3.0	* 33	27.5	* 64	7.5	* 29
Max Q Clear Time (g_c+I1), s	2.4	59.7	0.0	41.9	29.5	66.2	9.5	26.6
Green Ext Time (p_c), s	0.0	23.4	0.0	0.0	0.0	0.0	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	75.9
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	13	34	2357	23	79	2729
Future Volume (veh/h)	13	34	2357	23	79	2729
Number	3	18	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1827	1900	1827	1827
Adj Flow Rate, veh/h	13	34	2357	23	79	2729
Adj No. of Lanes	1	1	3	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	4	4	4	4
Cap, veh/h	53	47	3754	37	101	2949
Arrive On Green	0.03	0.03	0.74	0.74	0.06	0.85
Sat Flow, veh/h	1757	1568	5258	50	1740	3563
Grp Volume(v), veh/h	13	34	1538	842	79	2729
Grp Sat Flow(s),veh/h/ln	1757	1568	1663	1818	1740	1736
Q Serve(g_s), s	0.6	1.8	19.4	19.5	3.8	47.4
Cycle Q Clear(g_c), s	0.6	1.8	19.4	19.5	3.8	47.4
Prop In Lane	1.00	1.00		0.03	1.00	
Lane Grp Cap(c), veh/h	53	47	2450	1340	101	2949
V/C Ratio(X)	0.25	0.72	0.63	0.63	0.78	0.93
Avail Cap(c_a), veh/h	61	55	2450	1340	199	3106
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.6	41.2	5.5	5.5	39.9	4.5
Incr Delay (d2), s/veh	0.9	24.4	0.4	0.7	5.0	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.1	8.9	9.9	2.0	23.3
LnGrp Delay(d),s/veh	41.5	65.6	5.9	6.2	44.8	9.6
LnGrp LOS	D	E	A	A	D	A
Approach Vol, veh/h	47		2380			2808
Approach Delay, s/veh	58.9		6.0			10.6
Approach LOS	E		A			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		77.6			9.7	68.0		8.1
Change Period (Y+Rc), s		4.8			* 4.7	4.8		5.5
Max Green Setting (Gmax), s		76.7			* 9.8	62.2		3.0
Max Q Clear Time (g_c+I1), s		49.4			5.8	21.5		3.8
Green Ext Time (p_c), s		23.4			0.0	34.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	9.0
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	158	1747	810	62	1515	893	624	1673	106	1002	1638	122
Future Volume (veh/h)	158	1747	810	62	1515	893	624	1673	106	1002	1638	122
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	158	1747	810	62	1515	893	624	1673	106	1002	1638	122
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	4	4	4	4	4	4
Cap, veh/h	114	1345	602	68	1310	586	402	1311	408	616	1620	504
Arrive On Green	0.03	0.40	0.40	0.02	0.38	0.38	0.12	0.26	0.26	0.18	0.32	0.32
Sat Flow, veh/h	3312	3406	1524	3312	3406	1524	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	158	1747	810	62	1515	893	624	1673	106	1002	1638	122
Grp Sat Flow(s),veh/h/ln	1656	1703	1524	1656	1703	1524	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	5.0	57.4	57.4	2.7	55.9	55.9	17.3	38.2	7.8	26.5	47.2	8.4
Cycle Q Clear(g_c), s	5.0	57.4	57.4	2.7	55.9	55.9	17.3	38.2	7.8	26.5	47.2	8.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	114	1345	602	68	1310	586	402	1311	408	616	1620	504
V/C Ratio(X)	1.39	1.30	1.35	0.91	1.16	1.52	1.55	1.28	0.26	1.63	1.01	0.24
Avail Cap(c_a), veh/h	114	1345	602	68	1310	586	402	1311	408	616	1620	504
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.1	43.9	43.9	71.0	44.7	44.7	64.0	53.6	42.4	59.4	49.1	35.9
Incr Delay (d2), s/veh	218.9	139.9	166.5	75.6	79.3	244.2	260.7	130.2	0.1	289.8	25.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	53.1	51.9	2.0	40.6	63.3	22.6	33.3	3.4	37.1	25.4	3.6
LnGrp Delay(d),s/veh	289.1	183.9	210.4	146.7	124.0	288.9	324.7	183.8	42.5	349.2	74.1	36.0
LnGrp LOS	F	F	F	F	F	F	F	F	D	F	F	D
Approach Vol, veh/h		2715			2470			2403			2762	
Approach Delay, s/veh		197.9			184.2			214.1			172.3	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	61.3	22.0	52.0	8.5	62.8	31.0	43.0
Change Period (Y+Rc), s	5.0	* 5.4	* 4.7	4.8	5.5	* 5.4	4.5	4.8
Max Green Setting (Gmax), s	5.0	* 56	* 17	47.2	3.0	* 57	26.5	38.2
Max Q Clear Time (g_c+I1), s	7.0	57.9	19.3	49.2	4.7	59.4	28.5	40.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	191.6
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	453	724	305	272	602	199	182	1691	232	307	1910	166
Future Volume (veh/h)	453	724	305	272	602	199	182	1691	232	307	1910	166
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1845	1845	1827	1827
Adj Flow Rate, veh/h	453	724	305	272	602	199	182	1691	232	307	1910	166
Adj No. of Lanes	1	1	1	2	2	1	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	3	3	4	4
Cap, veh/h	381	608	517	237	633	283	153	1531	481	258	1850	576
Arrive On Green	0.22	0.33	0.33	0.07	0.18	0.18	0.09	0.31	0.31	0.15	0.37	0.37
Sat Flow, veh/h	1757	1845	1568	3408	3505	1568	1740	4988	1568	1757	4988	1553
Grp Volume(v), veh/h	453	724	305	272	602	199	182	1691	232	307	1910	166
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1752	1568	1740	1663	1568	1757	1663	1553
Q Serve(g_s), s	30.5	46.4	22.8	9.8	23.9	16.8	12.4	43.2	16.9	20.7	52.2	10.6
Cycle Q Clear(g_c), s	30.5	46.4	22.8	9.8	23.9	16.8	12.4	43.2	16.9	20.7	52.2	10.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	381	608	517	237	633	283	153	1531	481	258	1850	576
V/C Ratio(X)	1.19	1.19	0.59	1.15	0.95	0.70	1.19	1.10	0.48	1.19	1.03	0.29
Avail Cap(c_a), veh/h	381	608	517	237	633	283	153	1531	481	258	1850	576
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.1	47.2	39.2	65.4	57.0	54.1	64.2	48.8	39.6	60.0	44.3	31.2
Incr Delay (d2), s/veh	108.6	101.2	1.2	103.4	24.1	6.5	131.7	57.1	0.3	116.5	29.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	26.2	40.6	10.0	8.0	13.7	7.8	11.5	27.8	7.4	18.3	28.9	4.6
LnGrp Delay(d),s/veh	163.7	148.4	40.5	168.9	81.2	60.6	195.9	105.9	39.9	176.5	74.0	31.3
LnGrp LOS	F	F	D	F	F	E	F	F	D	F	F	C
Approach Vol, veh/h		1482			1073			2105			2383	
Approach Delay, s/veh		130.8			99.6			106.4			84.2	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	57.0	36.0	30.7	26.0	48.0	15.0	51.7
Change Period (Y+Rc), s	* 4.6	4.8	5.5	* 5.3	* 5.3	4.8	* 5.2	* 5.3
Max Green Setting (Gmax), s	* 12	52.2	30.5	* 25	* 21	43.2	* 9.8	* 46
Max Q Clear Time (g_c+I1), s	14.4	54.2	32.5	25.9	22.7	45.2	11.8	48.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	103.0
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	245	1001	338	199	966	659	149	1234	111	636	1926	214
Future Volume (veh/h)	245	1001	338	199	966	659	149	1234	111	636	1926	214
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1845	1845	1827	1827
Adj Flow Rate, veh/h	245	1001	338	199	966	659	149	1234	111	636	1926	214
Adj No. of Lanes	2	1	1	1	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	3	3	4	4
Cap, veh/h	296	726	617	164	1401	627	135	1097	345	636	1829	569
Arrive On Green	0.09	0.39	0.39	0.09	0.40	0.40	0.04	0.22	0.22	0.19	0.37	0.37
Sat Flow, veh/h	3408	1845	1568	1757	3505	1568	3375	4988	1568	3408	4988	1553
Grp Volume(v), veh/h	245	1001	338	199	966	659	149	1234	111	636	1926	214
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1757	1752	1568	1688	1663	1568	1704	1663	1553
Q Serve(g_s), s	10.6	59.0	25.0	14.0	34.3	60.0	6.0	33.0	8.9	28.0	55.0	15.2
Cycle Q Clear(g_c), s	10.6	59.0	25.0	14.0	34.3	60.0	6.0	33.0	8.9	28.0	55.0	15.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	296	726	617	164	1401	627	135	1097	345	636	1829	569
V/C Ratio(X)	0.83	1.38	0.55	1.21	0.69	1.05	1.10	1.12	0.32	1.00	1.05	0.38
Avail Cap(c_a), veh/h	432	726	617	164	1401	627	135	1097	345	636	1829	569
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.4	45.5	35.2	68.0	37.3	45.0	72.0	58.5	49.1	61.0	47.5	34.9
Incr Delay (d2), s/veh	8.4	179.4	1.0	139.2	1.4	50.2	107.9	68.2	0.5	35.6	36.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	66.2	11.0	13.1	16.9	34.7	4.8	22.1	3.9	16.3	31.4	6.6
LnGrp Delay(d),s/veh	75.8	224.9	36.2	207.2	38.8	95.2	179.9	126.7	49.6	96.6	84.2	35.3
LnGrp LOS	E	F	D	F	D	F	F	F	D	F	F	D
Approach Vol, veh/h		1584			1824			1494			2776	
Approach Delay, s/veh		161.6			77.5			126.3			83.2	
Approach LOS		F			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	59.0	17.0	64.0	32.0	37.0	18.0	63.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	55.0	19.0	54.0	28.0	33.0	14.0	59.0
Max Q Clear Time (g_c+I1), s	8.0	57.0	12.6	62.0	30.0	35.0	16.0	61.0
Green Ext Time (p_c), s	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	106.4
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	808	610	679	91	743	56	189	1125	11	115	2135	1109
Future Volume (veh/h)	808	610	679	91	743	56	189	1125	11	115	2135	1109
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	808	610	679	91	743	56	189	1125	11	115	2135	1109
Adj No. of Lanes	1	2	1	1	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	507	1411	631	94	584	261	158	1650	514	163	1679	523
Arrive On Green	0.29	0.41	0.41	0.05	0.17	0.17	0.05	0.33	0.33	0.05	0.34	0.34
Sat Flow, veh/h	1740	3471	1553	1740	3471	1553	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	808	610	679	91	743	56	189	1125	11	115	2135	1109
Grp Sat Flow(s),veh/h/ln	1740	1736	1553	1740	1736	1553	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	37.9	16.5	52.9	6.8	21.9	4.0	6.1	25.4	0.6	4.4	43.8	43.8
Cycle Q Clear(g_c), s	37.9	16.5	52.9	6.8	21.9	4.0	6.1	25.4	0.6	4.4	43.8	43.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	507	1411	631	94	584	261	158	1650	514	163	1679	523
V/C Ratio(X)	1.59	0.43	1.08	0.97	1.27	0.21	1.19	0.68	0.02	0.71	1.27	2.12
Avail Cap(c_a), veh/h	507	1411	631	94	584	261	158	1650	514	179	1679	523
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.1	27.8	38.6	61.5	54.1	46.7	62.0	37.6	29.3	61.0	43.2	43.2
Incr Delay (d2), s/veh	276.6	1.0	57.8	83.3	135.3	1.9	133.3	2.3	0.1	8.6	127.0	511.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	57.1	8.1	32.8	5.4	21.4	1.9	5.8	12.0	0.3	2.2	39.8	93.0
LnGrp Delay(d),s/veh	322.7	28.8	96.4	144.7	189.4	48.5	195.3	39.9	29.4	69.6	170.2	554.2
LnGrp LOS	F	C	F	F	F	D	F	D	C	E	F	F
Approach Vol, veh/h		2097			890			1325			3359	
Approach Delay, s/veh		163.9			175.9			62.0			293.5	
Approach LOS		F			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	49.0	43.0	27.1	11.8	48.2	12.0	58.1
Change Period (Y+Rc), s	* 4.9	* 5.2	* 5.1	* 5.2	5.5	* 5.2	5.0	* 5.2
Max Green Setting (Gmax), s	* 6.1	* 44	* 38	* 22	6.9	* 43	7.0	* 53
Max Q Clear Time (g_c+I1), s	8.1	45.8	39.9	23.9	6.4	27.4	8.8	54.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	15.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	204.4
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	793	514	145	753	124	326	1209	106	290	2455	103
Future Volume (veh/h)	103	793	514	145	753	124	326	1209	106	290	2455	103
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	103	793	514	145	753	124	326	1209	106	290	2455	103
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	125	799	357	160	835	374	333	2416	752	332	2415	752
Arrive On Green	0.04	0.23	0.23	0.05	0.24	0.24	0.10	0.48	0.48	0.10	0.48	0.48
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	103	793	514	145	753	124	326	1209	106	290	2455	103
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	4.7	35.1	35.4	6.6	32.4	10.2	15.0	25.6	5.9	13.2	75.2	5.7
Cycle Q Clear(g_c), s	4.7	35.1	35.4	6.6	32.4	10.2	15.0	25.6	5.9	13.2	75.2	5.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	125	799	357	160	835	374	333	2416	752	332	2415	752
V/C Ratio(X)	0.82	0.99	1.44	0.91	0.90	0.33	0.98	0.50	0.14	0.87	1.02	0.14
Avail Cap(c_a), veh/h	125	799	357	160	835	374	333	2416	752	441	2415	752
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	74.3	59.8	60.0	73.7	57.4	48.9	69.8	27.3	22.2	69.1	40.1	22.1
Incr Delay (d2), s/veh	32.2	30.1	212.5	43.7	14.1	1.7	43.7	0.5	0.3	11.5	22.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	20.3	36.5	4.1	17.3	4.6	9.0	11.9	2.6	6.7	39.5	2.5
LnGrp Delay(d),s/veh	106.5	89.9	272.4	117.4	71.5	50.6	113.6	27.8	22.4	80.5	62.6	22.4
LnGrp LOS	F	F	F	F	E	D	F	C	C	F	F	C
Approach Vol, veh/h		1410			1022			1641			2848	
Approach Delay, s/veh		157.7			75.5			44.5			63.0	
Approach LOS		F			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.8	80.7	11.2	42.6	20.8	80.7	12.8	41.0
Change Period (Y+Rc), s	5.5	* 5.5	5.5	5.6	5.5	* 5.5	5.5	* 5.6
Max Green Setting (Gmax), s	15.3	* 75	5.7	36.8	20.3	* 70	7.3	* 35
Max Q Clear Time (g_c+I1), s	17.0	77.2	6.7	34.4	15.2	27.6	8.6	37.4
Green Ext Time (p_c), s	0.0	0.0	0.0	2.4	0.1	42.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	79.7
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	855	240	115	753	73	64	107	96	109	174	82
Future Volume (veh/h)	22	855	240	115	753	73	64	107	96	109	174	82
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	22	855	240	115	753	73	64	107	96	109	174	82
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	27	1254	352	147	1718	166	81	222	189	140	285	242
Arrive On Green	0.02	0.46	0.46	0.08	0.53	0.53	0.05	0.12	0.12	0.08	0.15	0.15
Sat Flow, veh/h	1757	2705	759	1757	3229	313	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	22	554	541	115	409	417	64	107	96	109	174	82
Grp Sat Flow(s),veh/h/ln	1757	1752	1711	1757	1752	1789	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	0.8	15.7	15.7	4.1	9.0	9.0	2.3	3.4	3.6	3.9	5.6	3.0
Cycle Q Clear(g_c), s	0.8	15.7	15.7	4.1	9.0	9.0	2.3	3.4	3.6	3.9	5.6	3.0
Prop In Lane	1.00		0.44	1.00		0.17	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	27	813	793	147	932	952	81	222	189	140	285	242
V/C Ratio(X)	0.82	0.68	0.68	0.78	0.44	0.44	0.79	0.48	0.51	0.78	0.61	0.34
Avail Cap(c_a), veh/h	139	968	945	194	1024	1045	194	641	545	277	728	619
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.1	13.3	13.3	28.5	9.0	9.0	29.9	26.0	26.1	28.6	25.0	23.9
Incr Delay (d2), s/veh	43.8	1.5	1.6	14.1	0.3	0.3	15.7	1.6	2.1	8.8	2.1	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	7.9	7.7	2.6	4.4	4.5	1.5	1.9	1.7	2.2	3.0	1.3
LnGrp Delay(d),s/veh	74.9	14.9	14.9	42.6	9.4	9.4	45.7	27.6	28.2	37.4	27.1	24.7
LnGrp LOS	E	B	B	D	A	A	D	C	C	D	C	C
Approach Vol, veh/h		1117			941			267			365	
Approach Delay, s/veh		16.1			13.4			32.2			29.7	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	11.6	9.3	33.4	6.9	13.8	5.0	37.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	22.0	7.0	35.0	7.0	25.0	5.0	37.0
Max Q Clear Time (g_c+I1), s	5.9	5.6	6.1	17.7	4.3	7.6	2.8	11.0
Green Ext Time (p_c), s	0.1	2.0	0.0	11.7	0.0	2.0	0.0	15.3

Intersection Summary	
HCM 2010 Ctrl Delay	18.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	1210	512	29	1147	166	618	139	8	158	415	90
Future Volume (veh/h)	68	1210	512	29	1147	166	618	139	8	158	415	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	68	1210	512	29	1147	166	618	139	8	158	415	90
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	47	1136	461	35	1415	204	480	560	476	181	246	209
Arrive On Green	0.03	0.47	0.47	0.02	0.46	0.46	0.27	0.30	0.30	0.10	0.13	0.13
Sat Flow, veh/h	1757	2434	988	1757	3075	444	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	68	857	865	29	652	661	618	139	8	158	415	90
Grp Sat Flow(s),veh/h/ln	1757	1752	1670	1757	1752	1766	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	4.0	70.0	70.0	2.5	48.0	48.4	41.0	8.5	0.5	13.3	20.0	7.9
Cycle Q Clear(g_c), s	4.0	70.0	70.0	2.5	48.0	48.4	41.0	8.5	0.5	13.3	20.0	7.9
Prop In Lane	1.00		0.59	1.00		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	47	818	779	35	806	813	480	560	476	181	246	209
V/C Ratio(X)	1.45	1.05	1.11	0.83	0.81	0.81	1.29	0.25	0.02	0.87	1.69	0.43
Avail Cap(c_a), veh/h	47	818	779	35	806	813	480	560	476	258	246	209
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.0	40.0	40.0	73.2	34.8	34.9	54.5	39.4	36.6	66.3	65.0	59.8
Incr Delay (d2), s/veh	289.8	44.7	66.8	84.6	6.2	6.3	144.2	0.2	0.0	19.7	326.3	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	44.0	46.7	2.0	24.6	24.9	39.1	4.4	0.2	7.4	32.5	3.5
LnGrp Delay(d),s/veh	362.8	84.7	106.8	157.9	41.0	41.3	198.7	39.6	36.6	86.0	391.3	61.2
LnGrp LOS	F	F	F	F	D	D	F	D	D	F	F	E
Approach Vol, veh/h		1790			1342			765			663	
Approach Delay, s/veh		105.9			43.7			168.1			273.7	
Approach LOS		F			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.5	49.5	7.0	74.0	45.0	24.0	8.0	73.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	22.0	39.0	3.0	70.0	41.0	20.0	4.0	69.0
Max Q Clear Time (g_c+I1), s	15.3	10.5	4.5	72.0	43.0	22.0	6.0	50.4
Green Ext Time (p_c), s	0.2	4.0	0.0	0.0	0.0	0.0	0.0	17.1

Intersection Summary	
HCM 2010 Ctrl Delay	122.4
HCM 2010 LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	754	9	140	814	3	10	41	72	65	62	66
Future Volume (veh/h)	0	754	9	140	814	3	10	41	72	65	62	66
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1900	1845	1900	1900	1845	1900
Adj Flow Rate, veh/h	0	754	9	140	814	3	10	41	72	65	62	66
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	3	3	3	3	3	3
Cap, veh/h	5	1981	24	522	2000	7	130	121	189	224	126	107
Arrive On Green	0.00	0.56	0.56	0.56	0.56	0.56	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1740	3513	42	687	3547	13	64	620	965	404	647	546
Grp Volume(v), veh/h	0	372	391	140	398	419	123	0	0	193	0	0
Grp Sat Flow(s),veh/h/ln	1740	1736	1820	687	1736	1825	1649	0	0	1597	0	0
Q Serve(g_s), s	0.0	4.0	4.0	4.7	4.3	4.3	0.0	0.0	0.0	1.4	0.0	0.0
Cycle Q Clear(g_c), s	0.0	4.0	4.0	8.7	4.3	4.3	2.1	0.0	0.0	3.5	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.01	0.08		0.59	0.34		0.34
Lane Grp Cap(c), veh/h	5	979	1026	522	979	1029	439	0	0	457	0	0
V/C Ratio(X)	0.00	0.38	0.38	0.27	0.41	0.41	0.28	0.00	0.00	0.42	0.00	0.00
Avail Cap(c_a), veh/h	209	1567	1643	590	1149	1208	707	0	0	708	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	4.0	4.0	6.4	4.1	4.1	11.6	0.0	0.0	12.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.2	0.3	0.3	0.3	0.3	0.0	0.0	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.9	2.0	0.9	2.1	2.2	1.0	0.0	0.0	1.7	0.0	0.0
LnGrp Delay(d),s/veh	0.0	4.3	4.3	6.7	4.4	4.4	12.0	0.0	0.0	12.7	0.0	0.0
LnGrp LOS		A	A	A	A	A	B			B		
Approach Vol, veh/h		763			957			123			193	
Approach Delay, s/veh		4.3			4.7			12.0			12.7	
Approach LOS		A			A			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		10.5		22.7		10.5	0.0	22.7
Change Period (Y+Rc), s		4.0		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		12.0		30.0		12.0	4.0	22.0
Max Q Clear Time (g_c+I1), s		4.1		6.0		5.5	0.0	10.7
Green Ext Time (p_c), s		1.1		12.8		1.0	0.0	7.7

Intersection Summary	
HCM 2010 Ctrl Delay	5.7
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	858	161	185	829	363	131	433	129	342	522	24
Future Volume (veh/h)	67	858	161	185	829	363	131	433	129	342	522	24
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	67	858	161	185	829	363	131	433	129	342	522	24
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	81	896	168	189	865	377	155	444	377	345	643	547
Arrive On Green	0.05	0.30	0.30	0.11	0.36	0.36	0.09	0.24	0.24	0.20	0.35	0.35
Sat Flow, veh/h	1757	2947	553	1757	2377	1037	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	67	510	509	185	610	582	131	433	129	342	522	24
Grp Sat Flow(s),veh/h/ln	1757	1752	1747	1757	1752	1662	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	4.9	37.2	37.2	13.7	44.2	44.5	9.6	30.3	8.9	25.3	33.4	1.3
Cycle Q Clear(g_c), s	4.9	37.2	37.2	13.7	44.2	44.5	9.6	30.3	8.9	25.3	33.4	1.3
Prop In Lane	1.00		0.32	1.00		0.62	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	81	533	531	189	638	605	155	444	377	345	643	547
V/C Ratio(X)	0.83	0.96	0.96	0.98	0.96	0.96	0.85	0.98	0.34	0.99	0.81	0.04
Avail Cap(c_a), veh/h	81	535	533	189	638	605	161	444	377	345	643	547
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.5	44.4	44.4	57.9	40.4	40.5	58.4	49.0	40.8	52.2	38.5	28.0
Incr Delay (d2), s/veh	45.5	28.2	28.3	58.7	25.1	27.0	29.6	36.0	0.2	46.4	7.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	22.2	22.1	9.7	25.8	24.9	5.9	19.8	3.8	16.7	18.3	0.6
LnGrp Delay(d),s/veh	107.0	72.6	72.7	116.5	65.5	67.5	88.0	85.0	41.0	98.5	45.7	28.0
LnGrp LOS	F	E	E	F	E	E	F	F	D	F	D	C
Approach Vol, veh/h		1086			1377			693			888	
Approach Delay, s/veh		74.8			73.2			77.4			65.6	
Approach LOS		E			E			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	52.1	17.0	49.7	19.0	44.3	31.0	35.7
Change Period (Y+Rc), s	* 5.2	4.8	5.5	* 4.4	5.0	* 4.8	5.5	* 4.4
Max Green Setting (Gmax), s	* 6	47.3	11.9	* 45	14.0	* 40	25.5	* 31
Max Q Clear Time (g_c+I1), s	6.9	46.5	11.6	35.4	15.7	39.2	27.3	32.3
Green Ext Time (p_c), s	0.0	0.6	0.0	1.9	0.0	0.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	72.7
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	283	2137	108	198	2093	1	169	1669	220	5	1865	171
Future Volume (veh/h)	283	2137	108	198	2093	1	169	1669	220	5	1865	171
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1792	1845	1845	1792	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	283	2137	108	198	2093	1	169	1669	220	5	1865	171
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	6	3	3	6	3	3	3	3	3	3	3
Cap, veh/h	227	1794	575	159	1696	544	114	1669	747	13	1566	700
Arrive On Green	0.07	0.37	0.37	0.05	0.35	0.35	0.03	0.48	0.48	0.00	0.45	0.45
Sat Flow, veh/h	3408	4893	1568	3408	4893	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	283	2137	108	198	2093	1	169	1669	220	5	1865	171
Grp Sat Flow(s),veh/h/ln	1704	1631	1568	1704	1631	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	10.0	55.0	7.0	7.0	52.0	0.1	5.0	71.4	12.8	0.2	67.0	10.2
Cycle Q Clear(g_c), s	10.0	55.0	7.0	7.0	52.0	0.1	5.0	71.4	12.8	0.2	67.0	10.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	227	1794	575	159	1696	544	114	1669	747	13	1566	700
V/C Ratio(X)	1.25	1.19	0.19	1.24	1.23	0.00	1.49	1.00	0.29	0.39	1.19	0.24
Avail Cap(c_a), veh/h	227	1794	575	159	1696	544	114	1669	747	91	1566	700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.0	47.5	32.3	71.5	49.0	32.0	72.5	39.3	23.9	74.5	41.5	25.8
Incr Delay (d2), s/veh	141.8	91.8	0.2	151.9	110.5	0.0	260.2	22.0	0.2	18.2	92.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	40.0	3.1	6.6	40.8	0.0	6.5	39.6	5.6	0.1	52.6	4.5
LnGrp Delay(d),s/veh	211.8	139.3	32.5	223.4	159.5	32.0	332.7	61.3	24.1	92.7	134.2	26.0
LnGrp LOS	F	F	C	F	F	C	F	E	C	F	F	C
Approach Vol, veh/h		2528			2292			2058			2041	
Approach Delay, s/veh		142.9			165.0			79.6			125.1	
Approach LOS		F			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.6	75.4	11.0	59.0	9.0	71.0	14.0	56.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	68.0	7.0	55.0	5.0	67.0	10.0	52.0
Max Q Clear Time (g_c+I1), s	2.2	73.4	9.0	57.0	7.0	69.0	12.0	54.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	129.9
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	233	817	124	499	947	130	70	1104	652	196	1352	462
Future Volume (veh/h)	233	817	124	499	947	130	70	1104	652	196	1352	462
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1900	1845	1900	1900	1845	1845
Adj Flow Rate, veh/h	233	817	124	499	947	130	70	1104	652	196	1352	462
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	82	468	71	164	619	85	21	335	198	76	523	512
Arrive On Green	0.05	0.15	0.15	0.09	0.20	0.20	0.32	0.32	0.32	0.33	0.33	0.33
Sat Flow, veh/h	1757	3052	463	1757	3097	425	66	1047	619	232	1601	1568
Grp Volume(v), veh/h	233	469	472	499	536	541	1826	0	0	1548	0	462
Grp Sat Flow(s),veh/h/ln	1757	1752	1763	1757	1752	1770	1732	0	0	1833	0	1568
Q Serve(g_s), s	7.0	23.0	23.0	14.0	30.0	30.0	48.0	0.0	0.0	49.0	0.0	42.2
Cycle Q Clear(g_c), s	7.0	23.0	23.0	14.0	30.0	30.0	48.0	0.0	0.0	49.0	0.0	42.2
Prop In Lane	1.00		0.26	1.00		0.24	0.04		0.36	0.13		1.00
Lane Grp Cap(c), veh/h	82	269	270	164	350	354	554	0	0	599	0	512
V/C Ratio(X)	2.84	1.75	1.75	3.04	1.53	1.53	3.29	0.00	0.00	2.59	0.00	0.90
Avail Cap(c_a), veh/h	82	269	270	164	350	354	554	0	0	599	0	512
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	71.5	63.5	63.5	68.0	60.0	60.0	51.0	0.0	0.0	50.5	0.0	48.2
Incr Delay (d2), s/veh	861.5	350.6	350.5	935.5	251.9	252.1	1037.0	0.0	0.0	718.2	0.0	19.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	23.0	37.3	37.5	49.4	39.0	39.4	182.6	0.0	0.0	144.2	0.0	20.9
LnGrp Delay(d),s/veh	933.0	414.1	414.0	1003.5	311.9	312.1	1088.0	0.0	0.0	768.7	0.0	67.3
LnGrp LOS	F	F	F	F	F	F	F			F		E
Approach Vol, veh/h		1174			1576			1826			2010	
Approach Delay, s/veh		517.0			530.9			1088.0			607.5	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		52.0	18.0	27.0		53.0	11.0	34.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		48.0	14.0	23.0		49.0	7.0	30.0
Max Q Clear Time (g_c+I1), s		50.0	16.0	25.0		51.0	9.0	32.0
Green Ext Time (p_c), s		0.0	0.0	0.0		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	706.3
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1257	0	450	0	647	1686	0	1224	808
Future Volume (veh/h)	0	0	0	1257	0	450	0	647	1686	0	1224	808
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1827	0	1827	0	1827	1827	0	1827	1827
Adj Flow Rate, veh/h				1257	0	450	0	647	0	0	1224	0
Adj No. of Lanes				2	0	2	0	3	1	0	3	1
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				4	0	4	0	4	4	0	4	4
Cap, veh/h				1417	0	1147	0	1820	567	0	1820	567
Arrive On Green				0.42	0.00	0.42	0.00	0.36	0.00	0.00	0.36	0.00
Sat Flow, veh/h				3375	0	2733	0	5152	1553	0	5152	1553
Grp Volume(v), veh/h				1257	0	450	0	647	0	0	1224	0
Grp Sat Flow(s),veh/h/ln				1688	0	1367	0	1663	1553	0	1663	1553
Q Serve(g_s), s				15.5	0.0	5.2	0.0	4.3	0.0	0.0	9.3	0.0
Cycle Q Clear(g_c), s				15.5	0.0	5.2	0.0	4.3	0.0	0.0	9.3	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1417	0	1147	0	1820	567	0	1820	567
V/C Ratio(X)				0.89	0.00	0.39	0.00	0.36	0.00	0.00	0.67	0.00
Avail Cap(c_a), veh/h				1978	0	1602	0	2823	879	0	2646	824
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				12.1	0.0	9.1	0.0	10.4	0.0	0.0	12.0	0.0
Incr Delay (d2), s/veh				3.1	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.8	0.0	2.0	0.0	1.9	0.0	0.0	4.2	0.0
LnGrp Delay(d),s/veh				15.2	0.0	9.2	0.0	10.5	0.0	0.0	12.2	0.0
LnGrp LOS				B		A		B			B	
Approach Vol, veh/h					1707			647			1224	
Approach Delay, s/veh					13.6			10.5			12.2	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		21.5		23.5		21.5		
Change Period (Y+Rc), s		5.1		4.6		* 5.1		
Max Green Setting (Gmax), s		23.9		26.4		* 26		
Max Q Clear Time (g_c+I1), s		11.3		17.5		6.3		
Green Ext Time (p_c), s		5.1		1.4		6.1		

Intersection Summary	
HCM 2010 Ctrl Delay	12.6
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	31	17	531	44	548	48	2122	349	520	2580	59
Future Volume (veh/h)	73	31	17	531	44	548	48	2122	349	520	2580	59
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	73	31	17	531	44	548	48	2122	349	520	2580	59
Adj No. of Lanes	1	1	0	2	1	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	66	42	23	561	304	258	61	2406	749	561	3092	70
Arrive On Green	0.04	0.04	0.04	0.16	0.16	0.16	0.04	0.48	0.48	0.17	0.62	0.62
Sat Flow, veh/h	1757	1121	615	3408	1845	1568	1740	4988	1553	3375	5018	114
Grp Volume(v), veh/h	73	0	48	531	44	548	48	2122	349	520	1706	933
Grp Sat Flow(s),veh/h/ln	1757	0	1736	1704	1845	1568	1740	1663	1553	1688	1663	1807
Q Serve(g_s), s	5.5	0.0	4.0	22.5	3.0	24.0	4.0	55.9	21.9	22.1	58.9	59.8
Cycle Q Clear(g_c), s	5.5	0.0	4.0	22.5	3.0	24.0	4.0	55.9	21.9	22.1	58.9	59.8
Prop In Lane	1.00		0.35	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	66	0	66	561	304	258	61	2406	749	561	2049	1113
V/C Ratio(X)	1.10	0.00	0.73	0.95	0.14	2.12	0.78	0.88	0.47	0.93	0.83	0.84
Avail Cap(c_a), veh/h	66	0	66	561	304	258	127	2508	781	591	2049	1113
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.1	0.0	69.4	60.2	52.1	60.9	69.7	34.0	25.2	59.9	22.0	22.2
Incr Delay (d2), s/veh	140.9	0.0	30.5	25.0	0.1	517.9	7.8	3.7	0.2	19.8	2.9	5.5
Initial Q Delay(d3),s/veh	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.0	2.5	12.6	1.5	47.5	2.1	26.4	9.4	11.9	27.6	31.3
LnGrp Delay(d),s/veh	212.0	0.0	99.9	85.2	52.2	578.8	77.6	37.7	25.3	79.6	24.9	27.7
LnGrp LOS	F		F	F	D	F	E	D	C	E	C	C
Approach Vol, veh/h		121			1123			2519			3159	
Approach Delay, s/veh		167.5			324.8			36.8			34.8	
Approach LOS		F			F			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.2	95.0		11.0	29.7	75.5		29.5
Change Period (Y+Rc), s	* 5.1	* 5.2		5.5	5.5	* 5.2		5.5
Max Green Setting (Gmax), s	* 11	* 89		5.5	25.5	* 73		24.0
Max Q Clear Time (g_c+I1), s	6.0	61.8		7.5	24.1	57.9		26.0
Green Ext Time (p_c), s	0.0	22.2		0.0	0.1	12.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	84.9
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	199	1244	479	559	1047	725	513	1101	152	851	1873	184
Future Volume (veh/h)	199	1244	479	559	1047	725	513	1101	152	851	1873	184
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	199	1244	479	559	1047	725	513	1101	152	851	1873	184
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	224	1040	465	419	1240	555	370	1245	388	616	1610	501
Arrive On Green	0.07	0.30	0.30	0.12	0.35	0.35	0.11	0.25	0.25	0.18	0.32	0.32
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	199	1244	479	559	1047	725	513	1101	152	851	1873	184
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	8.7	44.7	44.7	18.5	41.4	53.3	16.5	32.0	12.3	27.5	48.6	13.7
Cycle Q Clear(g_c), s	8.7	44.7	44.7	18.5	41.4	53.3	16.5	32.0	12.3	27.5	48.6	13.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	224	1040	465	419	1240	555	370	1245	388	616	1610	501
V/C Ratio(X)	0.89	1.20	1.03	1.34	0.84	1.31	1.39	0.88	0.39	1.38	1.16	0.37
Avail Cap(c_a), veh/h	224	1040	465	419	1240	555	370	1245	388	616	1610	501
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.8	53.0	53.0	66.1	44.8	48.7	67.1	54.4	47.0	61.5	51.0	39.2
Incr Delay (d2), s/veh	31.3	97.7	49.4	166.4	5.2	150.6	190.2	7.6	0.2	181.3	80.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	35.6	25.8	18.3	21.0	46.2	17.4	15.6	5.3	28.3	34.3	5.9
LnGrp Delay(d),s/veh	101.1	150.6	102.4	232.4	50.0	199.2	257.2	62.0	47.2	242.9	131.9	39.4
LnGrp LOS	F	F	F	F	D	F	F	E	D	F	F	D
Approach Vol, veh/h		1922			2331			1766			2908	
Approach Delay, s/veh		133.5			140.2			117.4			158.5	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	54.2	15.4	59.0	33.0	43.2	24.0	50.4
Change Period (Y+Rc), s	5.5	* 5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	16.5	* 49	9.9	* 53	27.5	* 37	18.5	* 44
Max Q Clear Time (g_c+I1), s	18.5	50.6	10.7	55.3	29.5	34.0	20.5	46.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	140.2
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	253	2158	132	441	1460	511	579	903	128	555	2277	161
Future Volume (veh/h)	253	2158	132	441	1460	511	579	903	128	555	2277	161
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1845	1845	1792	1792	1845	1845	1845	1827	1845	1827
Adj Flow Rate, veh/h	253	2158	132	441	1460	511	579	903	128	555	2277	0
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	3	3	6	6	3	3	3	4	3	4
Cap, veh/h	294	1622	520	322	1666	519	399	1316	410	596	1603	494
Arrive On Green	0.09	0.33	0.33	0.09	0.34	0.34	0.12	0.26	0.26	0.18	0.32	0.00
Sat Flow, veh/h	3312	4893	1568	3408	4893	1524	3408	5036	1568	3375	5036	1553
Grp Volume(v), veh/h	253	2158	132	441	1460	511	579	903	128	555	2277	0
Grp Sat Flow(s),veh/h/ln	1656	1631	1568	1704	1631	1524	1704	1679	1568	1688	1679	1553
Q Serve(g_s), s	11.3	49.9	9.2	14.2	42.2	50.1	17.6	24.3	9.9	24.4	47.9	0.0
Cycle Q Clear(g_c), s	11.3	49.9	9.2	14.2	42.2	50.1	17.6	24.3	9.9	24.4	47.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	294	1622	520	322	1666	519	399	1316	410	596	1603	494
V/C Ratio(X)	0.86	1.33	0.25	1.37	0.88	0.99	1.45	0.69	0.31	0.93	1.42	0.00
Avail Cap(c_a), veh/h	319	1622	520	322	1666	519	399	1316	410	650	1603	494
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	67.6	50.3	36.7	68.2	46.7	49.3	66.4	50.0	44.7	61.1	51.3	0.0
Incr Delay (d2), s/veh	18.1	152.9	0.1	185.7	5.4	35.5	217.3	1.5	0.4	18.6	193.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	45.4	4.0	14.9	19.9	26.2	20.3	11.5	4.3	13.0	50.8	0.0
LnGrp Delay(d),s/veh	85.7	203.2	36.8	253.9	52.1	84.8	283.7	51.5	45.1	79.7	244.3	0.0
LnGrp LOS	F	F	D	F	D	F	F	D	D	E	F	
Approach Vol, veh/h		2543			2412			1610			2832	
Approach Delay, s/veh		182.9			95.9			134.5			212.1	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.0	53.0	17.7	56.8	31.6	44.4	19.0	55.5
Change Period (Y+Rc), s	* 5.4	5.1	* 4.3	5.6	5.0	5.1	* 4.8	* 5.6
Max Green Setting (Gmax), s	* 18	47.9	* 15	49.6	29.0	36.9	* 14	* 50
Max Q Clear Time (g_c+I1), s	19.6	49.9	13.3	52.1	26.4	26.3	16.2	51.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.2	9.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	161.1
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	158	1180	370	112	1086	50	176	1163	290	40	2521	321
Future Volume (veh/h)	158	1180	370	112	1086	50	176	1163	290	40	2521	321
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	158	1180	370	112	1086	50	176	1163	290	40	2521	321
Adj No. of Lanes	2	1	0	2	2	1	1	3	0	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	123	591	185	80	1493	668	76	1515	378	68	1779	554
Arrive On Green	0.04	0.44	0.44	0.02	0.43	0.43	0.04	0.38	0.38	0.02	0.35	0.35
Sat Flow, veh/h	3408	1348	423	3408	3505	1568	1757	4022	1003	3408	5036	1568
Grp Volume(v), veh/h	158	0	1550	112	1086	50	176	971	482	40	2521	321
Grp Sat Flow(s),veh/h/ln	1704	0	1770	1704	1752	1568	1757	1679	1668	1704	1679	1568
Q Serve(g_s), s	5.4	0.0	65.8	3.5	38.7	2.8	6.5	38.0	38.0	1.7	53.0	25.0
Cycle Q Clear(g_c), s	5.4	0.0	65.8	3.5	38.7	2.8	6.5	38.0	38.0	1.7	53.0	25.0
Prop In Lane	1.00		0.24	1.00		1.00	1.00		0.60	1.00		1.00
Lane Grp Cap(c), veh/h	123	0	776	80	1493	668	76	1265	628	68	1779	554
V/C Ratio(X)	1.29	0.00	2.00	1.41	0.73	0.07	2.31	0.77	0.77	0.59	1.42	0.58
Avail Cap(c_a), veh/h	123	0	776	80	1493	668	76	1265	628	68	1779	554
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.3	0.0	42.1	73.2	35.8	25.5	71.8	41.0	41.0	72.9	48.5	39.4
Incr Delay (d2), s/veh	177.4	0.0	452.9	242.8	1.8	0.0	629.4	2.9	5.7	12.4	190.9	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	0.0	129.8	4.3	19.1	1.2	16.5	18.2	18.5	0.9	56.0	10.9
LnGrp Delay(d),s/veh	249.7	0.0	495.0	316.1	37.6	25.6	701.2	43.9	46.7	85.3	239.4	40.4
LnGrp LOS	F		F	F	D	C	F	D	D	F	F	D
Approach Vol, veh/h		1708			1248			1629			2882	
Approach Delay, s/veh		472.3			62.1			115.7			215.1	
Approach LOS		F			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	58.0	9.0	71.0	8.5	61.5	10.9	69.1
Change Period (Y+Rc), s	5.5	5.0	5.5	* 5.2	5.5	5.0	5.5	* 5.2
Max Green Setting (Gmax), s	6.5	53.0	3.5	* 66	3.0	56.5	5.4	* 64
Max Q Clear Time (g_c+I1), s	8.5	55.0	5.5	67.8	3.7	40.0	7.4	40.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	15.0	0.0	22.0

Intersection Summary		
HCM 2010 Ctrl Delay		226.7
HCM 2010 LOS		F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	228	725	168	123	768	193	66	904	137	320	2297	311
Future Volume (veh/h)	228	725	168	123	768	193	66	904	137	320	2297	311
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1830	1900	1845	1803	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	228	725	168	123	768	193	66	904	137	320	2297	311
Adj No. of Lanes	2	2	0	2	2	0	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	4	4	3	6	6	3	3	3	3	3	3
Cap, veh/h	250	828	192	163	732	184	92	1928	600	380	2354	733
Arrive On Green	0.07	0.30	0.30	0.05	0.27	0.27	0.03	0.38	0.38	0.11	0.47	0.47
Sat Flow, veh/h	3408	2805	650	3408	2713	682	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	228	449	444	123	485	476	66	904	137	320	2297	311
Grp Sat Flow(s),veh/h/ln	1704	1739	1716	1704	1713	1682	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	8.6	31.9	31.9	4.6	35.0	35.0	2.5	17.5	7.7	11.9	58.0	17.1
Cycle Q Clear(g_c), s	8.6	31.9	31.9	4.6	35.0	35.0	2.5	17.5	7.7	11.9	58.0	17.1
Prop In Lane	1.00		0.38	1.00		0.41	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	250	513	506	163	462	454	92	1928	600	380	2354	733
V/C Ratio(X)	0.91	0.88	0.88	0.76	1.05	1.05	0.72	0.47	0.23	0.84	0.98	0.42
Avail Cap(c_a), veh/h	250	513	506	163	462	454	92	1928	600	504	2364	736
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.7	43.5	43.5	61.0	47.4	47.4	62.6	30.1	27.1	56.5	33.8	23.0
Incr Delay (d2), s/veh	34.8	15.0	15.2	18.0	55.4	55.8	23.4	0.2	0.2	9.5	13.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	17.5	17.3	2.6	23.5	23.2	1.5	8.2	3.3	6.1	29.7	7.4
LnGrp Delay(d),s/veh	94.5	58.5	58.7	79.1	102.8	103.1	86.1	30.3	27.3	66.0	47.1	23.3
LnGrp LOS	F	E	E	E	F	F	F	C	C	E	D	C
Approach Vol, veh/h		1121			1084			1107			2928	
Approach Delay, s/veh		65.9			100.2			33.2			46.7	
Approach LOS		E			F			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	54.8	15.0	40.0	9.0	65.7	11.7	43.3
Change Period (Y+Rc), s	5.5	* 5.1	5.5	* 5	5.5	* 5.1	5.5	* 5
Max Green Setting (Gmax), s	19.2	* 45	9.5	* 35	3.5	* 61	6.2	* 38
Max Q Clear Time (g_c+I1), s	13.9	19.5	10.6	37.0	4.5	60.0	6.6	33.9
Green Ext Time (p_c), s	0.5	24.2	0.0	0.0	0.0	0.7	0.0	2.3

Intersection Summary	
HCM 2010 Ctrl Delay	57.0
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

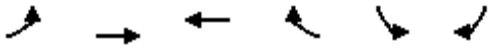
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	349	131	433	325	219	76	1050	47	502	1998	233
Future Volume (veh/h)	96	349	131	433	325	219	76	1050	47	502	1998	233
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1845	1827	1845	1845	1845
Adj Flow Rate, veh/h	96	349	131	433	325	219	76	1050	47	502	1998	233
Adj No. of Lanes	2	2	1	1	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	3	4	3	3	3
Cap, veh/h	144	441	197	453	1198	536	101	1472	454	549	2125	662
Arrive On Green	0.04	0.13	0.13	0.26	0.34	0.34	0.03	0.29	0.29	0.16	0.42	0.42
Sat Flow, veh/h	3408	3505	1568	1757	3505	1568	3375	5036	1553	3408	5036	1568
Grp Volume(v), veh/h	96	349	131	433	325	219	76	1050	47	502	1998	233
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1757	1752	1568	1688	1679	1553	1704	1679	1568
Q Serve(g_s), s	3.6	12.5	10.3	31.5	8.7	13.9	2.9	24.2	2.9	18.8	49.4	13.1
Cycle Q Clear(g_c), s	3.6	12.5	10.3	31.5	8.7	13.9	2.9	24.2	2.9	18.8	49.4	13.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	144	441	197	453	1198	536	101	1472	454	549	2125	662
V/C Ratio(X)	0.67	0.79	0.66	0.96	0.27	0.41	0.75	0.71	0.10	0.91	0.94	0.35
Avail Cap(c_a), veh/h	223	837	374	453	1520	680	101	1472	454	588	2145	668
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.3	55.1	54.1	47.4	31.0	32.7	62.5	41.1	33.5	53.6	36.0	25.5
Incr Delay (d2), s/veh	5.2	1.2	1.4	30.7	0.0	0.2	23.7	1.7	0.1	17.5	8.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	6.1	4.6	19.1	4.3	6.0	1.7	11.4	1.2	10.2	24.5	5.7
LnGrp Delay(d),s/veh	66.5	56.3	55.5	78.2	31.0	32.9	86.1	42.7	33.6	71.1	44.9	25.8
LnGrp LOS	E	E	E	E	C	C	F	D	C	E	D	C
Approach Vol, veh/h		576			977			1173			2733	
Approach Delay, s/veh		57.8			52.3			45.2			48.1	
Approach LOS		E			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	43.1	11.0	49.8	9.2	59.9	39.0	21.7
Change Period (Y+Rc), s	* 5.1	5.1	5.5	* 5.4	* 5.3	5.1	5.5	* 5.4
Max Green Setting (Gmax), s	* 22	37.0	8.5	* 56	* 3.9	55.3	33.5	* 31
Max Q Clear Time (g_c+I1), s	20.8	26.2	5.6	15.9	4.9	51.4	33.5	14.5
Green Ext Time (p_c), s	0.1	10.3	0.1	1.9	0.0	3.4	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	49.2
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	141	2268	1668	647	801	316
Future Volume (veh/h)	141	2268	1668	647	801	316
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845
Adj Flow Rate, veh/h	141	2268	1668	647	801	316
Adj No. of Lanes	1	3	3	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	132	2644	1508	561	717	640
Arrive On Green	0.08	0.52	0.42	0.42	0.41	0.41
Sat Flow, veh/h	1757	5202	3784	1346	1757	1568
Grp Volume(v), veh/h	141	2268	1542	773	801	316
Grp Sat Flow(s),veh/h/ln	1757	1679	1679	1607	1757	1568
Q Serve(g_s), s	9.0	46.7	50.0	50.0	49.0	17.9
Cycle Q Clear(g_c), s	9.0	46.7	50.0	50.0	49.0	17.9
Prop In Lane	1.00			0.84	1.00	1.00
Lane Grp Cap(c), veh/h	132	2644	1399	670	717	640
V/C Ratio(X)	1.07	0.86	1.10	1.15	1.12	0.49
Avail Cap(c_a), veh/h	132	2644	1399	670	717	640
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.5	24.6	35.0	35.0	35.5	26.3
Incr Delay (d2), s/veh	98.4	3.0	57.3	85.5	70.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	22.2	34.3	38.0	37.7	16.8
LnGrp Delay(d),s/veh	153.9	27.7	92.3	120.5	105.9	26.9
LnGrp LOS	F	C	F	F	F	C
Approach Vol, veh/h		2409	2315		1117	
Approach Delay, s/veh		35.1	101.7		83.5	
Approach LOS		D	F		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				67.0		53.0	13.0	54.0
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				63.0		49.0	9.0	50.0
Max Q Clear Time (g_c+I1), s				48.7		51.0	11.0	52.0
Green Ext Time (p_c), s				14.2		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	70.8
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1420	53	68	1019	0	13	0	137	0	148	0
Future Volume (veh/h)	0	1420	53	68	1019	0	13	0	137	0	148	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	0	1420	53	68	1019	0	13	0	137	0	148	0
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	4	1657	62	84	2142	0	17	412	350	4	241	205
Arrive On Green	0.00	0.48	0.48	0.05	0.61	0.00	0.01	0.00	0.22	0.00	0.13	0.00
Sat Flow, veh/h	1757	3446	128	1757	3597	0	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	0	721	752	68	1019	0	13	0	137	0	148	0
Grp Sat Flow(s),veh/h/ln	1757	1752	1822	1757	1752	0	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	0.0	17.5	17.6	1.9	7.7	0.0	0.4	0.0	3.6	0.0	3.7	0.0
Cycle Q Clear(g_c), s	0.0	17.5	17.6	1.9	7.7	0.0	0.4	0.0	3.6	0.0	3.7	0.0
Prop In Lane	1.00		0.07	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	4	842	876	84	2142	0	17	412	350	4	241	205
V/C Ratio(X)	0.00	0.86	0.86	0.81	0.48	0.00	0.74	0.00	0.39	0.00	0.61	0.00
Avail Cap(c_a), veh/h	109	942	980	109	2142	0	109	496	422	73	458	389
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	11.1	11.1	22.8	5.2	0.0	23.9	0.0	16.0	0.0	19.9	0.0
Incr Delay (d2), s/veh	0.0	7.2	7.1	28.3	0.2	0.0	46.3	0.0	0.7	0.0	2.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	10.1	10.5	1.5	3.7	0.0	0.4	0.0	1.6	0.0	2.0	0.0
LnGrp Delay(d),s/veh	0.0	18.3	18.2	51.1	5.3	0.0	70.1	0.0	16.7	0.0	22.4	0.0
LnGrp LOS		B	B	D	A		E		B		C	
Approach Vol, veh/h		1473			1087			150			148	
Approach Delay, s/veh		18.3			8.2			21.3			22.4	
Approach LOS		B			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	14.8	6.3	27.2	4.5	10.3	0.0	33.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	2.0	13.0	3.0	26.0	3.0	12.0	3.0	26.0
Max Q Clear Time (g_c+I1), s	0.0	5.6	3.9	19.6	2.4	5.7	0.0	9.7
Green Ext Time (p_c), s	0.0	0.7	0.0	3.6	0.0	0.7	0.0	13.8

Intersection Summary	
HCM 2010 Ctrl Delay	14.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	282	1789	102	1020	1188	350	76	642	784	395	811	90
Future Volume (veh/h)	282	1789	102	1020	1188	350	76	642	784	395	811	90
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1792	1845	1845	1792	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	282	1789	102	1020	1188	350	76	642	784	395	811	90
Adj No. of Lanes	2	3	1	2	3	1	1	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	6	3	3	6	3	3	3	3	3	3	3
Cap, veh/h	325	1259	403	477	1477	473	95	318	388	204	1493	668
Arrive On Green	0.10	0.26	0.26	0.14	0.30	0.30	0.05	0.42	0.42	0.06	0.43	0.43
Sat Flow, veh/h	3408	4893	1568	3408	4893	1568	1757	757	924	3408	3505	1568
Grp Volume(v), veh/h	282	1789	102	1020	1188	350	76	0	1426	395	811	90
Grp Sat Flow(s),veh/h/ln	1704	1631	1568	1704	1631	1568	1757	0	1682	1704	1752	1568
Q Serve(g_s), s	12.2	38.6	7.8	21.0	33.6	30.1	6.4	0.0	63.0	9.0	25.9	5.2
Cycle Q Clear(g_c), s	12.2	38.6	7.8	21.0	33.6	30.1	6.4	0.0	63.0	9.0	25.9	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.55	1.00		1.00
Lane Grp Cap(c), veh/h	325	1259	403	477	1477	473	95	0	706	204	1493	668
V/C Ratio(X)	0.87	1.42	0.25	2.14	0.80	0.74	0.80	0.00	2.02	1.93	0.54	0.13
Avail Cap(c_a), veh/h	341	1259	403	477	1477	473	164	0	706	204	1493	668
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.9	55.7	44.2	64.5	48.3	47.1	70.1	0.0	43.5	70.5	32.2	26.2
Incr Delay (d2), s/veh	19.7	194.0	0.5	518.9	3.5	6.5	14.1	0.0	463.6	436.7	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	40.0	3.4	44.3	15.7	13.9	3.5	0.0	120.2	16.6	12.6	2.3
LnGrp Delay(d),s/veh	86.6	249.7	44.7	583.4	51.8	53.6	84.2	0.0	507.1	507.2	32.6	26.3
LnGrp LOS	F	F	D	F	D	D	F		F	F	C	C
Approach Vol, veh/h		2173			2558			1502			1296	
Approach Delay, s/veh		218.9			264.0			485.7			176.8	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	45.0	12.1	67.9	18.3	51.7	13.0	67.0
Change Period (Y+Rc), s	4.0	6.4	4.0	4.0	4.0	6.4	4.0	4.0
Max Green Setting (Gmax), s	21.0	38.6	14.0	58.0	15.0	44.6	9.0	63.0
Max Q Clear Time (g_c+I1), s	23.0	40.6	8.4	27.9	14.2	35.6	11.0	65.0
Green Ext Time (p_c), s	0.0	0.0	0.1	26.0	0.1	8.9	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	280.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	592	33	162	623	19	37	287	160	4	647	91
Future Volume (veh/h)	22	592	33	162	623	19	37	287	160	4	647	91
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1759	1759	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	22	592	33	162	623	19	37	287	160	4	647	91
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	8	8	8	3	3	3	3	3	3
Cap, veh/h	48	597	33	166	723	22	62	450	251	50	629	88
Arrive On Green	0.03	0.35	0.35	0.10	0.43	0.43	0.04	0.40	0.40	0.03	0.40	0.40
Sat Flow, veh/h	1707	1682	94	1675	1698	52	1757	1114	621	1757	1583	223
Grp Volume(v), veh/h	22	0	625	162	0	642	37	0	447	4	0	738
Grp Sat Flow(s),veh/h/ln	1707	0	1776	1675	0	1750	1757	0	1735	1757	0	1805
Q Serve(g_s), s	1.8	0.0	49.4	13.6	0.0	46.9	2.9	0.0	29.2	0.3	0.0	56.0
Cycle Q Clear(g_c), s	1.8	0.0	49.4	13.6	0.0	46.9	2.9	0.0	29.2	0.3	0.0	56.0
Prop In Lane	1.00		0.05	1.00		0.03	1.00		0.36	1.00		0.12
Lane Grp Cap(c), veh/h	48	0	630	166	0	745	62	0	701	50	0	717
V/C Ratio(X)	0.45	0.00	0.99	0.97	0.00	0.86	0.60	0.00	0.64	0.08	0.00	1.03
Avail Cap(c_a), veh/h	170	0	630	166	0	745	174	0	701	174	0	717
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	67.4	0.0	45.3	63.3	0.0	36.7	67.0	0.0	33.7	66.7	0.0	42.5
Incr Delay (d2), s/veh	6.5	0.0	33.8	61.7	0.0	10.1	9.0	0.0	1.9	0.7	0.0	41.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	30.0	9.2	0.0	24.7	1.6	0.0	14.3	0.2	0.0	36.1
LnGrp Delay(d),s/veh	73.9	0.0	79.1	125.0	0.0	46.9	76.0	0.0	35.6	67.4	0.0	83.7
LnGrp LOS	E		E	F		D	E		D	E		F
Approach Vol, veh/h		647			804			484			742	
Approach Delay, s/veh		78.9			62.6			38.7			83.6	
Approach LOS		E			E			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	61.0	18.0	54.0	9.0	60.0	8.0	64.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	14.0	56.0	14.0	50.0	14.0	56.0	14.0	50.0
Max Q Clear Time (g_c+I1), s	2.3	31.2	15.6	51.4	4.9	58.0	3.8	48.9
Green Ext Time (p_c), s	0.0	9.5	0.0	0.0	0.0	0.0	0.0	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	68.0
HCM 2010 LOS	E

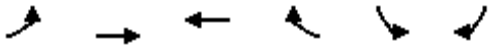
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1023	44	920	27	77	110	654	2127	17	146	1016	934
Future Volume (veh/h)	1023	44	920	27	77	110	654	2127	17	146	1016	934
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1900	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	1054	0	920	27	77	110	654	2127	17	146	1016	0
Adj No. of Lanes	2	0	1	0	1	1	1	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	981	0	438	22	62	72	426	2253	18	111	1284	400
Arrive On Green	0.28	0.00	0.28	0.05	0.05	0.05	0.25	0.44	0.44	0.06	0.26	0.00
Sat Flow, veh/h	3480	0	1553	473	1348	1568	1740	5104	41	1740	4988	1553
Grp Volume(v), veh/h	1054	0	920	104	0	110	654	1385	759	146	1016	0
Grp Sat Flow(s),veh/h/ln	1740	0	1553	1821	0	1568	1740	1663	1820	1740	1663	1553
Q Serve(g_s), s	33.7	0.0	33.7	5.5	0.0	5.5	29.3	47.7	47.8	7.6	22.7	0.0
Cycle Q Clear(g_c), s	33.7	0.0	33.7	5.5	0.0	5.5	29.3	47.7	47.8	7.6	22.7	0.0
Prop In Lane	1.00		1.00	0.26		1.00	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	981	0	438	84	0	72	426	1468	803	111	1284	400
V/C Ratio(X)	1.07	0.00	2.10	1.24	0.00	1.53	1.53	0.94	0.94	1.32	0.79	0.00
Avail Cap(c_a), veh/h	981	0	438	84	0	72	426	1485	813	111	1301	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	42.9	0.0	42.9	57.0	0.0	57.0	45.1	32.0	32.0	56.0	41.4	0.0
Incr Delay (d2), s/veh	51.1	0.0	503.8	176.8	0.0	294.6	251.9	12.2	19.0	194.0	3.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	23.0	0.0	75.7	6.9	0.0	8.3	43.8	24.2	28.1	9.6	10.8	0.0
LnGrp Delay(d),s/veh	94.0	0.0	546.7	233.8	0.0	351.6	297.1	44.2	51.0	250.0	44.5	0.0
LnGrp LOS	F		F	F		F	F	D	D	F	D	
Approach Vol, veh/h		1974			214			2798			1162	
Approach Delay, s/veh		305.0			294.4			105.1			70.3	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	34.0	35.6		11.0	12.0	57.6		39.0
Change Period (Y+Rc), s	* 4.7	4.8		5.5	* 4.4	* 4.8		5.3
Max Green Setting (Gmax), s	* 29	31.2		5.5	* 7.6	* 53		33.7
Max Q Clear Time (g_c+I1), s	31.3	24.7		7.5	9.6	49.8		35.7
Green Ext Time (p_c), s	0.0	5.0		0.0	0.0	3.0		0.0

Intersection Summary			
HCM 2010 Ctrl Delay		169.3	
HCM 2010 LOS		F	

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	31	1297	1256	285	675	258
Future Volume (veh/h)	31	1297	1256	285	675	258
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845
Adj Flow Rate, veh/h	31	1297	1256	285	675	258
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	58	1884	1347	302	702	627
Arrive On Green	0.03	0.54	0.47	0.47	0.40	0.40
Sat Flow, veh/h	1757	3597	2939	638	1757	1568
Grp Volume(v), veh/h	31	1297	767	774	675	258
Grp Sat Flow(s),veh/h/ln	1757	1752	1752	1732	1757	1568
Q Serve(g_s), s	2.2	34.7	52.4	54.4	47.8	15.1
Cycle Q Clear(g_c), s	2.2	34.7	52.4	54.4	47.8	15.1
Prop In Lane	1.00			0.37	1.00	1.00
Lane Grp Cap(c), veh/h	58	1884	829	819	702	627
V/C Ratio(X)	0.53	0.69	0.93	0.94	0.96	0.41
Avail Cap(c_a), veh/h	220	2169	829	819	729	651
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.7	21.7	31.5	32.1	37.3	27.5
Incr Delay (d2), s/veh	7.3	0.8	16.1	19.3	23.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	17.0	28.8	30.2	27.7	14.7
LnGrp Delay(d),s/veh	68.0	22.4	47.6	51.4	61.1	28.0
LnGrp LOS	E	C	D	D	E	C
Approach Vol, veh/h		1328	1541		933	
Approach Delay, s/veh		23.5	49.5		51.9	
Approach LOS		C	D		D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		72.6		55.0	8.2	64.4		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		79.0		53.0	16.0	59.0		
Max Q Clear Time (g_c+I1), s		36.7		49.8	4.2	56.4		
Green Ext Time (p_c), s		32.0		1.2	0.0	2.5		

Intersection Summary	
HCM 2010 Ctrl Delay	41.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	527	388	31	99	293	722	56	2184	54	905	1643	475
Future Volume (veh/h)	527	388	31	99	293	722	56	2184	54	905	1643	475
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	527	388	31	99	293	722	56	2184	54	905	1643	475
Adj No. of Lanes	2	3	0	2	1	2	2	3	0	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	374	1275	101	142	367	1197	91	1822	45	623	2601	810
Arrive On Green	0.11	0.27	0.27	0.04	0.20	0.20	0.03	0.36	0.36	0.18	0.52	0.52
Sat Flow, veh/h	3408	4760	375	3514	1845	3136	3408	5055	125	3408	5036	1568
Grp Volume(v), veh/h	527	272	147	99	293	722	56	1449	789	905	1643	475
Grp Sat Flow(s),veh/h/ln	1704	1679	1778	1757	1845	1568	1704	1679	1823	1704	1679	1568
Q Serve(g_s), s	16.5	9.7	9.9	4.2	22.8	27.8	2.4	54.2	54.2	27.5	35.2	31.6
Cycle Q Clear(g_c), s	16.5	9.7	9.9	4.2	22.8	27.8	2.4	54.2	54.2	27.5	35.2	31.6
Prop In Lane	1.00		0.21	1.00		1.00	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	374	899	476	142	367	1197	91	1210	657	623	2601	810
V/C Ratio(X)	1.41	0.30	0.31	0.69	0.80	0.60	0.61	1.20	1.20	1.45	0.63	0.59
Avail Cap(c_a), veh/h	374	899	476	206	368	1199	134	1210	657	623	2601	810
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.9	43.9	43.9	71.2	57.4	37.4	72.4	48.1	48.1	61.4	26.1	25.2
Incr Delay (d2), s/veh	199.5	0.1	0.1	2.3	10.9	0.6	2.5	97.0	104.8	212.3	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.1	4.5	4.9	2.1	12.7	12.1	1.2	41.3	46.3	31.3	16.4	13.9
LnGrp Delay(d),s/veh	266.4	43.9	44.1	73.5	68.3	38.0	74.9	145.1	152.8	273.7	26.5	26.0
LnGrp LOS	F	D	D	E	E	D	E	F	F	F	C	C
Approach Vol, veh/h		946			1114			2294			3023	
Approach Delay, s/veh		167.9			49.1			146.1			100.4	
Approach LOS		F			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	83.3	22.0	35.6	33.0	59.8	11.6	46.0
Change Period (Y+Rc), s	5.5	5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	5.9	75.5	16.5	* 30	27.5	* 54	8.8	* 38
Max Q Clear Time (g_c+I1), s	4.4	37.2	18.5	29.8	29.5	56.2	6.2	11.9
Green Ext Time (p_c), s	0.0	22.4	0.0	0.1	0.0	0.0	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	115.5
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	311	103	44	69	49	159	17	1681	31	71	1627	51
Future Volume (veh/h)	311	103	44	69	49	159	17	1681	31	71	1627	51
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	229	218	44	59	63	159	17	1681	31	71	1627	51
Adj No. of Lanes	1	1	0	1	1	1	1	3	0	1	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	301	255	52	218	229	195	20	2071	38	110	2285	72
Arrive On Green	0.17	0.17	0.17	0.12	0.12	0.12	0.01	0.41	0.41	0.06	0.46	0.46
Sat Flow, veh/h	1757	1491	301	1757	1845	1568	1757	5091	94	1757	5017	157
Grp Volume(v), veh/h	229	0	262	59	63	159	17	1108	604	71	1089	589
Grp Sat Flow(s),veh/h/ln	1757	0	1792	1757	1845	1568	1757	1679	1828	1757	1679	1817
Q Serve(g_s), s	10.8	0.0	12.3	2.6	2.7	8.6	0.8	25.4	25.4	3.4	22.7	22.7
Cycle Q Clear(g_c), s	10.8	0.0	12.3	2.6	2.7	8.6	0.8	25.4	25.4	3.4	22.7	22.7
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.05	1.00		0.09
Lane Grp Cap(c), veh/h	301	0	307	218	229	195	20	1366	744	110	1529	827
V/C Ratio(X)	0.76	0.00	0.85	0.27	0.28	0.82	0.83	0.81	0.81	0.65	0.71	0.71
Avail Cap(c_a), veh/h	569	0	581	549	576	490	65	1494	814	118	1587	859
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.2	0.0	34.9	34.4	34.4	37.0	42.8	22.8	22.8	39.7	19.0	19.0
Incr Delay (d2), s/veh	1.5	0.0	2.6	0.2	0.2	3.2	26.0	2.9	5.2	7.7	1.2	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.0	6.3	1.3	1.4	3.9	0.5	12.2	13.8	1.9	10.7	11.8
LnGrp Delay(d),s/veh	35.7	0.0	37.5	34.7	34.7	40.2	68.8	25.7	27.9	47.5	20.2	21.3
LnGrp LOS	D		D	C	C	D	E	C	C	D	C	C
Approach Vol, veh/h		491			281			1729			1749	
Approach Delay, s/veh		36.7			37.8			26.9			21.7	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.8	44.3		16.3	10.0	40.1		20.4
Change Period (Y+Rc), s	* 4.8	4.8		5.5	* 4.6	4.8		5.5
Max Green Setting (Gmax), s	* 3.2	41.0		27.1	* 5.8	38.6		28.1
Max Q Clear Time (g_c+I1), s	2.8	24.7		10.6	5.4	27.4		14.3
Green Ext Time (p_c), s	0.0	10.3		0.2	0.0	7.9		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	26.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	1493	551	266	1244	334	538	1211	157	489	1175	57
Future Volume (veh/h)	73	1493	551	266	1244	334	538	1211	157	489	1175	57
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	73	1493	551	266	1244	334	538	1211	157	489	1175	57
Adj No. of Lanes	2	3	0	2	3	1	2	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	116	1324	480	249	2025	631	485	1294	403	459	1227	59
Arrive On Green	0.03	0.36	0.36	0.07	0.40	0.40	0.14	0.26	0.26	0.13	0.25	0.25
Sat Flow, veh/h	3408	3648	1321	3408	5036	1568	3408	5036	1568	3408	4921	239
Grp Volume(v), veh/h	73	1372	672	266	1244	334	538	1211	157	489	801	431
Grp Sat Flow(s),veh/h/ln	1704	1679	1612	1704	1679	1568	1704	1679	1568	1704	1679	1803
Q Serve(g_s), s	2.7	47.2	47.2	9.5	25.5	21.0	18.5	30.6	10.7	17.5	30.6	30.6
Cycle Q Clear(g_c), s	2.7	47.2	47.2	9.5	25.5	21.0	18.5	30.6	10.7	17.5	30.6	30.6
Prop In Lane	1.00		0.82	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	116	1219	585	249	2025	631	485	1294	403	459	837	449
V/C Ratio(X)	0.63	1.13	1.15	1.07	0.61	0.53	1.11	0.94	0.39	1.07	0.96	0.96
Avail Cap(c_a), veh/h	173	1219	585	249	2025	631	485	1294	403	459	837	449
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.0	41.4	41.4	60.3	30.8	29.5	55.7	47.3	39.9	56.3	48.1	48.1
Incr Delay (d2), s/veh	2.1	67.5	85.5	76.2	0.4	0.4	74.1	12.5	0.2	60.6	21.3	31.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	33.3	34.9	7.1	11.8	9.1	13.7	15.6	4.7	12.1	16.6	19.1
LnGrp Delay(d),s/veh	64.1	108.9	126.9	136.4	31.3	29.9	129.9	59.8	40.1	116.9	69.4	79.8
LnGrp LOS	E	F	F	F	C	C	F	E	D	F	E	E
Approach Vol, veh/h		2117			1844			1906			1721	
Approach Delay, s/veh		113.1			46.2			77.9			85.5	
Approach LOS		F			D			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.0	38.0	9.9	58.1	23.0	39.0	15.0	53.0
Change Period (Y+Rc), s	5.5	* 5.6	5.5	5.8	5.5	* 5.6	5.5	5.8
Max Green Setting (Gmax), s	18.5	* 32	6.6	50.1	17.5	* 33	9.5	47.2
Max Q Clear Time (g_c+I1), s	20.5	32.6	4.7	27.5	19.5	32.6	11.5	49.2
Green Ext Time (p_c), s	0.0	0.0	0.0	13.4	0.0	0.7	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	81.7
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	1656	130	438	1173	428	85	515	427	580	714	299
Future Volume (veh/h)	159	1656	130	438	1173	428	85	515	427	580	714	299
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	159	1656	130	438	1173	428	85	515	427	580	714	299
Adj No. of Lanes	1	2	0	2	2	1	1	1	0	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	156	1160	90	232	1152	515	92	322	267	316	712	605
Arrive On Green	0.09	0.35	0.35	0.07	0.33	0.33	0.05	0.35	0.35	0.09	0.39	0.39
Sat Flow, veh/h	1757	3295	256	3408	3505	1568	1757	934	774	3408	1845	1568
Grp Volume(v), veh/h	159	873	913	438	1173	428	85	0	942	580	714	299
Grp Sat Flow(s),veh/h/ln	1757	1752	1799	1704	1752	1568	1757	0	1708	1704	1845	1568
Q Serve(g_s), s	12.9	51.2	51.2	9.9	47.8	36.6	7.0	0.0	50.2	13.5	56.1	21.0
Cycle Q Clear(g_c), s	12.9	51.2	51.2	9.9	47.8	36.6	7.0	0.0	50.2	13.5	56.1	21.0
Prop In Lane	1.00		0.14	1.00		1.00	1.00		0.45	1.00		1.00
Lane Grp Cap(c), veh/h	156	617	634	232	1152	515	92	0	590	316	712	605
V/C Ratio(X)	1.02	1.42	1.44	1.89	1.02	0.83	0.93	0.00	1.60	1.83	1.00	0.49
Avail Cap(c_a), veh/h	156	617	634	232	1152	515	92	0	590	316	712	605
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.3	47.1	47.1	67.8	48.8	45.1	68.6	0.0	47.6	66.0	44.7	33.9
Incr Delay (d2), s/veh	77.5	196.4	207.0	415.2	31.1	10.3	68.9	0.0	276.8	386.9	34.5	0.2
Initial Q Delay(d3),s/veh	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	58.4	61.8	18.0	28.0	17.4	5.2	0.0	68.9	23.3	35.3	9.1
LnGrp Delay(d),s/veh	143.9	243.5	254.1	483.0	79.9	55.4	137.5	0.0	324.4	452.9	79.2	34.1
LnGrp LOS	F	F	F	F	F	E	F		F	F	F	C
Approach Vol, veh/h		1945			2039			1027			1593	
Approach Delay, s/veh		240.3			161.4			308.9			206.8	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.4	52.7	13.1	61.2	15.0	56.1	19.0	55.3
Change Period (Y+Rc), s	5.5	* 4.9	5.5	* 5.1	* 5.1	* 4.9	5.5	* 5.1
Max Green Setting (Gmax), s	12.9	* 48	7.6	* 56	* 9.9	* 51	13.5	* 50
Max Q Clear Time (g_c+I1), s	14.9	49.8	9.0	58.1	11.9	53.2	15.5	52.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	218.5
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	464	1250	60	178	966	94	74	236	81	156	433	429
Future Volume (veh/h)	464	1250	60	178	966	94	74	236	81	156	433	429
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	464	1250	60	178	966	94	74	236	81	156	433	429
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	578	1545	691	290	1249	559	146	687	307	190	731	327
Arrive On Green	0.17	0.44	0.44	0.08	0.36	0.36	0.04	0.20	0.20	0.06	0.21	0.21
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	464	1250	60	178	966	94	74	236	81	156	433	429
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	9.4	22.3	1.6	3.6	17.6	3.0	1.5	4.2	3.1	3.3	8.0	15.0
Cycle Q Clear(g_c), s	9.4	22.3	1.6	3.6	17.6	3.0	1.5	4.2	3.1	3.3	8.0	15.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	578	1545	691	290	1249	559	146	687	307	190	731	327
V/C Ratio(X)	0.80	0.81	0.09	0.61	0.77	0.17	0.51	0.34	0.26	0.82	0.59	1.31
Avail Cap(c_a), veh/h	758	1545	691	711	1414	632	190	731	327	190	731	327
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.7	17.5	11.7	31.8	20.6	15.8	33.7	24.9	24.5	33.6	25.7	28.4
Incr Delay (d2), s/veh	4.7	3.3	0.1	2.1	2.4	0.1	2.7	0.3	0.5	24.4	1.3	160.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	11.3	0.7	1.8	8.9	1.3	0.8	2.1	1.4	2.2	4.0	21.0
LnGrp Delay(d),s/veh	33.4	20.8	11.7	33.9	23.0	16.0	36.3	25.2	25.0	58.0	27.0	188.8
LnGrp LOS	C	C	B	C	C	B	D	C	C	E	C	F
Approach Vol, veh/h		1774			1238			391			1018	
Approach Delay, s/veh		23.8			24.0			27.3			99.9	
Approach LOS		C			C			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	18.1	10.1	35.7	7.1	19.0	16.2	29.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	15.0	15.0	30.0	4.0	15.0	16.0	29.0
Max Q Clear Time (g_c+I1), s	5.3	6.2	5.6	24.3	3.5	17.0	11.4	19.6
Green Ext Time (p_c), s	0.0	3.6	0.5	5.2	0.0	0.0	0.8	6.0

Intersection Summary	
HCM 2010 Ctrl Delay	41.7
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	189	1932	27	55	1127	123	49	325	31	142	518	135
Future Volume (veh/h)	189	1932	27	55	1127	123	49	325	31	142	518	135
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1759	1845	1845	1759	1845
Adj Flow Rate, veh/h	189	1932	27	55	1127	123	49	325	31	142	518	135
Adj No. of Lanes	2	2	0	1	2	1	1	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	8	3	3	8	3
Cap, veh/h	239	1845	26	63	1707	764	63	481	429	188	515	459
Arrive On Green	0.07	0.52	0.52	0.04	0.49	0.49	0.04	0.27	0.27	0.06	0.29	0.29
Sat Flow, veh/h	3408	3539	49	1757	3505	1568	1757	1759	1568	3408	1759	1568
Grp Volume(v), veh/h	189	954	1005	55	1127	123	49	325	31	142	518	135
Grp Sat Flow(s),veh/h/ln	1704	1752	1836	1757	1752	1568	1757	1759	1568	1704	1759	1568
Q Serve(g_s), s	7.6	73.0	73.0	4.4	34.0	6.1	3.9	23.1	2.1	5.8	41.0	9.3
Cycle Q Clear(g_c), s	7.6	73.0	73.0	4.4	34.0	6.1	3.9	23.1	2.1	5.8	41.0	9.3
Prop In Lane	1.00		0.03	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	239	914	957	63	1707	764	63	481	429	188	515	459
V/C Ratio(X)	0.79	1.04	1.05	0.88	0.66	0.16	0.78	0.68	0.07	0.75	1.01	0.29
Avail Cap(c_a), veh/h	316	914	957	63	1707	764	63	481	429	195	515	459
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.1	33.5	33.5	67.2	27.2	20.0	67.0	45.3	37.7	65.2	49.5	38.3
Incr Delay (d2), s/veh	9.5	42.0	42.9	71.7	1.0	0.1	45.8	3.7	0.1	14.9	41.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	45.7	48.1	3.4	16.7	2.7	2.7	11.7	0.9	3.1	25.8	4.1
LnGrp Delay(d),s/veh	73.6	75.5	76.4	138.9	28.1	20.1	112.8	49.1	37.8	80.1	90.5	38.7
LnGrp LOS	E	F	F	F	C	C	F	D	D	F	F	D
Approach Vol, veh/h		2148			1305			405			795	
Approach Delay, s/veh		75.8			32.0			55.9			79.8	
Approach LOS		E			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.7	42.3	9.0	77.0	9.0	45.0	13.8	72.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	38.0	5.0	73.0	5.0	41.0	13.0	65.0
Max Q Clear Time (g_c+I1), s	7.8	25.1	6.4	75.0	5.9	43.0	9.6	36.0
Green Ext Time (p_c), s	0.0	5.0	0.0	0.0	0.0	0.0	0.2	26.3

Intersection Summary	
HCM 2010 Ctrl Delay	62.5
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	275	554	274	207	284	332	150	2100	107	347	1359	298
Future Volume (veh/h)	275	554	274	207	284	332	150	2100	107	347	1359	298
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	275	554	274	207	269	342	150	2100	107	347	1359	298
Adj No. of Lanes	2	2	1	2	1	2	2	4	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	293	921	412	272	468	1141	210	2122	524	371	1923	599
Arrive On Green	0.09	0.26	0.26	0.08	0.25	0.25	0.06	0.34	0.34	0.11	0.39	0.39
Sat Flow, veh/h	3408	3505	1568	3514	1845	3136	3375	6285	1553	3375	4988	1553
Grp Volume(v), veh/h	275	554	274	207	269	342	150	2100	107	347	1359	298
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1757	1845	1568	1688	1571	1553	1688	1663	1553
Q Serve(g_s), s	8.4	14.5	16.3	6.0	13.3	8.1	4.6	34.7	5.1	10.7	24.1	15.3
Cycle Q Clear(g_c), s	8.4	14.5	16.3	6.0	13.3	8.1	4.6	34.7	5.1	10.7	24.1	15.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	293	921	412	272	468	1141	210	2122	524	371	1923	599
V/C Ratio(X)	0.94	0.60	0.67	0.76	0.57	0.30	0.72	0.99	0.20	0.93	0.71	0.50
Avail Cap(c_a), veh/h	293	982	439	397	565	1305	236	2122	524	371	1923	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.5	33.8	34.4	47.3	34.1	23.7	48.1	34.4	24.6	46.1	27.1	24.4
Incr Delay (d2), s/veh	35.7	1.2	4.1	2.5	3.0	0.4	6.8	17.0	0.1	30.1	1.9	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	7.2	7.6	3.0	7.2	3.6	2.3	17.5	2.2	6.5	11.4	6.9
LnGrp Delay(d),s/veh	83.2	34.9	38.6	49.8	37.1	24.1	54.9	51.5	24.7	76.2	29.0	26.6
LnGrp LOS	F	C	D	D	D	C	D	D	C	E	C	C
Approach Vol, veh/h		1103			818			2357			2004	
Approach Delay, s/veh		47.9			34.9			50.5			36.8	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	45.7	14.5	32.3	17.0	40.7	13.6	33.3
Change Period (Y+Rc), s	5.5	* 5.4	5.5	5.8	5.5	* 5.4	5.5	* 5.8
Max Green Setting (Gmax), s	7.3	* 40	9.0	32.0	11.5	* 35	11.8	* 29
Max Q Clear Time (g_c+I1), s	6.6	26.1	10.4	15.3	12.7	36.7	8.0	18.3
Green Ext Time (p_c), s	0.0	13.1	0.0	11.2	0.0	0.0	0.1	8.1

Intersection Summary	
HCM 2010 Ctrl Delay	43.6
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	522	1183	795	497	678	146	541	1061	670	60	1676	154
Future Volume (veh/h)	522	1183	795	497	678	146	541	1061	670	60	1676	154
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1827	1827	1827	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	522	1183	795	497	678	146	541	1061	670	60	1676	154
Adj No. of Lanes	2	2	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	4	4	4	4	4	4	4	4	4
Cap, veh/h	566	1074	480	393	1281	399	416	1980	616	96	1507	469
Arrive On Green	0.17	0.31	0.31	0.12	0.26	0.26	0.12	0.40	0.40	0.03	0.30	0.30
Sat Flow, veh/h	3408	3505	1568	3375	4988	1553	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	522	1183	795	497	678	146	541	1061	670	60	1676	154
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1688	1663	1553	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	22.6	46.0	46.0	17.5	17.6	11.6	18.5	24.5	59.6	2.6	45.4	11.5
Cycle Q Clear(g_c), s	22.6	46.0	46.0	17.5	17.6	11.6	18.5	24.5	59.6	2.6	45.4	11.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	566	1074	480	393	1281	399	416	1980	616	96	1507	469
V/C Ratio(X)	0.92	1.10	1.66	1.26	0.53	0.37	1.30	0.54	1.09	0.63	1.11	0.33
Avail Cap(c_a), veh/h	715	1074	480	393	1281	399	416	1980	616	97	1507	469
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.6	52.1	52.1	66.3	48.0	45.8	65.8	34.7	45.3	72.2	52.4	40.6
Incr Delay (d2), s/veh	13.6	59.7	304.0	137.5	1.2	1.9	152.1	0.5	62.2	9.0	60.5	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.7	31.1	60.5	15.7	8.2	5.2	17.4	11.3	36.1	1.4	29.2	5.1
LnGrp Delay(d),s/veh	75.3	111.8	356.1	203.8	49.2	47.7	217.9	35.2	107.4	81.2	112.9	41.4
LnGrp LOS	E	F	F	F	D	D	F	D	F	F	F	D
Approach Vol, veh/h		2500			1321			2272			1890	
Approach Delay, s/veh		181.9			107.2			100.0			106.1	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.0	51.2	30.4	44.6	9.8	65.4	23.0	52.0
Change Period (Y+Rc), s	5.5	* 5.8	5.5	* 6	5.5	* 5.8	5.5	6.0
Max Green Setting (Gmax), s	18.5	* 45	31.5	* 32	4.3	* 60	17.5	46.0
Max Q Clear Time (g_c+I1), s	20.5	47.4	24.6	19.6	4.6	61.6	19.5	48.0
Green Ext Time (p_c), s	0.0	0.0	0.3	12.4	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	128.3
HCM 2010 LOS	F

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	709	1573	416	38	917	292	281	1314	39	772	1755	342
Future Volume (veh/h)	709	1573	416	38	917	292	281	1314	39	772	1755	342
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	709	1573	416	38	917	292	281	1314	39	772	1755	342
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	603	1892	589	66	1099	342	291	1265	394	665	1818	566
Arrive On Green	0.18	0.38	0.38	0.02	0.22	0.22	0.09	0.25	0.25	0.20	0.36	0.36
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	709	1573	416	38	917	292	281	1314	39	772	1755	342
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	26.5	42.5	33.8	1.7	26.1	26.8	12.4	38.0	2.9	29.5	51.7	26.9
Cycle Q Clear(g_c), s	26.5	42.5	33.8	1.7	26.1	26.8	12.4	38.0	2.9	29.5	51.7	26.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	603	1892	589	66	1099	342	291	1265	394	665	1818	566
V/C Ratio(X)	1.18	0.83	0.71	0.58	0.83	0.85	0.97	1.04	0.10	1.16	0.97	0.60
Avail Cap(c_a), veh/h	603	1896	590	82	1143	356	291	1265	394	665	1818	566
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.6	42.4	39.7	72.8	56.0	56.3	68.2	55.9	42.8	60.1	46.7	38.8
Incr Delay (d2), s/veh	95.6	3.1	3.3	2.9	4.9	16.4	43.3	35.8	0.0	88.5	13.7	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.4	20.2	15.2	0.8	12.6	13.2	7.5	21.5	1.2	21.8	26.0	11.7
LnGrp Delay(d),s/veh	157.2	45.5	43.0	75.7	60.9	72.7	111.5	91.7	42.8	148.6	60.4	40.1
LnGrp LOS	F	D	D	E	E	E	F	F	D	F	E	D
Approach Vol, veh/h		2698			1247			1634			2869	
Approach Delay, s/veh		74.5			64.1			94.0			81.7	
Approach LOS		E			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.4	60.6	32.0	38.8	35.0	44.0	8.4	62.4
Change Period (Y+Rc), s	5.5	6.0	5.5	* 6.1	5.5	* 6	5.5	* 6.1
Max Green Setting (Gmax), s	12.9	54.0	26.5	* 34	29.5	* 38	3.6	* 56
Max Q Clear Time (g_c+I1), s	14.4	53.7	28.5	28.8	31.5	40.0	3.7	44.5
Green Ext Time (p_c), s	0.0	0.3	0.0	3.9	0.0	0.0	0.0	7.2

Intersection Summary	
HCM 2010 Ctrl Delay	79.2
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	725	1572	357	116	867	372	253	1286	104	729	1852	841
Future Volume (veh/h)	725	1572	357	116	867	372	253	1286	104	729	1852	841
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1759	1759	1759	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	725	1572	357	116	867	372	253	1286	104	729	1852	841
Adj No. of Lanes	2	3	0	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	8	8	8	4	4	4	4	4	4
Cap, veh/h	713	1466	331	132	903	281	252	1260	392	686	1902	592
Arrive On Green	0.21	0.36	0.36	0.04	0.19	0.19	0.07	0.25	0.25	0.20	0.38	0.38
Sat Flow, veh/h	3408	4112	927	3250	4803	1495	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	725	1281	648	116	867	372	253	1286	104	729	1852	841
Grp Sat Flow(s),veh/h/ln	1704	1679	1681	1625	1601	1495	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	31.4	53.5	53.5	5.3	26.8	28.2	11.2	37.9	8.0	30.5	54.8	57.2
Cycle Q Clear(g_c), s	31.4	53.5	53.5	5.3	26.8	28.2	11.2	37.9	8.0	30.5	54.8	57.2
Prop In Lane	1.00		0.55	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	713	1197	600	132	903	281	252	1260	392	686	1902	592
V/C Ratio(X)	1.02	1.07	1.08	0.88	0.96	1.32	1.00	1.02	0.27	1.06	0.97	1.42
Avail Cap(c_a), veh/h	713	1197	600	132	903	281	252	1260	392	686	1902	592
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.3	48.2	48.3	71.6	60.3	60.9	69.4	56.0	44.9	59.8	45.7	46.4
Incr Delay (d2), s/veh	37.8	47.0	60.2	42.6	20.7	168.1	57.7	30.6	0.1	52.1	14.8	198.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.5	32.6	34.8	3.2	13.6	24.7	7.2	21.0	3.5	19.2	27.8	57.2
LnGrp Delay(d),s/veh	97.1	95.2	108.5	114.2	81.0	229.0	127.1	86.7	45.0	111.8	60.5	245.3
LnGrp LOS	F	F	F	F	F	F	F	F	D	F	E	F
Approach Vol, veh/h		2654			1355			1643			3422	
Approach Delay, s/veh		99.0			124.5			90.3			116.8	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.7	62.7	36.9	33.7	36.0	43.4	11.6	59.0
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	11.2	57.2	31.4	28.2	30.5	37.9	6.1	53.5
Max Q Clear Time (g_c+I1), s	13.2	59.2	33.4	30.2	32.5	39.9	7.3	55.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	107.9
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	770	1155	171	169	798	163	139	896	318	252	1431	465
Future Volume (veh/h)	770	1155	171	169	798	163	139	896	318	252	1431	465
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845	1845	1827	1827	1827	1831	1900
Adj Flow Rate, veh/h	770	1155	171	169	798	163	139	896	318	252	1431	465
Adj No. of Lanes	2	2	1	0	1	1	1	2	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	4	4	4	4	4
Cap, veh/h	718	738	330	94	443	460	82	1000	447	268	855	265
Arrive On Green	0.21	0.21	0.21	0.29	0.29	0.29	0.05	0.29	0.29	0.08	0.33	0.33
Sat Flow, veh/h	3408	3505	1568	320	1509	1568	1757	3471	1553	3375	2617	811
Grp Volume(v), veh/h	770	1155	171	967	0	163	139	896	318	252	928	968
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1829	0	1568	1757	1736	1553	1688	1740	1688
Q Serve(g_s), s	31.6	31.6	14.5	44.0	0.0	12.3	7.0	37.2	27.5	11.1	49.0	49.0
Cycle Q Clear(g_c), s	31.6	31.6	14.5	44.0	0.0	12.3	7.0	37.2	27.5	11.1	49.0	49.0
Prop In Lane	1.00		1.00	0.17		1.00	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	718	738	330	536	0	460	82	1000	447	268	568	551
V/C Ratio(X)	1.07	1.56	0.52	1.80	0.00	0.35	1.70	0.90	0.71	0.94	1.63	1.76
Avail Cap(c_a), veh/h	718	738	330	536	0	460	82	1000	447	268	568	551
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.2	59.2	52.4	53.0	0.0	41.8	71.5	51.2	47.8	68.7	50.5	50.5
Incr Delay (d2), s/veh	54.7	260.5	1.4	368.6	0.0	0.5	359.5	10.6	5.2	39.3	292.5	347.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.3	42.0	6.4	77.1	0.0	5.4	11.6	19.3	12.5	6.7	69.7	76.1
LnGrp Delay(d),s/veh	113.9	319.7	53.9	421.6	0.0	42.3	431.0	61.9	53.0	108.0	343.0	398.1
LnGrp LOS	F	F	D	F		D	F	E	D	F	F	F
Approach Vol, veh/h		2096			1130			1353			2148	
Approach Delay, s/veh		222.4			366.9			97.7			340.3	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.0	54.0		37.0	16.8	48.2		48.0
Change Period (Y+Rc), s	4.0	5.0		* 5.4	* 4.9	5.0		4.0
Max Green Setting (Gmax), s	7.0	49.0		* 32	* 12	43.2		44.0
Max Q Clear Time (g_c+I1), s	9.0	51.0		33.6	13.1	39.2		46.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	3.9		0.0

Intersection Summary			
HCM 2010 Ctrl Delay		259.2	
HCM 2010 LOS		F	

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	409	1696	105	330	996	256	63	695	346	302	1169	288
Future Volume (veh/h)	409	1696	105	330	996	256	63	695	346	302	1169	288
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1792	1845	1845	1845	1827	1845	1845
Adj Flow Rate, veh/h	409	1696	105	330	996	256	63	695	346	302	1169	288
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	6	3	3	3	4	3	3
Cap, veh/h	467	1532	685	303	1363	739	76	805	360	325	1064	691
Arrive On Green	0.14	0.44	0.44	0.09	0.39	0.39	0.02	0.23	0.23	0.10	0.30	0.30
Sat Flow, veh/h	3408	3505	1568	3408	3505	1524	3408	3505	1568	3375	3505	1568
Grp Volume(v), veh/h	409	1696	105	330	996	256	63	695	346	302	1169	288
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1524	1704	1752	1568	1688	1752	1568
Q Serve(g_s), s	15.9	59.0	5.5	12.0	32.8	14.0	2.5	25.7	29.4	12.0	41.0	17.0
Cycle Q Clear(g_c), s	15.9	59.0	5.5	12.0	32.8	14.0	2.5	25.7	29.4	12.0	41.0	17.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	467	1532	685	303	1363	739	76	805	360	325	1064	691
V/C Ratio(X)	0.88	1.11	0.15	1.09	0.73	0.35	0.83	0.86	0.96	0.93	1.10	0.42
Avail Cap(c_a), veh/h	555	1532	685	303	1363	739	76	805	360	325	1064	691
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.1	38.0	22.9	61.5	35.2	21.5	65.7	50.0	51.4	60.5	47.0	25.9
Incr Delay (d2), s/veh	12.9	58.3	0.1	77.7	2.0	0.3	51.5	9.6	37.1	31.7	58.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	40.9	2.4	8.9	16.2	5.9	1.7	13.5	16.5	7.0	28.5	7.4
LnGrp Delay(d),s/veh	70.1	96.3	23.0	139.2	37.3	21.8	117.2	59.6	88.5	92.2	105.5	26.3
LnGrp LOS	E	F	C	F	D	C	F	E	F	F	F	C
Approach Vol, veh/h		2210			1582			1104			1759	
Approach Delay, s/veh		88.0			56.0			71.9			90.2	
Approach LOS		F			E			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	65.0	7.0	47.0	22.5	58.5	17.0	37.0
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	12.0	59.0	3.0	41.0	22.0	49.0	13.0	31.0
Max Q Clear Time (g_c+I1), s	14.0	61.0	4.5	43.0	17.9	34.8	14.0	31.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.6	13.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	78.3
HCM 2010 LOS	E

Notes

User approved changes to right turn type.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	552	15	19	543	1124	484
Future Volume (veh/h)	552	15	19	543	1124	484
Number	7	14	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1900	1827	1827	1827	1900
Adj Flow Rate, veh/h	552	15	19	543	1124	484
Adj No. of Lanes	0	0	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	4	4	4	4
Cap, veh/h	560	15	22	1931	1173	490
Arrive On Green	0.35	0.35	0.01	0.56	0.49	0.49
Sat Flow, veh/h	1594	43	1740	3563	2480	998
Grp Volume(v), veh/h	568	0	19	543	807	801
Grp Sat Flow(s),veh/h/ln	1640	0	1740	1736	1736	1651
Q Serve(g_s), s	36.2	0.0	1.1	8.7	46.6	50.4
Cycle Q Clear(g_c), s	36.2	0.0	1.1	8.7	46.6	50.4
Prop In Lane	0.97	0.03	1.00			0.60
Lane Grp Cap(c), veh/h	577	0	22	1931	853	811
V/C Ratio(X)	0.99	0.00	0.86	0.28	0.95	0.99
Avail Cap(c_a), veh/h	577	0	101	2101	853	811
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.8	0.0	51.9	12.3	25.5	26.4
Incr Delay (d2), s/veh	33.6	0.0	27.3	0.0	18.9	28.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.6	0.0	0.7	4.2	26.7	29.3
LnGrp Delay(d),s/veh	67.4	0.0	79.1	12.3	44.4	54.8
LnGrp LOS	E		E	B	D	D
Approach Vol, veh/h	568			562	1608	
Approach Delay, s/veh	67.4			14.6	49.6	
Approach LOS	E			B	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	6.8	57.4		41.0		64.2		
Change Period (Y+Rc), s	5.5	* 5.7		4.0		* 5.7		
Max Green Setting (Gmax), s	6.1	* 52		37.0		* 64		
Max Q Clear Time (g_c+I1), s	3.1	52.4		38.2		10.7		
Green Ext Time (p_c), s	0.0	0.0		0.0		7.9		

Intersection Summary	
HCM 2010 Ctrl Delay	46.1
HCM 2010 LOS	D

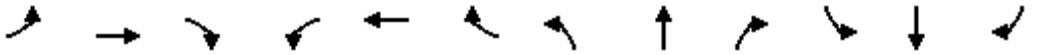
Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	365	46	15	18	27	12	39	1631	0	25	1268	288
Future Volume (veh/h)	365	46	15	18	27	12	39	1631	0	25	1268	288
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1583	1845	1845	1845	1845	1810	1845	1845	1845
Adj Flow Rate, veh/h	365	46	15	18	27	12	39	1631	0	25	1268	288
Adj No. of Lanes	2	1	1	1	1	1	2	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	20	3	3	3	3	5	3	3	3
Cap, veh/h	449	303	257	25	91	77	102	2037	894	38	2009	899
Arrive On Green	0.13	0.16	0.16	0.02	0.05	0.05	0.03	0.58	0.00	0.02	0.57	0.57
Sat Flow, veh/h	3408	1845	1568	1508	1845	1568	3408	3505	1538	1757	3505	1568
Grp Volume(v), veh/h	365	46	15	18	27	12	39	1631	0	25	1268	288
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1508	1845	1568	1704	1752	1538	1757	1752	1568
Q Serve(g_s), s	7.7	1.6	0.6	0.9	1.0	0.5	0.8	27.0	0.0	1.0	17.9	7.1
Cycle Q Clear(g_c), s	7.7	1.6	0.6	0.9	1.0	0.5	0.8	27.0	0.0	1.0	17.9	7.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	449	303	257	25	91	77	102	2037	894	38	2009	899
V/C Ratio(X)	0.81	0.15	0.06	0.71	0.30	0.16	0.38	0.80	0.00	0.66	0.63	0.32
Avail Cap(c_a), veh/h	460	548	466	81	398	339	184	2082	914	95	2082	931
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.3	26.5	26.1	36.2	34.0	33.7	35.3	12.1	0.0	36.0	10.6	8.3
Incr Delay (d2), s/veh	10.5	0.2	0.1	31.1	1.8	0.9	2.4	2.3	0.0	17.4	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	0.8	0.3	0.6	0.6	0.3	0.4	13.6	0.0	0.7	8.8	3.1
LnGrp Delay(d),s/veh	41.8	26.8	26.2	67.3	35.8	34.7	37.6	14.4	0.0	53.4	11.2	8.5
LnGrp LOS	D	C	C	E	D	C	D	B		D	B	A
Approach Vol, veh/h		426			57			1670			1581	
Approach Delay, s/veh		39.6			45.5			15.0			11.3	
Approach LOS		D			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.6	47.1	5.2	16.2	6.2	46.5	13.8	7.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	44.0	4.0	22.0	4.0	44.0	10.0	16.0
Max Q Clear Time (g_c+I1), s	3.0	29.0	2.9	3.6	2.8	19.9	9.7	3.0
Green Ext Time (p_c), s	0.0	14.1	0.0	0.4	0.0	21.9	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	16.7
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	984	765	4	62	455	87	53	835	72	85	660	713
Future Volume (veh/h)	984	765	4	62	455	87	53	835	72	85	660	713
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1810	1810	1810	1810	1810	1810
Adj Flow Rate, veh/h	984	765	4	62	455	87	53	835	72	85	660	713
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	5	5	5	5	5	5
Cap, veh/h	993	1680	752	104	766	343	91	835	373	116	860	385
Arrive On Green	0.30	0.49	0.49	0.03	0.22	0.22	0.03	0.24	0.24	0.03	0.25	0.25
Sat Flow, veh/h	3312	3406	1524	3312	3406	1524	3343	3438	1538	3343	3438	1538
Grp Volume(v), veh/h	984	765	4	62	455	87	53	835	72	85	660	713
Grp Sat Flow(s),veh/h/ln	1656	1703	1524	1656	1703	1524	1672	1719	1538	1672	1719	1538
Q Serve(g_s), s	31.7	15.7	0.1	2.0	12.8	5.0	1.7	26.0	4.0	2.7	19.1	26.8
Cycle Q Clear(g_c), s	31.7	15.7	0.1	2.0	12.8	5.0	1.7	26.0	4.0	2.7	19.1	26.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	993	1680	752	104	766	343	91	835	373	116	860	385
V/C Ratio(X)	0.99	0.46	0.01	0.60	0.59	0.25	0.58	1.00	0.19	0.74	0.77	1.85
Avail Cap(c_a), veh/h	993	1705	763	170	859	384	94	835	373	116	860	385
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.3	17.7	13.8	51.2	37.1	34.1	51.5	40.5	32.2	51.2	37.3	40.1
Incr Delay (d2), s/veh	26.3	0.4	0.0	2.0	1.7	0.8	5.4	31.2	0.2	19.2	4.2	393.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.1	7.4	0.1	0.9	6.2	2.2	0.8	15.9	1.7	1.6	9.6	53.5
LnGrp Delay(d),s/veh	63.6	18.1	13.8	53.2	38.8	34.9	56.9	71.7	32.5	70.4	41.5	434.1
LnGrp LOS	E	B	B	D	D	C	E	F	C	E	D	F
Approach Vol, veh/h		1753			604			960			1458	
Approach Delay, s/veh		43.7			39.7			68.0			235.1	
Approach LOS		D			D			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	36.7	30.1	7.5	32.8	8.0	58.8	8.3	32.0
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	32.1	27.0	3.0	26.7	5.5	53.6	3.7	26.0
Max Q Clear Time (g_c+I1), s	33.7	14.8	3.7	28.8	4.0	17.7	4.7	28.0
Green Ext Time (p_c), s	0.0	9.3	0.0	0.0	0.0	20.5	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		106.5
HCM 2010 LOS		F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	764	54	412	908	111	89	568	164	161	870	202
Future Volume (veh/h)	135	764	54	412	908	111	89	568	164	161	870	202
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	135	764	54	412	908	111	89	568	164	161	870	202
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	166	779	55	432	1352	605	98	808	362	193	998	447
Arrive On Green	0.09	0.23	0.23	0.25	0.39	0.39	0.06	0.23	0.23	0.11	0.28	0.28
Sat Flow, veh/h	1757	3321	235	1757	3505	1568	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	135	403	415	412	908	111	89	568	164	161	870	202
Grp Sat Flow(s),veh/h/ln	1757	1752	1803	1757	1752	1568	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	6.7	20.5	20.5	20.7	19.2	4.2	4.5	13.3	8.0	8.0	21.1	9.5
Cycle Q Clear(g_c), s	6.7	20.5	20.5	20.7	19.2	4.2	4.5	13.3	8.0	8.0	21.1	9.5
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	166	411	423	432	1352	605	98	808	362	193	998	447
V/C Ratio(X)	0.81	0.98	0.98	0.95	0.67	0.18	0.91	0.70	0.45	0.83	0.87	0.45
Avail Cap(c_a), veh/h	196	411	423	432	1352	605	98	822	368	196	1018	456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.7	34.0	34.0	33.2	22.8	18.2	42.0	31.6	29.6	39.0	30.4	26.3
Incr Delay (d2), s/veh	19.3	39.0	38.5	31.7	1.3	0.1	61.6	2.7	0.9	25.0	8.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	14.3	14.7	13.8	9.5	1.8	3.9	6.8	3.5	5.2	11.3	4.2
LnGrp Delay(d),s/veh	59.1	73.0	72.6	64.9	24.1	18.3	103.7	34.3	30.5	64.0	38.7	27.0
LnGrp LOS	E	E	E	E	C	B	F	C	C	E	D	C
Approach Vol, veh/h		953			1431			821			1233	
Approach Delay, s/veh		70.8			35.4			41.0			40.1	
Approach LOS		E			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.9	24.6	26.0	25.0	9.0	29.5	12.5	38.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	21.0	22.0	21.0	5.0	26.0	10.0	33.0
Max Q Clear Time (g_c+I1), s	10.0	15.3	22.7	22.5	6.5	23.1	8.7	21.2
Green Ext Time (p_c), s	0.0	4.4	0.0	0.0	0.0	2.4	0.0	8.4

Intersection Summary	
HCM 2010 Ctrl Delay	45.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	643	153	135	693	110	277	795	125	150	1227	187
Future Volume (veh/h)	60	643	153	135	693	110	277	795	125	150	1227	187
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	60	643	153	135	693	110	277	795	125	150	1227	187
Adj No. of Lanes	1	2	1	1	2	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	76	662	296	137	676	107	271	1352	213	184	1209	183
Arrive On Green	0.04	0.19	0.19	0.08	0.22	0.22	0.16	0.45	0.45	0.11	0.40	0.40
Sat Flow, veh/h	1757	3505	1568	1757	3031	481	1740	3006	473	1740	3023	458
Grp Volume(v), veh/h	60	643	153	135	400	403	277	459	461	150	702	712
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1760	1740	1736	1744	1740	1736	1746
Q Serve(g_s), s	3.0	16.4	7.9	6.9	20.1	20.1	14.0	17.8	17.8	7.6	36.0	36.0
Cycle Q Clear(g_c), s	3.0	16.4	7.9	6.9	20.1	20.1	14.0	17.8	17.8	7.6	36.0	36.0
Prop In Lane	1.00		1.00	1.00		0.27	1.00		0.27	1.00		0.26
Lane Grp Cap(c), veh/h	76	662	296	137	391	393	271	780	784	184	694	698
V/C Ratio(X)	0.78	0.97	0.52	0.99	1.02	1.03	1.02	0.59	0.59	0.81	1.01	1.02
Avail Cap(c_a), veh/h	78	662	296	137	391	393	271	780	784	290	694	698
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.6	36.3	32.8	41.5	35.0	35.0	38.0	18.5	18.5	39.4	27.0	27.0
Incr Delay (d2), s/veh	38.9	27.8	1.6	73.1	51.8	52.1	60.9	1.2	1.2	9.4	36.8	39.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	10.5	3.5	6.1	15.3	15.4	11.3	8.8	8.8	4.1	24.3	24.9
LnGrp Delay(d),s/veh	81.5	64.1	34.4	114.6	86.7	87.0	98.9	19.7	19.7	48.7	63.8	66.2
LnGrp LOS	F	E	C	F	F	F	F	B	B	D	F	F
Approach Vol, veh/h		856			938			1197			1564	
Approach Delay, s/veh		60.0			90.9			38.0			63.5	
Approach LOS		E			F			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.5	44.5	11.0	21.0	18.0	40.0	7.9	24.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	15.0	35.0	7.0	17.0	14.0	36.0	4.0	20.0
Max Q Clear Time (g_c+I1), s	9.6	19.8	8.9	18.4	16.0	38.0	5.0	22.1
Green Ext Time (p_c), s	0.2	12.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	61.8
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	1202	449	45	1624	199	186	771	64	32	1395	152
Future Volume (veh/h)	188	1202	449	45	1624	199	186	771	64	32	1395	152
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1827	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	188	1202	449	45	1624	199	186	771	64	32	1395	152
Adj No. of Lanes	1	3	0	1	3	1	1	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	174	1314	490	57	1496	466	174	1473	122	40	1308	585
Arrive On Green	0.10	0.37	0.37	0.03	0.30	0.30	0.10	0.45	0.45	0.02	0.38	0.38
Sat Flow, veh/h	1740	3581	1335	1740	4988	1553	1740	3246	269	1740	3471	1553
Grp Volume(v), veh/h	188	1116	535	45	1624	199	186	412	423	32	1395	152
Grp Sat Flow(s),veh/h/ln	1740	1663	1591	1740	1663	1553	1740	1736	1779	1740	1736	1553
Q Serve(g_s), s	13.0	41.6	41.7	3.3	39.0	13.4	13.0	22.1	22.1	2.4	49.0	8.8
Cycle Q Clear(g_c), s	13.0	41.6	41.7	3.3	39.0	13.4	13.0	22.1	22.1	2.4	49.0	8.8
Prop In Lane	1.00		0.84	1.00		1.00	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	174	1220	584	57	1496	466	174	788	808	40	1308	585
V/C Ratio(X)	1.08	0.91	0.92	0.78	1.09	0.43	1.07	0.52	0.52	0.80	1.07	0.26
Avail Cap(c_a), veh/h	174	1220	584	67	1496	466	174	788	808	80	1308	585
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.5	39.2	39.2	62.4	45.5	36.5	58.5	25.4	25.4	63.2	40.5	28.0
Incr Delay (d2), s/veh	91.3	10.7	19.4	39.5	50.1	0.6	87.8	0.6	0.6	28.7	44.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.6	20.9	21.4	2.2	24.8	5.8	10.5	10.7	10.9	1.5	31.5	3.8
LnGrp Delay(d),s/veh	149.8	49.9	58.6	101.9	95.6	37.2	146.3	26.1	26.1	91.9	85.1	28.2
LnGrp LOS	F	D	E	F	F	D	F	C	C	F	F	C
Approach Vol, veh/h		1839			1868			1021			1579	
Approach Delay, s/veh		62.6			89.6			48.0			79.8	
Approach LOS		E			F			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	63.0	8.3	51.7	17.0	53.0	17.0	43.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	56.0	5.0	47.0	13.0	49.0	13.0	39.0
Max Q Clear Time (g_c+I1), s	4.4	24.1	5.3	43.7	15.0	51.0	15.0	41.0
Green Ext Time (p_c), s	0.0	22.3	0.0	3.2	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	72.5
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	152	1434	136	278	1394	10	248	288	140	302	1162	147
Future Volume (veh/h)	152	1434	136	278	1394	10	248	288	140	302	1162	147
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1827	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	152	1434	136	278	1394	10	248	288	140	302	1162	147
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	3	3	3	3	3	3
Cap, veh/h	139	1304	123	174	1481	663	164	703	315	327	1028	460
Arrive On Green	0.08	0.41	0.41	0.10	0.43	0.43	0.09	0.20	0.20	0.19	0.29	0.29
Sat Flow, veh/h	1740	3207	302	1740	3471	1553	1757	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	152	772	798	278	1394	10	248	288	140	302	1162	147
Grp Sat Flow(s),veh/h/ln	1740	1736	1774	1740	1736	1553	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	12.0	61.0	61.0	15.0	57.7	0.6	14.0	10.7	11.8	25.3	44.0	11.0
Cycle Q Clear(g_c), s	12.0	61.0	61.0	15.0	57.7	0.6	14.0	10.7	11.8	25.3	44.0	11.0
Prop In Lane	1.00		0.17	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	139	706	721	174	1481	663	164	703	315	327	1028	460
V/C Ratio(X)	1.09	1.09	1.11	1.60	0.94	0.02	1.51	0.41	0.45	0.92	1.13	0.32
Avail Cap(c_a), veh/h	139	706	721	174	1481	663	164	703	315	410	1028	460
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.0	44.5	44.5	67.5	41.2	24.8	68.0	52.2	52.6	60.0	53.0	41.3
Incr Delay (d2), s/veh	103.1	62.4	66.5	294.3	12.1	0.0	259.4	0.4	1.0	23.3	71.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	41.5	43.2	21.4	30.2	0.2	18.6	5.2	5.2	14.5	31.4	4.8
LnGrp Delay(d),s/veh	172.1	106.9	111.0	361.8	53.3	24.8	327.4	52.6	53.6	83.3	124.1	41.7
LnGrp LOS	F	F	F	F	D	C	F	D	D	F	F	D
Approach Vol, veh/h		1722			1682			676			1611	
Approach Delay, s/veh		114.5			104.1			153.6			109.0	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	31.9	34.1	19.0	65.0	18.0	48.0	16.0	68.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	35.0	23.0	15.0	61.0	14.0	44.0	12.0	64.0
Max Q Clear Time (g_c+I1), s	27.3	13.8	17.0	63.0	16.0	46.0	14.0	59.7
Green Ext Time (p_c), s	0.6	6.7	0.0	0.0	0.0	0.0	0.0	4.1

Intersection Summary		
HCM 2010 Ctrl Delay		114.5
HCM 2010 LOS		F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	590	41	70	596	51	61	967	84	181	1391	641
Future Volume (veh/h)	61	590	41	70	596	51	61	967	84	181	1391	641
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1827	1827	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	61	590	41	70	596	51	61	967	84	181	1391	641
Adj No. of Lanes	2	3	1	2	3	1	2	2	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	139	1024	319	149	1039	324	139	1366	119	271	1603	717
Arrive On Green	0.04	0.21	0.21	0.04	0.21	0.21	0.04	0.42	0.42	0.08	0.46	0.46
Sat Flow, veh/h	3375	4988	1553	3375	4988	1553	3375	3232	281	3375	3471	1553
Grp Volume(v), veh/h	61	590	41	70	596	51	61	519	532	181	1391	641
Grp Sat Flow(s),veh/h/ln	1688	1663	1553	1688	1663	1553	1688	1736	1777	1688	1736	1553
Q Serve(g_s), s	1.1	6.9	1.4	1.3	6.9	1.7	1.1	15.9	15.9	3.4	23.3	24.5
Cycle Q Clear(g_c), s	1.1	6.9	1.4	1.3	6.9	1.7	1.1	15.9	15.9	3.4	23.3	24.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	139	1024	319	149	1039	324	139	734	751	271	1603	717
V/C Ratio(X)	0.44	0.58	0.13	0.47	0.57	0.16	0.44	0.71	0.71	0.67	0.87	0.89
Avail Cap(c_a), veh/h	209	1234	384	209	1234	384	209	751	770	313	1610	720
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	23.2	21.0	30.2	23.0	20.9	30.3	15.4	15.4	28.9	15.6	15.9
Incr Delay (d2), s/veh	2.2	0.5	0.2	2.3	0.5	0.2	2.2	3.0	2.9	4.4	5.3	13.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.2	0.6	0.7	3.2	0.8	0.6	8.1	8.3	1.7	12.2	13.0
LnGrp Delay(d),s/veh	32.4	23.7	21.2	32.4	23.5	21.2	32.4	18.4	18.3	33.3	20.9	29.6
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	C	C
Approach Vol, veh/h		692			717			1112			2213	
Approach Delay, s/veh		24.3			24.2			19.1			24.4	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	31.3	6.9	17.3	6.7	33.9	6.7	17.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	28.0	4.0	16.0	4.0	30.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	5.4	17.9	3.3	8.9	3.1	26.5	3.1	8.9
Green Ext Time (p_c), s	0.0	9.3	0.0	4.4	0.0	3.4	0.0	4.4

Intersection Summary	
HCM 2010 Ctrl Delay	23.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	392	166	30	401	3	70	225	10	18	459	87
Future Volume (veh/h)	36	392	166	30	401	3	70	225	10	18	459	87
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1827	1827	1827	1845	1845	1845
Adj Flow Rate, veh/h	36	392	166	30	401	3	70	225	10	18	459	87
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	3	3	3
Cap, veh/h	55	619	259	48	901	7	88	652	554	31	598	508
Arrive On Green	0.03	0.26	0.26	0.03	0.26	0.26	0.05	0.36	0.36	0.02	0.32	0.32
Sat Flow, veh/h	1740	2388	998	1740	3531	26	1740	1827	1553	1757	1845	1568
Grp Volume(v), veh/h	36	284	274	30	197	207	70	225	10	18	459	87
Grp Sat Flow(s),veh/h/ln	1740	1736	1651	1740	1736	1822	1740	1827	1553	1757	1845	1568
Q Serve(g_s), s	1.0	6.8	7.0	0.8	4.5	4.5	1.9	4.3	0.2	0.5	10.6	1.9
Cycle Q Clear(g_c), s	1.0	6.8	7.0	0.8	4.5	4.5	1.9	4.3	0.2	0.5	10.6	1.9
Prop In Lane	1.00		0.60	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	55	450	428	48	443	465	88	652	554	31	598	508
V/C Ratio(X)	0.65	0.63	0.64	0.63	0.44	0.45	0.79	0.34	0.02	0.58	0.77	0.17
Avail Cap(c_a), veh/h	147	587	558	147	587	616	147	772	657	149	780	663
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.6	15.5	15.6	22.8	14.8	14.8	22.2	11.2	9.8	23.1	14.4	11.4
Incr Delay (d2), s/veh	12.1	1.5	1.6	12.6	0.7	0.7	14.4	0.3	0.0	15.6	3.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.4	3.3	0.6	2.2	2.3	1.2	2.2	0.1	0.4	5.9	0.8
LnGrp Delay(d),s/veh	34.7	17.0	17.2	35.4	15.5	15.5	36.6	11.5	9.9	38.6	17.8	11.6
LnGrp LOS	C	B	B	D	B	B	D	B	A	D	B	B
Approach Vol, veh/h		594			434			305			564	
Approach Delay, s/veh		18.1			16.9			17.2			17.5	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.8	20.9	5.3	16.3	6.4	19.3	5.5	16.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	20.0	4.0	16.0	4.0	20.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	2.5	6.3	2.8	9.0	3.9	12.6	3.0	6.5
Green Ext Time (p_c), s	0.0	3.9	0.0	3.3	0.0	2.7	0.0	4.0

Intersection Summary	
HCM 2010 Ctrl Delay	17.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	6	258	50	9	1	193	1512	55	1	1853	0
Future Volume (veh/h)	1	6	258	50	9	1	193	1512	55	1	1853	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1759	1900	1845	1845	1900	1792	1792	1792	1792	1792	1900
Adj Flow Rate, veh/h	1	6	258	50	9	1	193	1512	55	1	1853	0
Adj No. of Lanes	0	1	0	1	1	0	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	8	8	8	3	3	3	6	6	6	6	6	6
Cap, veh/h	1	4	183	78	72	8	214	1793	802	306	1976	0
Arrive On Green	0.13	0.13	0.13	0.04	0.04	0.04	0.13	0.53	0.53	0.18	0.58	0.00
Sat Flow, veh/h	6	34	1461	1757	1631	181	1707	3406	1524	1707	3495	0
Grp Volume(v), veh/h	265	0	0	50	0	10	193	1512	55	1	1853	0
Grp Sat Flow(s),veh/h/ln	1501	0	0	1757	0	1813	1707	1703	1524	1707	1703	0
Q Serve(g_s), s	16.0	0.0	0.0	3.6	0.0	0.7	14.3	48.3	2.3	0.1	64.0	0.0
Cycle Q Clear(g_c), s	16.0	0.0	0.0	3.6	0.0	0.7	14.3	48.3	2.3	0.1	64.0	0.0
Prop In Lane	0.00		0.97	1.00		0.10	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	188	0	0	78	0	80	214	1793	802	306	1976	0
V/C Ratio(X)	1.41	0.00	0.00	0.64	0.00	0.12	0.90	0.84	0.07	0.00	0.94	0.00
Avail Cap(c_a), veh/h	188	0	0	220	0	227	214	2344	1049	306	2024	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	55.9	0.0	0.0	60.1	0.0	58.7	55.2	25.8	14.9	43.1	24.7	0.0
Incr Delay (d2), s/veh	213.3	0.0	0.0	8.6	0.0	0.7	36.4	2.3	0.0	0.0	9.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.7	0.0	0.0	1.9	0.0	0.4	8.9	23.3	1.0	0.0	32.3	0.0
LnGrp Delay(d),s/veh	269.3	0.0	0.0	68.7	0.0	59.4	91.6	28.1	14.9	43.1	33.7	0.0
LnGrp LOS	F			E		E	F	C	B	D	C	
Approach Vol, veh/h		265			60			1760			1854	
Approach Delay, s/veh		269.3			67.1			34.6			33.7	
Approach LOS		F			E			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	26.9	71.3		20.0	20.0	78.2		9.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	88.0		16.0	16.0	76.0		16.0
Max Q Clear Time (g_c+I1), s	2.1	50.3		18.0	16.3	66.0		5.6
Green Ext Time (p_c), s	1.8	17.0		0.0	0.0	8.2		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	50.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	15	38	145	6	210	41	1466	172	715	1465	6
Future Volume (veh/h)	11	15	38	145	6	210	41	1466	172	715	1465	6
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	11	15	38	145	6	210	41	1466	172	715	1465	6
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	17	42	107	119	7	228	53	1245	145	596	2516	10
Arrive On Green	0.01	0.09	0.09	0.07	0.15	0.15	0.03	0.39	0.39	0.34	0.70	0.70
Sat Flow, veh/h	1757	463	1174	1757	44	1531	1757	3164	368	1757	3580	15
Grp Volume(v), veh/h	11	0	53	145	0	216	41	806	832	715	717	754
Grp Sat Flow(s),veh/h/ln	1757	0	1637	1757	0	1575	1757	1752	1780	1757	1752	1842
Q Serve(g_s), s	0.9	0.0	4.5	10.0	0.0	19.9	3.4	58.0	58.0	50.0	30.3	30.4
Cycle Q Clear(g_c), s	0.9	0.0	4.5	10.0	0.0	19.9	3.4	58.0	58.0	50.0	30.3	30.4
Prop In Lane	1.00		0.72	1.00		0.97	1.00		0.21	1.00		0.01
Lane Grp Cap(c), veh/h	17	0	149	119	0	235	53	690	700	596	1231	1294
V/C Ratio(X)	0.64	0.00	0.36	1.22	0.00	0.92	0.78	1.17	1.19	1.20	0.58	0.58
Avail Cap(c_a), veh/h	48	0	178	119	0	235	107	690	700	596	1231	1294
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.7	0.0	62.9	68.7	0.0	61.9	71.0	44.7	44.7	48.7	11.0	11.0
Incr Delay (d2), s/veh	32.8	0.0	1.4	151.9	0.0	37.9	21.4	91.0	98.7	105.4	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	2.1	9.9	0.0	11.2	2.0	45.4	47.6	41.6	14.8	15.5
LnGrp Delay(d),s/veh	105.5	0.0	64.4	220.6	0.0	99.7	92.4	135.7	143.4	154.1	11.7	11.7
LnGrp LOS	F		E	F		F	F	F	F	F	B	B
Approach Vol, veh/h		64			361			1679			2186	
Approach Delay, s/veh		71.4			148.3			138.4			58.3	
Approach LOS		E			F			F			E	

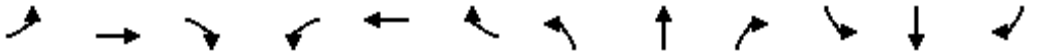
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	54.0	62.0	14.0	17.4	8.4	107.6	5.5	26.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	50.0	58.0	10.0	16.0	9.0	99.0	4.0	22.0
Max Q Clear Time (g_c+I1), s	52.0	60.0	12.0	6.5	5.4	32.4	2.9	21.9
Green Ext Time (p_c), s	0.0	0.0	0.0	1.1	0.0	51.6	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	97.4
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	324	12	14	1	6	4	10	1278	0	3	1357	355
Future Volume (veh/h)	324	12	14	1	6	4	10	1278	0	3	1357	355
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1900	1845	1900	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	324	12	14	1	6	4	10	1278	0	3	1357	0
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	374	14	346	2	10	7	18	1854	0	6	1830	819
Arrive On Green	0.22	0.22	0.22	0.01	0.01	0.01	0.01	0.53	0.00	0.00	0.52	0.00
Sat Flow, veh/h	1697	63	1568	157	941	628	1757	3597	0	1757	3505	1568
Grp Volume(v), veh/h	336	0	14	11	0	0	10	1278	0	3	1357	0
Grp Sat Flow(s),veh/h/ln	1760	0	1568	1726	0	0	1757	1752	0	1757	1752	1568
Q Serve(g_s), s	12.5	0.0	0.5	0.4	0.0	0.0	0.4	18.3	0.0	0.1	20.5	0.0
Cycle Q Clear(g_c), s	12.5	0.0	0.5	0.4	0.0	0.0	0.4	18.3	0.0	0.1	20.5	0.0
Prop In Lane	0.96		1.00	0.09		0.36	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	388	0	346	19	0	0	18	1854	0	6	1830	819
V/C Ratio(X)	0.87	0.00	0.04	0.58	0.00	0.00	0.56	0.69	0.00	0.53	0.74	0.00
Avail Cap(c_a), veh/h	441	0	393	407	0	0	104	1913	0	104	1913	856
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	25.4	0.0	20.8	33.4	0.0	0.0	33.4	11.8	0.0	33.7	12.6	0.0
Incr Delay (d2), s/veh	14.9	0.0	0.0	24.7	0.0	0.0	24.9	1.0	0.0	59.5	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	0.0	0.2	0.3	0.0	0.0	0.3	9.0	0.0	0.1	10.2	0.0
LnGrp Delay(d),s/veh	40.4	0.0	20.8	58.0	0.0	0.0	58.3	12.9	0.0	93.2	14.1	0.0
LnGrp LOS	D		C	E			E	B		F	B	
Approach Vol, veh/h		350			11			1288			1360	
Approach Delay, s/veh		39.6			58.0			13.2			14.3	
Approach LOS		D			E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.2	39.9		19.0	4.7	39.4		4.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	37.0		17.0	4.0	37.0		16.0
Max Q Clear Time (g_c+I1), s	2.1	20.3		14.5	2.4	22.5		2.4
Green Ext Time (p_c), s	0.0	14.6		0.5	0.0	12.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	16.9
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	334	1107	309	76	721	3	566	1221	90	4	1036	328
Future Volume (veh/h)	334	1107	309	76	721	3	566	1221	90	4	1036	328
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	334	1107	309	76	721	3	566	1221	90	4	1036	328
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	381	1101	493	129	842	377	571	1630	729	14	1057	473
Arrive On Green	0.11	0.31	0.31	0.04	0.24	0.24	0.17	0.46	0.46	0.00	0.30	0.30
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	334	1107	309	76	721	3	566	1221	90	4	1036	328
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	8.6	28.1	15.1	2.0	17.6	0.1	14.8	25.6	2.9	0.1	26.2	16.5
Cycle Q Clear(g_c), s	8.6	28.1	15.1	2.0	17.6	0.1	14.8	25.6	2.9	0.1	26.2	16.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	381	1101	493	129	842	377	571	1630	729	14	1057	473
V/C Ratio(X)	0.88	1.01	0.63	0.59	0.86	0.01	0.99	0.75	0.12	0.28	0.98	0.69
Avail Cap(c_a), veh/h	381	1101	493	152	861	385	571	1630	729	152	1057	473
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	30.7	26.2	42.4	32.5	25.9	37.2	19.7	13.6	44.4	31.0	27.6
Incr Delay (d2), s/veh	20.0	28.5	2.5	4.2	8.4	0.0	35.3	2.0	0.1	10.0	22.8	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	17.8	6.8	1.0	9.5	0.1	9.7	12.7	1.3	0.1	16.0	7.7
LnGrp Delay(d),s/veh	59.2	59.2	28.7	46.6	40.9	25.9	72.5	21.6	13.7	54.5	53.8	31.9
LnGrp LOS	E	F	C	D	D	C	E	C	B	D	D	C
Approach Vol, veh/h		1750			800			1877			1368	
Approach Delay, s/veh		53.8			41.4			36.6			48.6	
Approach LOS		D			D			D			D	

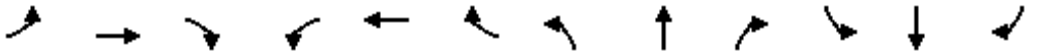
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.4	45.6	7.4	32.1	19.0	31.0	14.0	25.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	38.0	4.0	28.0	15.0	27.0	10.0	22.0
Max Q Clear Time (g_c+I1), s	2.1	27.6	4.0	30.1	16.8	28.2	10.6	19.6
Green Ext Time (p_c), s	0.0	9.3	0.0	0.0	0.0	0.0	0.0	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	45.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	212	2471	418	31	2146	213	126	79	27	250	222	191
Future Volume (veh/h)	212	2471	418	31	2146	213	126	79	27	250	222	191
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	212	2471	418	31	2146	213	126	79	27	250	222	191
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	167	1976	325	39	1882	184	131	193	164	191	256	218
Arrive On Green	0.09	0.66	0.66	0.02	0.58	0.58	0.07	0.10	0.10	0.11	0.14	0.14
Sat Flow, veh/h	1757	3014	496	1757	3226	315	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	212	1407	1482	31	1149	1210	126	79	27	250	222	191
Grp Sat Flow(s),veh/h/ln	1757	1752	1757	1757	1752	1789	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	14.0	96.7	96.7	2.6	86.0	86.0	10.5	5.9	2.3	16.0	17.4	17.6
Cycle Q Clear(g_c), s	14.0	96.7	96.7	2.6	86.0	86.0	10.5	5.9	2.3	16.0	17.4	17.6
Prop In Lane	1.00		0.28	1.00		0.18	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	167	1149	1152	39	1022	1043	131	193	164	191	256	218
V/C Ratio(X)	1.27	1.22	1.29	0.79	1.12	1.16	0.96	0.41	0.16	1.31	0.87	0.88
Avail Cap(c_a), veh/h	167	1149	1152	48	1022	1043	131	225	191	191	288	245
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.7	25.4	25.4	71.7	30.7	30.7	68.0	61.7	60.1	65.7	62.2	62.3
Incr Delay (d2), s/veh	160.5	109.1	135.3	50.4	69.0	82.7	66.6	1.4	0.5	172.5	21.6	26.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.2	81.1	89.7	1.8	61.0	66.3	7.5	3.1	1.0	16.9	10.4	9.2
LnGrp Delay(d),s/veh	227.2	134.5	160.7	122.2	99.7	113.4	134.6	63.1	60.6	238.2	83.8	88.6
LnGrp LOS	F	F	F	F	F	F	F	E	E	F	F	F
Approach Vol, veh/h		3101			2390			232			663	
Approach Delay, s/veh		153.3			106.9			101.6			143.4	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	19.5	7.3	100.7	15.0	24.5	18.0	90.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	18.0	4.0	96.0	11.0	23.0	14.0	86.0
Max Q Clear Time (g_c+I1), s	18.0	7.9	4.6	98.7	12.5	19.6	16.0	88.0
Green Ext Time (p_c), s	0.0	1.8	0.0	0.0	0.0	0.9	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	133.1
HCM 2010 LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1359	1159	590	4	709	282	599	1283	3	372	1573	769
Future Volume (veh/h)	1359	1159	590	4	709	282	599	1283	3	372	1573	769
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	1359	1159	590	4	709	282	599	1283	3	372	1573	769
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	1101	2226	693	14	620	193	498	1550	483	419	1433	446
Arrive On Green	0.32	0.44	0.44	0.00	0.12	0.12	0.15	0.31	0.31	0.12	0.28	0.28
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	1359	1159	590	4	709	282	599	1283	3	372	1573	769
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	42.0	21.7	43.8	0.2	16.0	16.0	19.0	30.8	0.2	14.0	37.0	37.0
Cycle Q Clear(g_c), s	42.0	21.7	43.8	0.2	16.0	16.0	19.0	30.8	0.2	14.0	37.0	37.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1101	2226	693	14	620	193	498	1550	483	419	1433	446
V/C Ratio(X)	1.23	0.52	0.85	0.28	1.14	1.46	1.20	0.83	0.01	0.89	1.10	1.72
Avail Cap(c_a), veh/h	1101	2226	693	105	620	193	498	1550	483	419	1433	446
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.0	26.3	32.4	64.5	57.0	57.0	55.5	41.8	31.2	56.1	46.5	46.5
Incr Delay (d2), s/veh	113.4	0.2	9.9	10.6	82.8	233.8	109.1	3.9	0.0	20.1	55.1	334.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	37.1	10.1	20.8	0.1	12.2	19.4	16.5	14.8	0.1	7.7	24.4	57.5
LnGrp Delay(d),s/veh	157.4	26.5	42.4	75.1	139.8	290.8	164.6	45.7	31.2	76.2	101.6	381.3
LnGrp LOS	F	C	D	E	F	F	F	D	C	E	F	F
Approach Vol, veh/h		3108			995			1885			2714	
Approach Delay, s/veh		86.8			182.3			83.4			177.4	
Approach LOS		F			F			F			F	

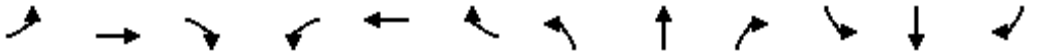
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	44.0	4.5	61.5	23.0	41.0	46.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	40.0	4.0	54.0	19.0	37.0	42.0	16.0
Max Q Clear Time (g_c+I1), s	16.0	32.8	2.2	45.8	21.0	39.0	44.0	18.0
Green Ext Time (p_c), s	0.0	7.0	0.0	7.3	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		125.2
HCM 2010 LOS		F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	988	632	220	663	701	335	511	377	809	971	0
Future Volume (veh/h)	0	988	632	220	663	701	335	511	377	809	971	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	0	988	632	220	663	701	335	511	377	809	971	0
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	4	1259	392	256	1888	588	413	789	353	852	1240	555
Arrive On Green	0.00	0.25	0.25	0.08	0.38	0.38	0.12	0.22	0.22	0.25	0.35	0.00
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	0	988	632	220	663	701	335	511	377	809	971	0
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	0.0	14.6	20.0	5.1	7.6	30.0	7.7	10.6	18.0	18.7	19.8	0.0
Cycle Q Clear(g_c), s	0.0	14.6	20.0	5.1	7.6	30.0	7.7	10.6	18.0	18.7	19.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	4	1259	392	256	1888	588	413	789	353	852	1240	555
V/C Ratio(X)	0.00	0.78	1.61	0.86	0.35	1.19	0.81	0.65	1.07	0.95	0.78	0.00
Avail Cap(c_a), veh/h	170	1259	392	256	1888	588	426	789	353	852	1240	555
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	28.0	30.0	36.6	18.0	25.0	34.3	28.1	31.0	29.5	23.1	0.0
Incr Delay (d2), s/veh	0.0	3.3	287.1	24.5	0.1	102.5	11.0	1.9	67.3	19.6	3.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.2	39.9	3.3	3.5	29.6	4.2	5.3	14.3	11.1	10.2	0.0
LnGrp Delay(d),s/veh	0.0	31.3	317.1	61.0	18.1	127.5	45.2	30.0	98.3	49.1	26.5	0.0
LnGrp LOS		C	F	E	B	F	D	C	F	D	C	
Approach Vol, veh/h		1620			1584			1223			1780	
Approach Delay, s/veh		142.8			72.5			55.2			36.8	
Approach LOS		F			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.0	22.0	10.0	24.0	13.7	32.3	0.0	34.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	20.0	18.0	6.0	20.0	10.0	28.0	4.0	22.0
Max Q Clear Time (g_c+I1), s	20.7	20.0	7.1	22.0	9.7	21.8	0.0	32.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	77.2
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	219	24	103	91	496	14	540	140	859	928	48
Future Volume (veh/h)	200	219	24	103	91	496	14	540	140	859	928	48
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	200	219	24	103	91	496	14	540	140	859	928	48
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	251	362	162	704	827	370	47	713	319	855	1544	691
Arrive On Green	0.07	0.10	0.10	0.21	0.24	0.24	0.01	0.20	0.20	0.25	0.44	0.44
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	200	219	24	103	91	496	14	540	140	859	928	48
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	3.9	4.1	0.8	1.7	1.4	16.0	0.3	9.8	3.1	17.0	13.7	1.2
Cycle Q Clear(g_c), s	3.9	4.1	0.8	1.7	1.4	16.0	0.3	9.8	3.1	17.0	13.7	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	251	362	162	704	827	370	47	713	319	855	1544	691
V/C Ratio(X)	0.80	0.61	0.15	0.15	0.11	1.34	0.30	0.76	0.44	1.01	0.60	0.07
Avail Cap(c_a), veh/h	251	827	370	704	827	370	201	827	370	855	1544	691
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.9	29.1	20.2	22.0	20.3	25.9	33.1	25.4	8.3	25.4	14.4	10.9
Incr Delay (d2), s/veh	16.1	1.6	0.4	0.1	0.1	170.4	3.5	3.5	0.9	32.0	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	2.0	0.4	0.8	0.7	24.4	0.2	5.1	2.1	11.6	6.7	0.5
LnGrp Delay(d),s/veh	47.0	30.7	20.6	22.1	20.4	196.3	36.7	28.9	9.2	57.5	15.1	11.0
LnGrp LOS	D	C	C	C	C	F	D	C	A	F	B	B
Approach Vol, veh/h		443			690			694			1835	
Approach Delay, s/veh		37.5			147.1			25.1			34.8	
Approach LOS		D			F			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.0	17.8	18.0	11.0	4.9	33.9	9.0	20.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	17.0	16.0	5.0	16.0	4.0	29.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	19.0	11.8	3.7	6.1	2.3	15.7	5.9	18.0
Green Ext Time (p_c), s	0.0	2.0	0.5	0.9	0.0	8.5	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	54.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	245	680	216	28	505	125	143	347	28	243	488	148
Future Volume (veh/h)	245	680	216	28	505	125	143	347	28	243	488	148
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	245	680	216	28	505	125	143	347	28	243	488	148
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	370	1340	600	85	1048	469	236	757	339	367	892	399
Arrive On Green	0.11	0.38	0.38	0.02	0.30	0.30	0.07	0.22	0.22	0.11	0.25	0.25
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	245	680	216	28	505	125	143	347	28	243	488	148
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	4.1	8.8	5.9	0.5	7.0	3.6	2.4	5.1	0.8	4.1	7.2	4.6
Cycle Q Clear(g_c), s	4.1	8.8	5.9	0.5	7.0	3.6	2.4	5.1	0.8	4.1	7.2	4.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	370	1340	600	85	1048	469	236	757	339	367	892	399
V/C Ratio(X)	0.66	0.51	0.36	0.33	0.48	0.27	0.61	0.46	0.08	0.66	0.55	0.37
Avail Cap(c_a), veh/h	745	2061	922	229	1531	685	458	1296	580	745	1590	711
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.5	14.1	13.2	28.5	17.1	15.9	26.9	20.3	18.6	25.5	19.2	18.3
Incr Delay (d2), s/veh	2.0	0.3	0.4	2.2	0.3	0.3	2.5	0.4	0.1	2.0	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	4.3	2.6	0.3	3.4	1.6	1.2	2.5	0.4	2.0	3.5	2.1
LnGrp Delay(d),s/veh	27.5	14.4	13.5	30.8	17.4	16.2	29.4	20.7	18.7	27.6	19.7	18.8
LnGrp LOS	C	B	B	C	B	B	C	C	B	C	B	B
Approach Vol, veh/h		1141			658			518			879	
Approach Delay, s/veh		17.0			17.8			23.0			21.7	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.4	16.9	5.5	26.8	8.1	19.1	10.5	21.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	13.0	22.0	4.0	35.0	8.0	27.0	13.0	26.0
Max Q Clear Time (g_c+I1), s	6.1	7.1	2.5	10.8	4.4	9.2	6.1	9.0
Green Ext Time (p_c), s	0.5	5.5	0.0	10.5	0.1	6.0	0.5	8.8

Intersection Summary	
HCM 2010 Ctrl Delay	19.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	1109	509	51	1014	91	180	39	26	208	182	57
Future Volume (veh/h)	109	1109	509	51	1014	91	180	39	26	208	182	57
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	109	1109	509	51	1014	91	180	39	26	208	182	57
Adj No. of Lanes	1	2	1	1	2	1	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	139	1457	652	68	1315	588	223	237	201	253	269	229
Arrive On Green	0.08	0.42	0.42	0.04	0.38	0.38	0.13	0.13	0.13	0.14	0.15	0.15
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	109	1109	509	51	1014	91	180	39	26	208	182	57
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	3.6	15.8	16.5	1.7	14.9	2.3	5.8	1.1	0.9	6.7	5.5	1.9
Cycle Q Clear(g_c), s	3.6	15.8	16.5	1.7	14.9	2.3	5.8	1.1	0.9	6.7	5.5	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	139	1457	652	68	1315	588	223	237	201	253	269	229
V/C Ratio(X)	0.79	0.76	0.78	0.75	0.77	0.15	0.81	0.16	0.13	0.82	0.68	0.25
Avail Cap(c_a), veh/h	150	1457	652	120	1376	616	240	535	455	270	567	482
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	14.6	14.8	27.9	16.1	12.1	24.9	22.7	22.6	24.3	23.7	22.2
Incr Delay (d2), s/veh	22.2	2.4	6.1	15.5	2.6	0.1	17.2	0.3	0.3	17.2	3.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	8.0	8.1	1.1	7.7	1.0	3.9	0.6	0.4	4.4	3.0	0.8
LnGrp Delay(d),s/veh	48.7	17.0	20.9	43.3	18.7	12.3	42.1	23.1	22.9	41.5	26.7	22.7
LnGrp LOS	D	B	C	D	B	B	D	C	C	D	C	C
Approach Vol, veh/h		1727			1156			245			447	
Approach Delay, s/veh		20.2			19.3			37.1			33.1	
Approach LOS		C			B			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.5	11.5	6.3	28.4	11.4	12.5	8.6	26.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	9.0	17.0	4.0	24.0	8.0	18.0	5.0	23.0
Max Q Clear Time (g_c+I1), s	8.7	3.1	3.7	18.5	7.8	7.5	5.6	16.9
Green Ext Time (p_c), s	0.0	1.2	0.0	5.1	0.0	1.1	0.0	5.1

Intersection Summary	
HCM 2010 Ctrl Delay	22.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	321	149	139	191	33	212	64	35	205	201	16
Future Volume (veh/h)	46	321	149	139	191	33	212	64	35	205	201	16
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	46	321	149	139	191	33	212	64	35	205	201	16
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	67	450	383	176	469	81	256	200	109	254	298	24
Arrive On Green	0.04	0.24	0.24	0.10	0.31	0.31	0.15	0.18	0.18	0.14	0.18	0.18
Sat Flow, veh/h	1757	1845	1568	1757	1533	265	1757	1122	614	1757	1687	134
Grp Volume(v), veh/h	46	321	149	139	0	224	212	0	99	205	0	217
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1798	1757	0	1736	1757	0	1821
Q Serve(g_s), s	1.2	7.7	3.8	3.7	0.0	4.7	5.6	0.0	2.4	5.4	0.0	5.3
Cycle Q Clear(g_c), s	1.2	7.7	3.8	3.7	0.0	4.7	5.6	0.0	2.4	5.4	0.0	5.3
Prop In Lane	1.00		1.00	1.00		0.15	1.00		0.35	1.00		0.07
Lane Grp Cap(c), veh/h	67	450	383	176	0	550	256	0	309	254	0	322
V/C Ratio(X)	0.69	0.71	0.39	0.79	0.00	0.41	0.83	0.00	0.32	0.81	0.00	0.67
Avail Cap(c_a), veh/h	183	614	522	183	0	599	256	0	578	256	0	606
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.8	16.6	15.2	21.1	0.0	13.2	19.9	0.0	17.2	19.9	0.0	18.5
Incr Delay (d2), s/veh	11.7	2.5	0.6	19.7	0.0	0.5	19.7	0.0	0.6	17.0	0.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	4.1	1.7	2.7	0.0	2.4	4.1	0.0	1.2	3.8	0.0	2.9
LnGrp Delay(d),s/veh	34.5	19.1	15.8	40.8	0.0	13.7	39.7	0.0	17.8	36.9	0.0	20.9
LnGrp LOS	C	B	B	D		B	D		B	D		C
Approach Vol, veh/h		516			363			311			422	
Approach Delay, s/veh		19.5			24.1			32.7			28.7	
Approach LOS		B			C			C			C	

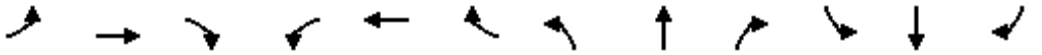
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	12.6	8.8	15.7	11.0	12.5	5.8	18.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	16.0	5.0	16.0	7.0	16.0	5.0	16.0
Max Q Clear Time (g_c+I1), s	7.4	4.4	5.7	9.7	7.6	7.3	3.2	6.7
Green Ext Time (p_c), s	0.0	1.4	0.0	2.1	0.0	1.1	0.0	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	25.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	257	0	0	379	202	0	0	0	518	0	0
Future Volume (veh/h)	0	257	0	0	379	202	0	0	0	518	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	0	257	0	0	379	202	0	0	0	518	0	0
Adj No. of Lanes	2	2	1	1	2	1	1	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	15	1258	563	8	1258	563	8	8	7	951	515	438
Arrive On Green	0.00	0.36	0.00	0.00	0.36	0.36	0.00	0.00	0.00	0.28	0.00	0.00
Sat Flow, veh/h	3408	3505	1568	1757	3505	1568	1757	1845	1568	3408	1845	1568
Grp Volume(v), veh/h	0	257	0	0	379	202	0	0	0	518	0	0
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1757	1752	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	0.0	1.1	0.0	0.0	1.7	2.1	0.0	0.0	0.0	2.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	1.1	0.0	0.0	1.7	2.1	0.0	0.0	0.0	2.9	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	15	1258	563	8	1258	563	8	8	7	951	515	438
V/C Ratio(X)	0.00	0.20	0.00	0.00	0.30	0.36	0.00	0.00	0.00	0.54	0.00	0.00
Avail Cap(c_a), veh/h	617	2537	1135	318	2537	1135	318	1419	1206	2622	2504	2128
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	4.9	0.0	0.0	5.1	5.2	0.0	0.0	0.0	6.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.1	0.4	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.5	0.0	0.0	0.8	0.9	0.0	0.0	0.0	1.4	0.0	0.0
LnGrp Delay(d),s/veh	0.0	5.0	0.0	0.0	5.2	5.6	0.0	0.0	0.0	7.3	0.0	0.0
LnGrp LOS		A			A	A				A		
Approach Vol, veh/h		257			581			0			518	
Approach Delay, s/veh		5.0			5.4			0.0			7.3	
Approach LOS		A			A						A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.2	0.0	0.0	11.9	0.0	10.2	0.0	11.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	17.0	17.0	4.0	16.0	4.0	30.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	4.9	0.0	0.0	3.1	0.0	0.0	0.0	4.1
Green Ext Time (p_c), s	1.6	0.0	0.0	4.0	0.0	0.0	0.0	3.9

Intersection Summary		
HCM 2010 Ctrl Delay		6.0
HCM 2010 LOS		A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	5	28	200	21	70	58	1134	75	162	1182	88
Future Volume (veh/h)	50	5	28	200	21	70	58	1134	75	162	1182	88
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	50	5	28	200	21	70	58	1134	75	162	1182	88
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	62	92	78	243	282	240	72	1512	100	201	1740	129
Arrive On Green	0.04	0.05	0.05	0.14	0.15	0.15	0.04	0.45	0.45	0.11	0.53	0.53
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	3338	221	1757	3308	246
Grp Volume(v), veh/h	50	5	28	200	21	70	58	595	614	162	626	644
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1806	1757	1752	1801
Q Serve(g_s), s	1.8	0.2	1.1	7.2	0.6	2.6	2.1	18.4	18.4	5.9	17.2	17.3
Cycle Q Clear(g_c), s	1.8	0.2	1.1	7.2	0.6	2.6	2.1	18.4	18.4	5.9	17.2	17.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		0.14
Lane Grp Cap(c), veh/h	62	92	78	243	282	240	72	794	818	201	922	948
V/C Ratio(X)	0.81	0.05	0.36	0.82	0.07	0.29	0.80	0.75	0.75	0.81	0.68	0.68
Avail Cap(c_a), veh/h	161	423	360	269	536	455	81	831	856	215	965	991
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.3	29.6	30.1	27.4	23.7	24.6	31.1	14.8	14.8	28.3	11.4	11.4
Incr Delay (d2), s/veh	21.2	0.2	2.7	17.1	0.1	0.7	39.0	3.7	3.6	18.9	1.8	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.1	0.6	4.7	0.3	1.2	1.8	9.6	9.9	3.9	8.6	8.9
LnGrp Delay(d),s/veh	52.5	29.8	32.8	44.5	23.9	25.2	70.1	18.5	18.4	47.2	13.3	13.2
LnGrp LOS	D	C	C	D	C	C	E	B	B	D	B	B
Approach Vol, veh/h		83			291			1267			1432	
Approach Delay, s/veh		44.5			38.4			20.8			17.1	
Approach LOS		D			D			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	33.6	13.0	7.3	6.7	38.4	6.3	14.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	31.0	10.0	15.0	3.0	36.0	6.0	19.0
Max Q Clear Time (g_c+I1), s	7.9	20.4	9.2	3.1	4.1	19.3	3.8	4.6
Green Ext Time (p_c), s	0.0	9.2	0.0	0.3	0.0	13.8	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	21.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	9	99	49	7	99	44	1136	94	63	1148	61
Future Volume (veh/h)	101	9	99	49	7	99	44	1136	94	63	1148	61
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	101	9	99	49	7	99	44	1136	94	63	1148	61
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	118	247	210	60	186	158	53	1703	141	79	1808	96
Arrive On Green	0.07	0.13	0.13	0.03	0.10	0.10	0.03	0.52	0.52	0.04	0.53	0.53
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	3278	271	1757	3386	180
Grp Volume(v), veh/h	101	9	99	49	7	99	44	607	623	63	594	615
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1797	1757	1752	1813
Q Serve(g_s), s	3.4	0.3	3.5	1.7	0.2	3.6	1.5	15.2	15.2	2.1	14.3	14.3
Cycle Q Clear(g_c), s	3.4	0.3	3.5	1.7	0.2	3.6	1.5	15.2	15.2	2.1	14.3	14.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.15	1.00		0.10
Lane Grp Cap(c), veh/h	118	247	210	60	186	158	53	910	933	79	936	968
V/C Ratio(X)	0.86	0.04	0.47	0.82	0.04	0.63	0.83	0.67	0.67	0.80	0.63	0.64
Avail Cap(c_a), veh/h	118	494	420	118	494	420	88	997	1023	147	1056	1092
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.6	22.5	23.9	28.7	24.2	25.8	28.8	10.6	10.6	28.3	9.8	9.8
Incr Delay (d2), s/veh	43.1	0.1	1.6	22.9	0.1	4.0	26.3	1.5	1.5	16.7	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.1	1.6	1.2	0.1	1.7	1.1	7.6	7.8	1.4	7.0	7.3
LnGrp Delay(d),s/veh	70.7	22.6	25.6	51.6	24.3	29.8	55.1	12.1	12.0	44.9	10.9	10.8
LnGrp LOS	E	C	C	D	C	C	E	B	B	D	B	B
Approach Vol, veh/h		209			155			1274			1272	
Approach Delay, s/veh		47.3			36.4			13.5			12.5	
Approach LOS		D			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.7	35.0	6.0	12.0	5.8	35.9	8.0	10.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	34.0	4.0	16.0	3.0	36.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	4.1	17.2	3.7	5.5	3.5	16.3	5.4	5.6
Green Ext Time (p_c), s	0.0	13.6	0.0	0.5	0.0	15.6	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	16.7
HCM 2010 LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1454	51	207	883	63	112
Future Volume (veh/h)	1454	51	207	883	63	112
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1900	1845	1845	1845	1845
Adj Flow Rate, veh/h	1454	51	207	883	63	112
Adj No. of Lanes	2	0	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	2884	101	312	2926	160	142
Arrive On Green	0.83	0.83	0.83	0.83	0.09	0.09
Sat Flow, veh/h	3547	121	343	3597	1757	1568
Grp Volume(v), veh/h	736	769	207	883	63	112
Grp Sat Flow(s),veh/h/ln	1752	1823	343	1752	1757	1568
Q Serve(g_s), s	12.9	13.0	46.6	6.0	3.6	7.5
Cycle Q Clear(g_c), s	12.9	13.0	59.6	6.0	3.6	7.5
Prop In Lane		0.07	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1463	1522	312	2926	160	142
V/C Ratio(X)	0.50	0.51	0.66	0.30	0.39	0.79
Avail Cap(c_a), veh/h	1563	1626	332	3125	261	233
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	2.5	2.5	11.0	2.0	46.1	47.9
Incr Delay (d2), s/veh	0.3	0.3	4.5	0.1	1.6	9.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	6.5	4.8	2.8	1.8	3.6
LnGrp Delay(d),s/veh	2.8	2.8	15.6	2.0	47.7	57.1
LnGrp LOS	A	A	B	A	D	E
Approach Vol, veh/h	1505			1090	175	
Approach Delay, s/veh	2.8			4.6	53.7	
Approach LOS	A			A	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		13.8		93.9				93.9
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		16.0		96.0				96.0
Max Q Clear Time (g_c+I1), s		9.5		15.0				61.6
Green Ext Time (p_c), s		0.3		53.5				28.3

Intersection Summary	
HCM 2010 Ctrl Delay	6.7
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	2696	0	64	2266	0	0	4	79	116	0	0
Future Volume (veh/h)	147	2696	0	64	2266	0	0	4	79	116	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	147	2696	0	64	2266	0	0	4	79	116	0	0
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	176	3034	0	81	2763	0	2	140	119	132	371	315
Arrive On Green	0.10	0.60	0.00	0.05	0.55	0.00	0.00	0.08	0.08	0.08	0.00	0.00
Sat Flow, veh/h	1757	5202	0	1757	5202	0	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	147	2696	0	64	2266	0	0	4	79	116	0	0
Grp Sat Flow(s),veh/h/ln	1757	1679	0	1757	1679	0	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	6.6	36.6	0.0	2.9	29.5	0.0	0.0	0.2	3.9	5.2	0.0	0.0
Cycle Q Clear(g_c), s	6.6	36.6	0.0	2.9	29.5	0.0	0.0	0.2	3.9	5.2	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	176	3034	0	81	2763	0	2	140	119	132	371	315
V/C Ratio(X)	0.84	0.89	0.00	0.79	0.82	0.00	0.00	0.03	0.67	0.88	0.00	0.00
Avail Cap(c_a), veh/h	176	3034	0	88	2775	0	66	370	314	132	439	373
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	35.3	13.6	0.0	37.7	14.8	0.0	0.0	34.2	35.9	36.6	0.0	0.0
Incr Delay (d2), s/veh	27.9	3.6	0.0	34.3	2.1	0.0	0.0	0.1	6.3	44.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	17.7	0.0	2.2	14.0	0.0	0.0	0.1	1.9	4.1	0.0	0.0
LnGrp Delay(d),s/veh	63.2	17.2	0.0	72.0	16.9	0.0	0.0	34.3	42.2	80.8	0.0	0.0
LnGrp LOS	E	B		E	B			C	D	F		
Approach Vol, veh/h		2843			2330			83			116	
Approach Delay, s/veh		19.6			18.4			41.8			80.8	
Approach LOS		B			B			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	10.0	7.7	52.1	0.0	20.0	12.0	47.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	16.0	4.0	48.0	3.0	19.0	8.0	44.0
Max Q Clear Time (g_c+I1), s	7.2	5.9	4.9	38.6	0.0	0.0	8.6	31.5
Green Ext Time (p_c), s	0.0	0.1	0.0	9.4	0.0	0.0	0.0	12.3

Intersection Summary	
HCM 2010 Ctrl Delay	20.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	9999	9999	9999	9999	9999	9999	9999	9999	9999	9999	9999	9999
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1845	1568	1757	1845	1568
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	4504072	6625	1144	4072	6625	1144	4072	2420	770	2542	2420	1051648
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	6756108	9937	1716	6108	9937	1716	6108	3630	1155	3813	3630	1577472
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS												
Approach Vol, veh/h		0			0			0			0	
Approach Delay, s/veh		0.0			0.0			0.0			0.0	
Approach LOS												

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	9.0	53.0	7.0	45.0	21.0	41.0	15.0	37.0
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	0.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	2079	40	49	1239	2	168	0	0	2	0	22
Future Volume (veh/h)	47	2079	40	49	1239	2	168	0	0	2	0	22
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	47	2079	40	49	1239	2	168	0	0	2	0	22
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	57	2637	51	60	2699	4	210	313	266	3	96	81
Arrive On Green	0.03	0.52	0.52	0.03	0.52	0.52	0.12	0.00	0.00	0.00	0.00	0.05
Sat Flow, veh/h	1757	5087	98	1757	5192	8	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	47	1371	748	49	801	440	168	0	0	2	0	22
Grp Sat Flow(s),veh/h/ln	1757	1679	1827	1757	1679	1843	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	1.5	19.3	19.3	1.6	8.7	8.7	5.4	0.0	0.0	0.1	0.0	0.8
Cycle Q Clear(g_c), s	1.5	19.3	19.3	1.6	8.7	8.7	5.4	0.0	0.0	0.1	0.0	0.8
Prop In Lane	1.00		0.05	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	57	1741	947	60	1745	958	210	313	266	3	96	81
V/C Ratio(X)	0.82	0.79	0.79	0.82	0.46	0.46	0.80	0.00	0.00	0.66	0.00	0.27
Avail Cap(c_a), veh/h	152	1797	978	91	1745	958	243	701	596	91	541	460
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.8	11.4	11.4	27.8	8.8	8.8	24.8	0.0	0.0	28.9	0.0	26.4
Incr Delay (d2), s/veh	24.3	2.4	4.3	28.4	0.2	0.3	15.2	0.0	0.0	132.9	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	9.3	10.7	1.2	4.1	4.5	3.5	0.0	0.0	0.1	0.0	0.4
LnGrp Delay(d),s/veh	52.1	13.7	15.7	56.2	9.0	9.1	40.0	0.0	0.0	161.8	0.0	28.2
LnGrp LOS	D	B	B	E	A	A	D			F		C
Approach Vol, veh/h		2166			1290			168			24	
Approach Delay, s/veh		15.2			10.8			40.0			39.3	
Approach LOS		B			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.1	13.8	6.0	34.0	10.9	7.0	5.9	34.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	22.0	3.0	31.0	8.0	17.0	5.0	29.0
Max Q Clear Time (g_c+I1), s	2.1	0.0	3.6	21.3	7.4	2.8	3.5	10.7
Green Ext Time (p_c), s	0.0	0.0	0.0	8.7	0.0	0.0	0.0	17.1

Intersection Summary	
HCM 2010 Ctrl Delay	15.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	1926	77	104	1156	25	92	13	101	36	27	42
Future Volume (veh/h)	77	1926	77	104	1156	25	92	13	101	36	27	42
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	77	1926	77	104	1156	25	92	13	101	36	27	42
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	97	2443	97	132	2595	56	117	210	179	42	132	112
Arrive On Green	0.06	0.49	0.49	0.08	0.51	0.51	0.07	0.11	0.11	0.02	0.07	0.07
Sat Flow, veh/h	1757	4969	198	1757	5073	110	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	77	1300	703	104	765	416	92	13	101	36	27	42
Grp Sat Flow(s),veh/h/ln	1757	1679	1810	1757	1679	1825	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	2.3	17.4	17.5	3.2	7.8	7.8	2.8	0.3	3.3	1.1	0.7	1.4
Cycle Q Clear(g_c), s	2.3	17.4	17.5	3.2	7.8	7.8	2.8	0.3	3.3	1.1	0.7	1.4
Prop In Lane	1.00		0.11	1.00		0.06	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	97	1651	890	132	1717	934	117	210	179	42	132	112
V/C Ratio(X)	0.79	0.79	0.79	0.79	0.45	0.45	0.79	0.06	0.56	0.85	0.20	0.37
Avail Cap(c_a), veh/h	227	1734	934	162	1717	934	130	578	492	130	578	492
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	11.4	11.5	24.6	8.4	8.4	24.9	21.4	22.7	26.4	23.7	24.0
Incr Delay (d2), s/veh	13.2	2.4	4.4	18.5	0.2	0.3	25.0	0.1	2.8	35.1	0.8	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	8.5	9.7	2.2	3.7	4.0	2.2	0.2	1.6	0.9	0.4	0.7
LnGrp Delay(d),s/veh	38.5	13.8	15.9	43.1	8.6	8.7	49.9	21.6	25.5	61.4	24.5	26.1
LnGrp LOS	D	B	B	D	A	A	D	C	C	E	C	C
Approach Vol, veh/h		2080			1285			206			105	
Approach Delay, s/veh		15.4			11.4			36.2			37.8	
Approach LOS		B			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.3	10.2	8.1	30.7	7.6	7.9	7.0	31.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	17.0	5.0	28.0	4.0	17.0	7.0	26.0
Max Q Clear Time (g_c+I1), s	3.1	5.3	5.2	19.5	4.8	3.4	4.3	9.8
Green Ext Time (p_c), s	0.0	0.5	0.0	7.2	0.0	0.5	0.0	15.0

Intersection Summary	
HCM 2010 Ctrl Delay	15.8
HCM 2010 LOS	B



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	103	577	331	1457	2589	194
Future Volume (veh/h)	103	577	331	1457	2589	194
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	103	577	331	1457	2589	194
Adj No. of Lanes	1	1	1	3	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	351	588	307	3693	2514	185
Arrive On Green	0.20	0.20	0.17	0.73	0.52	0.52
Sat Flow, veh/h	1757	1568	1757	5202	4954	352
Grp Volume(v), veh/h	103	577	331	1457	1800	983
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1679	1679	1783
Q Serve(g_s), s	6.0	22.7	21.0	13.0	63.0	63.0
Cycle Q Clear(g_c), s	6.0	22.7	21.0	13.0	63.0	63.0
Prop In Lane	1.00	1.00	1.00			0.20
Lane Grp Cap(c), veh/h	351	588	307	3693	1763	936
V/C Ratio(X)	0.29	0.98	1.08	0.39	1.02	1.05
Avail Cap(c_a), veh/h	351	588	307	3693	1763	936
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.8	37.1	49.5	6.0	28.5	28.5
Incr Delay (d2), s/veh	0.5	32.3	73.2	0.1	27.0	43.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	30.6	16.4	6.0	35.5	42.0
LnGrp Delay(d),s/veh	41.2	69.3	122.7	6.1	55.5	72.0
LnGrp LOS	D	E	F	A	F	F
Approach Vol, veh/h	680			1788	2783	
Approach Delay, s/veh	65.1			27.7	61.3	
Approach LOS	E			C	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		92.0		28.0	25.0	67.0		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		88.0		24.0	21.0	63.0		
Max Q Clear Time (g_c+I1), s		15.0		24.7	23.0	65.0		
Green Ext Time (p_c), s		20.1		0.0	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	50.3
HCM 2010 LOS	D

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	398	106	82	889	1379	200
Future Volume (veh/h)	398	106	82	889	1379	200
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	398	106	82	889	1379	200
Adj No. of Lanes	1	1	1	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	441	394	102	2216	1587	228
Arrive On Green	0.25	0.25	0.06	0.63	0.52	0.52
Sat Flow, veh/h	1757	1568	1757	3597	3169	442
Grp Volume(v), veh/h	398	106	82	889	780	799
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1752	1752	1767
Q Serve(g_s), s	15.1	3.7	3.2	8.6	26.7	27.5
Cycle Q Clear(g_c), s	15.1	3.7	3.2	8.6	26.7	27.5
Prop In Lane	1.00	1.00	1.00			0.25
Lane Grp Cap(c), veh/h	441	394	102	2216	904	911
V/C Ratio(X)	0.90	0.27	0.80	0.40	0.86	0.88
Avail Cap(c_a), veh/h	460	411	102	2244	918	926
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.9	20.7	32.0	6.2	14.5	14.7
Incr Delay (d2), s/veh	20.2	0.4	35.2	0.1	8.4	9.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.8	3.6	2.5	4.1	14.9	15.5
LnGrp Delay(d),s/veh	45.1	21.0	67.1	6.3	22.9	24.2
LnGrp LOS	D	C	E	A	C	C
Approach Vol, veh/h	504			971	1579	
Approach Delay, s/veh	40.0			11.5	23.5	
Approach LOS	D			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		47.4		21.3	8.0	39.4		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		44.0		18.0	4.0	36.0		
Max Q Clear Time (g_c+I1), s		10.6		17.1	5.2	29.5		
Green Ext Time (p_c), s		24.8		0.2	0.0	6.0		

Intersection Summary	
HCM 2010 Ctrl Delay	22.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	958	912	90	946	894	0	75	759	762	41	1914	934
Future Volume (veh/h)	958	912	90	946	894	0	75	759	762	41	1914	934
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	958	912	90	946	894	0	75	759	762	41	1914	934
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	891	836	374	865	809	362	79	1831	570	72	1821	567
Arrive On Green	0.26	0.24	0.24	0.25	0.23	0.00	0.02	0.36	0.36	0.02	0.36	0.36
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	958	912	90	946	894	0	75	759	762	41	1914	934
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	34.0	31.0	6.0	33.0	30.0	0.0	2.9	14.7	47.3	1.5	47.0	47.0
Cycle Q Clear(g_c), s	34.0	31.0	6.0	33.0	30.0	0.0	2.9	14.7	47.3	1.5	47.0	47.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	891	836	374	865	809	362	79	1831	570	72	1821	567
V/C Ratio(X)	1.07	1.09	0.24	1.09	1.11	0.00	0.95	0.41	1.34	0.57	1.05	1.65
Avail Cap(c_a), veh/h	891	836	374	865	809	362	79	1831	570	79	1821	567
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.0	49.5	40.0	48.5	50.0	0.0	63.4	31.0	41.4	63.0	41.5	41.5
Incr Delay (d2), s/veh	52.3	59.0	0.3	59.3	64.5	0.0	85.5	0.2	163.2	8.0	36.0	299.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.4	21.8	2.6	22.6	21.7	0.0	2.3	6.8	46.2	0.8	27.8	67.4
LnGrp Delay(d),s/veh	100.3	108.5	40.3	107.8	114.5	0.0	149.0	31.2	204.6	71.0	77.5	340.8
LnGrp LOS	F	F	D	F	F		F	C	F	E	F	F
Approach Vol, veh/h		1960			1840			1596			2889	
Approach Delay, s/veh		101.4			111.1			119.5			162.6	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.7	51.3	37.0	35.0	7.0	51.0	38.0	34.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	47.0	33.0	31.0	3.0	47.0	34.0	30.0
Max Q Clear Time (g_c+I1), s	3.5	49.3	35.0	33.0	4.9	49.0	36.0	32.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	128.4
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	844	85	68	791	0	38	0	30	0	0	0
Future Volume (veh/h)	0	844	85	68	791	0	38	0	30	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	0	844	85	68	791	0	38	0	30	0	0	0
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	5	1578	159	81	2314	0	47	171	145	5	6	5
Arrive On Green	0.00	0.49	0.49	0.05	0.66	0.00	0.03	0.00	0.09	0.00	0.00	0.00
Sat Flow, veh/h	1757	3216	324	1757	3597	0	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	0	460	469	68	791	0	38	0	30	0	0	0
Grp Sat Flow(s),veh/h/ln	1757	1752	1788	1757	1752	0	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	0.0	5.9	5.9	1.2	3.2	0.0	0.7	0.0	0.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	5.9	5.9	1.2	3.2	0.0	0.7	0.0	0.6	0.0	0.0	0.0
Prop In Lane	1.00		0.18	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	5	860	877	81	2314	0	47	171	145	5	6	5
V/C Ratio(X)	0.00	0.53	0.53	0.84	0.34	0.00	0.81	0.00	0.21	0.00	0.00	0.00
Avail Cap(c_a), veh/h	163	1083	1104	217	2314	0	217	969	824	163	912	775
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	5.7	5.7	15.3	2.4	0.0	15.7	0.0	13.6	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.5	20.1	0.1	0.0	26.4	0.0	0.7	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.9	3.0	1.0	1.6	0.0	0.7	0.0	0.3	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	6.2	6.2	35.4	2.5	0.0	42.0	0.0	14.3	0.0	0.0	0.0
LnGrp LOS		A	A	D	A		D		B			
Approach Vol, veh/h		929			859			68			0	
Approach Delay, s/veh		6.2			5.1			29.8			0.0	
Approach LOS		A			A			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	7.0	5.5	19.9	4.9	2.1	0.0	25.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	17.0	4.0	20.0	4.0	16.0	3.0	21.0
Max Q Clear Time (g_c+I1), s	0.0	2.6	3.2	7.9	2.7	0.0	0.0	5.2
Green Ext Time (p_c), s	0.0	0.0	0.0	8.0	0.0	0.0	0.0	10.1

Intersection Summary	
HCM 2010 Ctrl Delay	6.6
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	2108	71	50	1807	75	217	4	0	118	7	116
Future Volume (veh/h)	69	2108	71	50	1807	75	217	4	0	118	7	116
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	69	2108	71	50	1807	75	217	4	0	118	7	116
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	87	2420	81	62	2327	96	259	287	244	166	190	161
Arrive On Green	0.05	0.48	0.48	0.04	0.47	0.47	0.15	0.16	0.00	0.09	0.10	0.10
Sat Flow, veh/h	1757	5004	168	1757	4960	206	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	69	1412	767	50	1222	660	217	4	0	118	7	116
Grp Sat Flow(s),veh/h/ln	1757	1679	1815	1757	1679	1808	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	2.7	26.0	26.2	2.0	21.1	21.1	8.3	0.1	0.0	4.5	0.2	5.0
Cycle Q Clear(g_c), s	2.7	26.0	26.2	2.0	21.1	21.1	8.3	0.1	0.0	4.5	0.2	5.0
Prop In Lane	1.00		0.09	1.00		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	87	1624	878	62	1575	848	259	287	244	166	190	161
V/C Ratio(X)	0.79	0.87	0.87	0.81	0.78	0.78	0.84	0.01	0.00	0.71	0.04	0.72
Avail Cap(c_a), veh/h	127	1647	890	76	1575	848	279	506	430	203	426	362
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.6	16.0	16.0	33.2	15.4	15.4	28.7	24.8	0.0	30.5	28.0	30.1
Incr Delay (d2), s/veh	18.4	5.3	9.5	38.7	2.5	4.6	18.7	0.0	0.0	8.6	0.1	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	13.2	15.3	1.6	10.2	11.5	5.4	0.1	0.0	2.6	0.1	2.4
LnGrp Delay(d),s/veh	50.9	21.2	25.5	71.9	17.9	20.0	47.4	24.8	0.0	39.0	28.1	36.0
LnGrp LOS	D	C	C	E	B	B	D	C		D	C	D
Approach Vol, veh/h		2248			1932			221			241	
Approach Delay, s/veh		23.6			20.0			47.0			37.3	
Approach LOS		C			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	14.8	6.4	37.5	14.2	11.1	7.5	36.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	19.0	3.0	34.0	11.0	16.0	5.0	32.0
Max Q Clear Time (g_c+I1), s	6.5	2.1	4.0	28.2	10.3	7.0	4.7	23.1
Green Ext Time (p_c), s	0.0	0.3	0.0	5.3	0.0	0.2	0.0	8.8

Intersection Summary	
HCM 2010 Ctrl Delay	23.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	534	1562	973	34	1124	18	833	788	46	89	810	359
Future Volume (veh/h)	534	1562	973	34	1124	18	833	788	46	89	810	359
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	534	1562	973	34	1124	18	833	788	46	89	810	359
Adj No. of Lanes	2	3	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	498	2118	659	61	1024	458	760	1398	625	135	755	338
Arrive On Green	0.15	0.42	0.42	0.02	0.29	0.29	0.22	0.40	0.40	0.04	0.22	0.22
Sat Flow, veh/h	3408	5036	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	534	1562	973	34	1124	18	833	788	46	89	810	359
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	19.0	33.9	54.7	1.3	38.0	1.1	29.0	22.7	2.4	3.3	28.0	28.0
Cycle Q Clear(g_c), s	19.0	33.9	54.7	1.3	38.0	1.1	29.0	22.7	2.4	3.3	28.0	28.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	498	2118	659	61	1024	458	760	1398	625	135	755	338
V/C Ratio(X)	1.07	0.74	1.48	0.56	1.10	0.04	1.10	0.56	0.07	0.66	1.07	1.06
Avail Cap(c_a), veh/h	498	2118	659	79	1024	458	760	1398	625	184	755	338
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.5	31.6	37.7	63.3	46.0	32.9	50.5	30.3	24.2	61.5	51.0	51.0
Incr Delay (d2), s/veh	61.0	1.4	222.1	7.8	58.5	0.0	61.9	0.5	0.0	5.3	54.1	66.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.1	15.9	64.2	0.7	26.7	0.5	20.2	11.0	1.0	1.7	19.2	18.4
LnGrp Delay(d),s/veh	116.5	33.0	259.8	71.1	104.5	33.0	112.4	30.8	24.3	66.9	105.1	117.6
LnGrp LOS	F	C	F	E	F	C	F	C	C	E	F	F
Approach Vol, veh/h		3069			1176			1667			1258	
Approach Delay, s/veh		119.4			102.5			71.4			106.0	
Approach LOS		F			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	55.8	6.3	58.7	33.0	32.0	23.0	42.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	50.0	3.0	54.0	29.0	28.0	19.0	38.0
Max Q Clear Time (g_c+I1), s	5.3	24.7	3.3	56.7	31.0	30.0	21.0	40.0
Green Ext Time (p_c), s	0.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	103.1
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	410	1024	109	102	713	177	74	357	26	240	862	441
Future Volume (veh/h)	410	1024	109	102	713	177	74	357	26	240	862	441
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	410	1024	109	102	713	177	74	357	26	240	862	441
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	461	1175	526	173	878	393	132	907	406	288	1067	477
Arrive On Green	0.14	0.34	0.34	0.05	0.25	0.25	0.04	0.26	0.26	0.08	0.30	0.30
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	410	1024	109	102	713	177	74	357	26	240	862	441
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	7.0	16.2	2.9	1.7	11.3	5.6	1.3	5.0	0.7	4.1	13.4	16.1
Cycle Q Clear(g_c), s	7.0	16.2	2.9	1.7	11.3	5.6	1.3	5.0	0.7	4.1	13.4	16.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	461	1175	526	173	878	393	132	907	406	288	1067	477
V/C Ratio(X)	0.89	0.87	0.21	0.59	0.81	0.45	0.56	0.39	0.06	0.83	0.81	0.92
Avail Cap(c_a), veh/h	461	1186	531	173	889	398	173	949	424	288	1067	477
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.1	18.5	14.0	27.5	20.8	18.7	27.9	18.1	16.5	26.6	19.0	19.9
Incr Delay (d2), s/veh	18.7	7.3	0.2	5.2	5.7	0.8	3.7	0.3	0.1	18.4	4.7	23.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	9.0	1.3	0.9	6.1	2.5	0.7	2.4	0.3	2.7	7.2	10.0
LnGrp Delay(d),s/veh	43.9	25.7	14.2	32.6	26.5	19.5	31.6	18.4	16.6	45.0	23.6	43.6
LnGrp LOS	D	C	B	C	C	B	C	B	B	D	C	D
Approach Vol, veh/h		1543			992			457			1543	
Approach Delay, s/veh		29.7			25.9			20.4			32.7	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	19.3	7.0	23.8	6.3	22.0	12.0	18.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	16.0	3.0	20.0	3.0	18.0	8.0	15.0
Max Q Clear Time (g_c+I1), s	6.1	7.0	3.7	18.2	3.3	18.1	9.0	13.3
Green Ext Time (p_c), s	0.0	6.1	0.0	1.6	0.0	0.0	0.0	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	29.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	764	47	328	756	7	15	146	39	3	659	138
Future Volume (veh/h)	37	764	47	328	756	7	15	146	39	3	659	138
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	37	764	47	328	756	7	15	146	39	3	659	138
Adj No. of Lanes	2	1	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	72	798	679	343	1796	804	48	796	356	129	879	393
Arrive On Green	0.02	0.43	0.43	0.10	0.51	0.51	0.01	0.23	0.23	0.04	0.25	0.25
Sat Flow, veh/h	3408	1845	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	37	764	47	328	756	7	15	146	39	3	659	138
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	0.9	31.8	1.4	7.6	10.6	0.2	0.3	2.7	1.6	0.1	13.8	5.7
Cycle Q Clear(g_c), s	0.9	31.8	1.4	7.6	10.6	0.2	0.3	2.7	1.6	0.1	13.8	5.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	72	798	679	343	1796	804	48	796	356	129	879	393
V/C Ratio(X)	0.52	0.96	0.07	0.96	0.42	0.01	0.31	0.18	0.11	0.02	0.75	0.35
Avail Cap(c_a), veh/h	129	813	691	343	1796	804	172	796	356	644	1192	533
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.5	21.8	13.2	35.5	12.0	9.5	38.8	24.7	24.3	36.8	27.4	24.4
Incr Delay (d2), s/veh	5.6	21.5	0.0	36.8	0.2	0.0	3.6	0.1	0.1	0.1	1.8	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	20.9	0.6	5.3	5.2	0.1	0.2	1.3	0.7	0.0	6.9	2.5
LnGrp Delay(d),s/veh	44.1	43.3	13.2	72.4	12.2	9.5	42.3	24.9	24.5	36.9	29.3	25.0
LnGrp LOS	D	D	B	E	B	A	D	C	C	D	C	C
Approach Vol, veh/h		848			1091			200			800	
Approach Delay, s/veh		41.7			30.3			26.1			28.5	
Approach LOS		D			C			C			C	

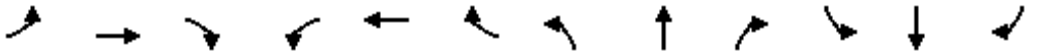
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	22.0	12.0	38.4	5.1	23.9	5.7	44.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	15.0	16.0	8.0	35.0	4.0	27.0	3.0	40.0
Max Q Clear Time (g_c+I1), s	2.1	4.7	9.6	33.8	2.3	15.8	2.9	12.6
Green Ext Time (p_c), s	0.0	4.6	0.0	0.5	0.0	4.1	0.0	13.4

Intersection Summary	
HCM 2010 Ctrl Delay	32.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	2180	52	179	1810	6	21	1480	236	14	1598	97
Future Volume (veh/h)	76	2180	52	179	1810	6	21	1480	236	14	1598	97
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	76	2180	52	179	1810	6	21	1480	236	14	1598	97
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	115	2071	645	115	2071	645	53	1526	683	40	1512	677
Arrive On Green	0.03	0.41	0.41	0.03	0.41	0.41	0.02	0.44	0.44	0.01	0.43	0.43
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	76	2180	52	179	1810	6	21	1480	236	14	1598	97
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	3.3	61.0	3.0	5.0	49.0	0.3	0.9	61.2	14.8	0.6	64.0	5.6
Cycle Q Clear(g_c), s	3.3	61.0	3.0	5.0	49.0	0.3	0.9	61.2	14.8	0.6	64.0	5.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	115	2071	645	115	2071	645	53	1526	683	40	1512	677
V/C Ratio(X)	0.66	1.05	0.08	1.56	0.87	0.01	0.39	0.97	0.35	0.35	1.06	0.14
Avail Cap(c_a), veh/h	115	2071	645	115	2071	645	92	1526	683	92	1512	677
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.8	43.7	26.6	71.7	40.1	25.8	72.3	40.9	27.8	72.7	42.2	25.5
Incr Delay (d2), s/veh	13.2	35.3	0.1	289.1	4.5	0.0	4.7	16.4	0.3	5.1	39.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	35.0	1.3	7.0	23.5	0.1	0.5	33.1	6.5	0.3	39.2	2.4
LnGrp Delay(d),s/veh	84.0	79.0	26.6	360.7	44.6	25.8	77.0	57.4	28.1	77.8	81.9	25.6
LnGrp LOS	F	F	C	F	D	C	E	E	C	E	F	C
Approach Vol, veh/h		2308			1995			1737			1709	
Approach Delay, s/veh		77.9			72.9			53.6			78.7	
Approach LOS		E			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.8	68.6	9.0	65.0	6.3	68.0	9.0	65.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	64.0	5.0	61.0	4.0	64.0	5.0	61.0
Max Q Clear Time (g_c+I1), s	2.6	63.2	7.0	63.0	2.9	66.0	5.3	51.0
Green Ext Time (p_c), s	0.0	0.8	0.0	0.0	0.0	0.0	0.0	9.9

Intersection Summary	
HCM 2010 Ctrl Delay	71.4
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	361	1283	0	460	1283	0	1	257	383	0	345	480
Future Volume (veh/h)	361	1283	0	460	1283	0	1	257	383	0	345	480
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	361	1283	0	460	1283	0	1	257	383	0	345	480
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	379	1274	0	459	1433	0	2	441	375	2	356	303
Arrive On Green	0.22	0.36	0.00	0.26	0.41	0.00	0.00	0.24	0.24	0.00	0.19	0.19
Sat Flow, veh/h	1757	3597	0	1757	3597	0	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	361	1283	0	460	1283	0	1	257	383	0	345	480
Grp Sat Flow(s),veh/h/ln	1757	1752	0	1757	1752	0	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	17.9	32.0	0.0	23.0	30.1	0.0	0.1	10.8	21.0	0.0	16.3	17.0
Cycle Q Clear(g_c), s	17.9	32.0	0.0	23.0	30.1	0.0	0.1	10.8	21.0	0.0	16.3	17.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	379	1274	0	459	1433	0	2	441	375	2	356	303
V/C Ratio(X)	0.95	1.01	0.00	1.00	0.90	0.00	0.50	0.58	1.02	0.00	0.97	1.59
Avail Cap(c_a), veh/h	379	1274	0	459	1433	0	40	441	375	40	356	303
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	34.1	28.0	0.0	32.5	24.3	0.0	44.0	29.6	33.5	0.0	35.3	35.5
Incr Delay (d2), s/veh	34.0	27.0	0.0	42.6	7.7	0.0	125.6	2.0	52.1	0.0	39.3	278.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	20.2	0.0	16.5	16.0	0.0	0.1	5.7	14.5	0.0	12.2	30.8
LnGrp Delay(d),s/veh	68.0	55.0	0.0	75.1	32.0	0.0	169.6	31.6	85.6	0.0	74.5	314.2
LnGrp LOS	E	F		F	C		F	C	F		E	F
Approach Vol, veh/h		1644			1743			641			825	
Approach Delay, s/veh		57.9			43.4			64.1			214.0	
Approach LOS		E			D			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	25.0	27.0	36.0	4.0	21.0	23.0	40.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	2.0	17.0	23.0	32.0	2.0	17.0	19.0	36.0
Max Q Clear Time (g_c+I1), s	0.0	23.0	25.0	34.0	2.1	19.0	19.9	32.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7

Intersection Summary		
HCM 2010 Ctrl Delay		80.0
HCM 2010 LOS		F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	298	666	0	1076	718	120	0	795	952	91	719	287
Future Volume (veh/h)	298	666	0	1076	718	120	0	795	952	91	719	287
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	298	666	0	1076	718	120	0	795	952	91	719	287
Adj No. of Lanes	1	2	1	2	2	1	1	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	330	666	298	1057	1093	489	2	1087	486	102	1332	596
Arrive On Green	0.19	0.19	0.00	0.31	0.31	0.31	0.00	0.31	0.31	0.03	0.38	0.38
Sat Flow, veh/h	1757	3505	1568	3408	3505	1568	1757	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	298	666	0	1076	718	120	0	795	952	91	719	287
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1704	1752	1568	1757	1752	1568	1704	1752	1568
Q Serve(g_s), s	16.6	19.0	0.0	31.0	17.7	5.7	0.0	20.2	31.0	2.7	16.0	13.9
Cycle Q Clear(g_c), s	16.6	19.0	0.0	31.0	17.7	5.7	0.0	20.2	31.0	2.7	16.0	13.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	330	666	298	1057	1093	489	2	1087	486	102	1332	596
V/C Ratio(X)	0.90	1.00	0.00	1.02	0.66	0.25	0.00	0.73	1.96	0.89	0.54	0.48
Avail Cap(c_a), veh/h	369	666	298	1057	1093	489	35	1087	486	102	1332	596
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.7	40.5	0.0	34.5	29.8	25.6	0.0	30.8	34.5	48.3	24.2	23.5
Incr Delay (d2), s/veh	23.0	34.9	0.0	32.4	1.4	0.3	0.0	2.6	438.8	55.5	0.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.1	12.4	0.0	19.3	8.8	2.5	0.0	10.1	72.6	2.0	7.8	6.1
LnGrp Delay(d),s/veh	62.7	75.4	0.0	66.9	31.2	25.9	0.0	33.4	473.3	103.9	24.6	24.1
LnGrp LOS	E	F		F	C	C		C	F	F	C	C
Approach Vol, veh/h		964			1914			1747			1097	
Approach Delay, s/veh		71.5			50.9			273.1			31.1	
Approach LOS		E			D			F			C	

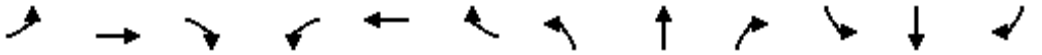
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	35.0	35.0	23.0	0.0	42.0	22.8	35.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	31.0	31.0	19.0	2.0	32.0	21.0	29.0
Max Q Clear Time (g_c+I1), s	4.7	33.0	33.0	21.0	0.0	18.0	18.6	19.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	11.7	0.2	6.1

Intersection Summary	
HCM 2010 Ctrl Delay	118.4
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	14	117	27	8	37	10	180	138	36	351	73
Future Volume (veh/h)	130	14	117	27	8	37	10	180	138	36	351	73
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	130	14	117	27	8	37	10	180	138	36	351	73
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	164	290	247	35	156	132	14	505	366	46	805	166
Arrive On Green	0.09	0.16	0.16	0.02	0.08	0.08	0.01	0.26	0.26	0.03	0.28	0.28
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	1942	1407	1757	2896	596
Grp Volume(v), veh/h	130	14	117	27	8	37	10	161	157	36	211	213
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1596	1757	1752	1740
Q Serve(g_s), s	2.2	0.2	2.0	0.5	0.1	0.7	0.2	2.2	2.4	0.6	2.9	3.0
Cycle Q Clear(g_c), s	2.2	0.2	2.0	0.5	0.1	0.7	0.2	2.2	2.4	0.6	2.9	3.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.88	1.00		0.34
Lane Grp Cap(c), veh/h	164	290	247	35	156	132	14	456	415	46	487	484
V/C Ratio(X)	0.79	0.05	0.47	0.76	0.05	0.28	0.71	0.35	0.38	0.79	0.43	0.44
Avail Cap(c_a), veh/h	353	1113	946	177	928	788	177	881	803	177	881	875
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.2	10.7	11.4	14.5	12.6	12.8	14.8	9.0	9.1	14.4	8.8	8.9
Incr Delay (d2), s/veh	8.4	0.1	1.4	27.9	0.1	1.1	49.5	0.5	0.6	25.3	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.1	0.9	0.5	0.1	0.3	0.3	1.1	1.1	0.6	1.5	1.5
LnGrp Delay(d),s/veh	21.7	10.7	12.9	42.5	12.7	13.9	64.2	9.5	9.6	39.8	9.4	9.5
LnGrp LOS	C	B	B	D	B	B	E	A	A	D	A	A
Approach Vol, veh/h		261			72			328			460	
Approach Delay, s/veh		17.1			24.5			11.2			11.8	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.8	11.8	4.6	8.7	4.2	12.3	6.8	6.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	15.0	3.0	18.0	3.0	15.0	6.0	15.0
Max Q Clear Time (g_c+I1), s	2.6	4.4	2.5	4.0	2.2	5.0	4.2	2.7
Green Ext Time (p_c), s	0.0	3.4	0.0	0.5	0.0	3.2	0.1	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	13.7
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	0	0	0	0	0	0	0	0	0	0	11
Future Volume (veh/h)	11	0	0	0	0	0	0	0	0	0	0	11
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	11	0	0	0	0	0	0	0	0	0	0	11
Adj No. of Lanes	1	1	1	1	1	1	1	2	1	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	16	17	14	16	17	14	16	947	424	649	474	424
Arrive On Green	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	3505	1568	1757	1752	1568
Grp Volume(v), veh/h	11	0	0	0	0	0	0	0	0	0	0	11
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1568	1757	1752	1568
Q Serve(g_s), s	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	16	17	14	16	17	14	16	947	424	649	474	424
V/C Ratio(X)	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
Avail Cap(c_a), veh/h	2374	4487	3814	633	2659	2260	475	6947	3108	2548	2368	2119
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0
Incr Delay (d2), s/veh	42.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	48.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0
LnGrp LOS	D											A
Approach Vol, veh/h		11			0			0			11	
Approach Delay, s/veh		48.1			0.0			0.0			3.0	
Approach LOS		D									A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s		7.0	0.0	4.1	0.0	7.0	4.1	0.0
Change Period (Y+Rc), s		4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s		22.0	4.0	27.0	3.0	15.0	15.0	16.0
Max Q Clear Time (g_c+I1), s		0.0	0.0	0.0	0.0	2.1	2.1	0.0
Green Ext Time (p_c), s		0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	25.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	15	27	164	26	94	23	327	77	54	443	93
Future Volume (veh/h)	30	15	27	164	26	94	23	327	77	54	443	93
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	30	15	27	164	26	94	23	327	77	54	443	93
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	38	137	117	213	320	272	30	830	193	63	902	188
Arrive On Green	0.02	0.07	0.07	0.12	0.17	0.17	0.02	0.29	0.29	0.04	0.31	0.31
Sat Flow, veh/h	1757	1845	1568	1757	1845	1568	1757	2825	656	1757	2889	602
Grp Volume(v), veh/h	30	15	27	164	26	94	23	201	203	54	268	268
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1752	1729	1757	1752	1738
Q Serve(g_s), s	0.6	0.3	0.5	3.0	0.4	1.8	0.4	3.1	3.2	1.0	4.2	4.2
Cycle Q Clear(g_c), s	0.6	0.3	0.5	3.0	0.4	1.8	0.4	3.1	3.2	1.0	4.2	4.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.38	1.00		0.35
Lane Grp Cap(c), veh/h	38	137	117	213	320	272	30	515	508	63	547	543
V/C Ratio(X)	0.78	0.11	0.23	0.77	0.08	0.35	0.76	0.39	0.40	0.86	0.49	0.49
Avail Cap(c_a), veh/h	261	822	699	470	1041	885	157	833	822	209	885	878
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.4	14.5	14.7	14.3	11.7	12.2	16.5	9.5	9.5	16.1	9.4	9.4
Incr Delay (d2), s/veh	28.4	0.3	1.0	5.8	0.1	0.8	31.4	0.5	0.5	26.7	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.1	0.3	1.8	0.2	0.8	0.5	1.5	1.5	0.9	2.1	2.1
LnGrp Delay(d),s/veh	44.8	14.9	15.7	20.2	11.8	13.0	47.9	10.0	10.0	42.8	10.1	10.1
LnGrp LOS	D	B	B	C	B	B	D	A	B	D	B	B
Approach Vol, veh/h		72			284			427			590	
Approach Delay, s/veh		27.7			17.0			12.0			13.1	
Approach LOS		C			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.2	13.9	8.1	6.5	4.6	14.5	4.7	9.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	16.0	9.0	15.0	3.0	17.0	5.0	19.0
Max Q Clear Time (g_c+I1), s	3.0	5.2	5.0	2.5	2.4	6.2	2.6	3.8
Green Ext Time (p_c), s	0.0	4.3	0.1	0.4	0.0	4.3	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	14.3
HCM 2010 LOS	B



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	40	13	377	49	22	647
Future Volume (veh/h)	40	13	377	49	22	647
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845
Adj Flow Rate, veh/h	40	13	377	49	22	647
Adj No. of Lanes	1	1	2	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	91	81	1613	208	815	1810
Arrive On Green	0.05	0.05	0.52	0.52	0.52	0.52
Sat Flow, veh/h	1757	1568	3215	403	948	3597
Grp Volume(v), veh/h	40	13	210	216	22	647
Grp Sat Flow(s),veh/h/ln	1757	1568	1752	1774	948	1752
Q Serve(g_s), s	0.4	0.1	1.2	1.2	0.2	2.0
Cycle Q Clear(g_c), s	0.4	0.1	1.2	1.2	1.5	2.0
Prop In Lane	1.00	1.00		0.23	1.00	
Lane Grp Cap(c), veh/h	91	81	905	916	815	1810
V/C Ratio(X)	0.44	0.16	0.23	0.24	0.03	0.36
Avail Cap(c_a), veh/h	1518	1355	1514	1533	1145	3029
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.5	8.4	2.5	2.5	2.9	2.7
Incr Delay (d2), s/veh	3.4	0.9	0.1	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	0.6	0.6	0.1	0.9
LnGrp Delay(d),s/veh	11.9	9.3	2.6	2.6	2.9	2.8
LnGrp LOS	B	A	A	A	A	A
Approach Vol, veh/h	53		426			669
Approach Delay, s/veh	11.2		2.6			2.8
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		13.6				13.6		5.0
Change Period (Y+Rc), s		4.0				4.0		4.0
Max Green Setting (Gmax), s		16.0				16.0		16.0
Max Q Clear Time (g_c+I1), s		3.2				4.0		2.4
Green Ext Time (p_c), s		5.8				5.5		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	3.1
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	40	94	142	28	31	92	304	198	70	521	97
Future Volume (veh/h)	91	40	94	142	28	31	92	304	198	70	521	97
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	91	40	94	142	28	31	92	304	198	70	521	97
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	344	233	198	182	604	514	115	981	623	453	925	171
Arrive On Green	0.13	0.13	0.13	0.10	0.33	0.33	0.07	0.48	0.48	0.31	0.31	0.31
Sat Flow, veh/h	1325	1845	1568	1757	1845	1568	1757	2059	1308	884	2953	548
Grp Volume(v), veh/h	91	40	94	142	28	31	92	258	244	70	308	310
Grp Sat Flow(s),veh/h/ln	1325	1845	1568	1757	1845	1568	1757	1752	1614	884	1752	1748
Q Serve(g_s), s	2.6	0.8	2.3	3.2	0.4	0.6	2.1	3.7	3.8	2.4	6.0	6.0
Cycle Q Clear(g_c), s	2.6	0.8	2.3	3.2	0.4	0.6	2.1	3.7	3.8	2.4	6.0	6.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.81	1.00		0.31
Lane Grp Cap(c), veh/h	344	233	198	182	604	514	115	835	769	453	549	547
V/C Ratio(X)	0.26	0.17	0.47	0.78	0.05	0.06	0.80	0.31	0.32	0.15	0.56	0.57
Avail Cap(c_a), veh/h	663	677	576	301	1174	998	215	1115	1027	544	729	727
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.7	15.9	16.6	17.9	9.4	9.4	18.8	6.6	6.6	10.5	11.7	11.7
Incr Delay (d2), s/veh	0.4	0.3	1.8	7.1	0.0	0.0	12.0	0.2	0.2	0.2	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.4	1.1	1.9	0.2	0.2	1.4	1.8	1.7	0.6	3.0	3.0
LnGrp Delay(d),s/veh	17.1	16.3	18.3	25.0	9.4	9.5	30.8	6.8	6.8	10.6	12.6	12.6
LnGrp LOS	B	B	B	C	A	A	C	A	A	B	B	B
Approach Vol, veh/h		225			201			594			688	
Approach Delay, s/veh		17.5			20.4			10.5			12.4	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6		8
Phs Duration (G+Y+Rc), s		23.5	8.2	9.2	6.7	16.8		17.4
Change Period (Y+Rc), s		4.0	4.0	4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s		26.0	7.0	15.0	5.0	17.0		26.0
Max Q Clear Time (g_c+I1), s		5.8	5.2	4.6	4.1	8.0		2.6
Green Ext Time (p_c), s		7.7	0.1	0.7	0.0	4.8		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.4
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	9.9
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	0	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	0	446	181	425
Demand Flow Rate, veh/h	0	459	187	437
Vehicles Circulating, veh/h	459	187	0	305
Vehicles Exiting, veh/h	283	0	459	341
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	10.1	4.8	11.9
Approach LOS	-	B	A	B

Lane	Left	Left	Left
Designated Moves	LTR	LT	TR
Assumed Moves	LTR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	459	187	437
Cap Entry Lane, veh/h	937	1130	833
Entry HV Adj Factor	0.971	0.970	0.972
Flow Entry, veh/h	446	181	425
Cap Entry, veh/h	910	1096	809
V/C Ratio	0.490	0.165	0.525
Control Delay, s/veh	10.1	4.8	11.9
LOS	B	A	B
95th %tile Queue, veh	3	1	3

Intersection	
Intersection Delay, s/veh	28.5
Intersection LOS	D

Approach	EB	WB	NB	SB
Entry Lanes	1	0	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	648	0	52	446
Demand Flow Rate, veh/h	668	0	54	460
Vehicles Circulating, veh/h	460	32	710	0
Vehicles Exiting, veh/h	0	732	418	32
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	44.5	0.0	7.9	7.6
Approach LOS	E	-	A	A

Lane	Left	Left	Left
Designated Moves	LTR	TR	LT
Assumed Moves	LTR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	668	54	460
Cap Entry Lane, veh/h	713	556	1130
Entry HV Adj Factor	0.971	0.969	0.971
Flow Entry, veh/h	648	52	446
Cap Entry, veh/h	692	538	1097
V/C Ratio	0.936	0.097	0.407
Control Delay, s/veh	44.5	7.9	7.6
LOS	E	A	A
95th %tile Queue, veh	13	0	2

Intersection	
Intersection Delay, s/veh	210.1
Intersection LOS	F

Approach	EB	WB	NB	SB
Entry Lanes	0	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	0	470	2291	2190
Demand Flow Rate, veh/h	0	484	2360	2256
Vehicles Circulating, veh/h	2299	2360	0	621
Vehicles Exiting, veh/h	578	0	2299	2223
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	607.2	62.0	279.7
Approach LOS	-	F	F	F

Lane	Left	Left	Right	Left	Right
Designated Moves	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Critical Headway, s	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	484	1109	1251	1060	1196
Cap Entry Lane, veh/h	217	1130	1130	709	732
Entry HV Adj Factor	0.972	0.971	0.971	0.971	0.971
Flow Entry, veh/h	470	1077	1214	1030	1161
Cap Entry, veh/h	210	1097	1097	689	710
V/C Ratio	2.235	0.981	1.107	1.495	1.635
Control Delay, s/veh	607.2	42.3	79.5	247.6	308.2
LOS	F	E	F	F	F
95th %tile Queue, veh	37	19	30	50	63

Intersection	
Intersection Delay, s/veh	341.5
Intersection LOS	F

Approach	EB	WB	NB	SB
Entry Lanes	1	0	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	776	0	2213	2231
Demand Flow Rate, veh/h	798	0	2279	2298
Vehicles Circulating, veh/h	2298	2359	715	0
Vehicles Exiting, veh/h	0	635	2381	2359
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	1181.5	0.0	336.8	54.2
Approach LOS	F	-	F	F

Lane	Left	Left	Right	Left	Right
Designated Moves	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Critical Headway, s	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	798	1071	1208	1080	1218
Cap Entry Lane, veh/h	226	661	685	1130	1130
Entry HV Adj Factor	0.972	0.971	0.971	0.971	0.971
Flow Entry, veh/h	776	1040	1173	1049	1182
Cap Entry, veh/h	220	642	665	1097	1097
V/C Ratio	3.528	1.620	1.763	0.956	1.078
Control Delay, s/veh	1181.5	303.7	366.1	37.0	69.4
LOS	F	F	F	E	F
95th %tile Queue, veh	73	57	70	17	27

Intersection	
Intersection Delay, s/veh	12.1
Intersection LOS	B

Approach	WB	NB	SB
Entry Lanes	1	2	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	381	866	1178
Demand Flow Rate, veh/h	393	892	1214
Vehicles Circulating, veh/h	755	331	124
Vehicles Exiting, veh/h	468	1007	1024
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	16.2	10.8	11.6
Approach LOS	C	B	B

Lane	Left	Left	Right	Left	Right
Designated Moves	LR	LT	TR	LT	TR
Assumed Moves	LR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Critical Headway, s	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	393	419	473	571	643
Cap Entry Lane, veh/h	666	882	896	1030	1036
Entry HV Adj Factor	0.969	0.971	0.970	0.970	0.971
Flow Entry, veh/h	381	407	459	554	624
Cap Entry, veh/h	646	856	870	999	1006
V/C Ratio	0.590	0.475	0.528	0.555	0.621
Control Delay, s/veh	16.2	10.3	11.3	10.8	12.3
LOS	C	B	B	B	B
95th %tile Queue, veh	4	3	3	4	4

Intersection	
Intersection Delay, s/veh	9.2
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	2	2	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	354	819	977
Demand Flow Rate, veh/h	364	844	1006
Vehicles Circulating, veh/h	713	145	185
Vehicles Exiting, veh/h	276	1046	892
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	8.9	8.3	10.2
Approach LOS	A	A	B

Lane	Left	Right	Left	Right	Left	Right
Designated Moves	L	TR	LT	TR	LT	TR
Assumed Moves	L	TR	LT	TR	LT	TR
RT Channelized						
Lane Util	0.508	0.492	0.470	0.530	0.470	0.530
Critical Headway, s	4.293	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	185	179	397	447	473	533
Cap Entry Lane, veh/h	662	686	1014	1021	984	993
Entry HV Adj Factor	0.973	0.972	0.970	0.971	0.971	0.971
Flow Entry, veh/h	180	174	385	434	459	518
Cap Entry, veh/h	644	667	983	992	955	964
V/C Ratio	0.279	0.261	0.392	0.438	0.481	0.537
Control Delay, s/veh	9.1	8.6	8.0	8.6	9.6	10.7
LOS	A	A	A	A	A	B
95th %tile Queue, veh	1	1	2	2	3	3

Intersection	
Intersection Delay, s/veh	9.2
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	2	2	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	350	816	1016
Demand Flow Rate, veh/h	361	841	1046
Vehicles Circulating, veh/h	642	139	159
Vehicles Exiting, veh/h	338	1066	844
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	8.3	8.2	10.2
Approach LOS	A	A	B

Lane	Left	Right	Left	Right	Left	Right
Designated Moves	L	TR	LT	TR	LT	TR
Assumed Moves	L	TR	LT	TR	LT	TR
RT Channelized						
Lane Util	0.440	0.560	0.470	0.530	0.470	0.530
Critical Headway, s	4.293	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	159	202	395	446	492	554
Cap Entry Lane, veh/h	698	721	1018	1025	1003	1011
Entry HV Adj Factor	0.969	0.970	0.971	0.970	0.970	0.972
Flow Entry, veh/h	154	196	384	433	477	538
Cap Entry, veh/h	676	700	989	994	973	982
V/C Ratio	0.228	0.280	0.388	0.435	0.491	0.548
Control Delay, s/veh	8.0	8.5	7.9	8.6	9.7	10.8
LOS	A	A	A	A	A	B
95th %tile Queue, veh	1	1	2	2	3	3

Intersection	
Int Delay, s/veh	4.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	41	110	823	60	296	216
Future Vol, veh/h	41	110	823	60	296	216
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	70	0	-	-	85	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	4	4	3	3	3	3
Mvmt Flow	41	110	823	60	296	216

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1553	442	0	0	883	0
Stage 1	853	-	-	-	-	-
Stage 2	700	-	-	-	-	-
Critical Hdwy	6.88	6.98	-	-	4.16	-
Critical Hdwy Stg 1	5.88	-	-	-	-	-
Critical Hdwy Stg 2	5.88	-	-	-	-	-
Follow-up Hdwy	3.54	3.34	-	-	2.23	-
Pot Cap-1 Maneuver	102	558	-	-	756	-
Stage 1	373	-	-	-	-	-
Stage 2	448	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	62	558	-	-	756	-
Mov Cap-2 Maneuver	171	-	-	-	-	-
Stage 1	373	-	-	-	-	-
Stage 2	273	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.3	0	7.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	171	558	756	-
HCM Lane V/C Ratio	-	-	0.24	0.197	0.392	-
HCM Control Delay (s)	-	-	32.6	13	12.8	-
HCM Lane LOS	-	-	D	B	B	-
HCM 95th %tile Q(veh)	-	-	0.9	0.7	1.9	-

Intersection	
Int Delay, s/veh	10

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	299	73	945	158	62	1543
Future Vol, veh/h	299	73	945	158	62	1543
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	4	4	4	4
Mvmt Flow	299	73	945	158	62	1543

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1765	552	0	0	1103	0
Stage 1	1024	-	-	-	-	-
Stage 2	741	-	-	-	-	-
Critical Hdwy	5.76	7.16	-	-	5.38	-
Critical Hdwy Stg 1	6.66	-	-	-	-	-
Critical Hdwy Stg 2	6.06	-	-	-	-	-
Follow-up Hdwy	3.83	3.93	-	-	3.14	-
Pot Cap-1 Maneuver	~ 124	407	-	-	343	-
Stage 1	~ 232	-	-	-	-	-
Stage 2	390	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	0	407	-	-	343	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	~ 232	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	57.8	0	5.8
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	407	343	-
HCM Lane V/C Ratio	-	-	0.914	0.181	-
HCM Control Delay (s)	-	-	57.8	17.8	5.3
HCM Lane LOS	-	-	F	C	A
HCM 95th %tile Q(veh)	-	-	9.8	0.7	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	34.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	83	2696	2336	25	14	30
Future Vol, veh/h	83	2696	2336	25	14	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	190	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	6	6	6	6	3	3
Mvmt Flow	83	2696	2336	25	14	30

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2361	0	-	0	3863	1181
Stage 1	-	-	-	-	2349	-
Stage 2	-	-	-	-	1514	-
Critical Hdwy	4.22	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.26	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	192	-	-	-	~ 3	181
Stage 1	-	-	-	-	57	-
Stage 2	-	-	-	-	167	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	192	-	-	-	~ 2	181
Mov Cap-2 Maneuver	-	-	-	-	~ 2	-
Stage 1	-	-	-	-	57	-
Stage 2	-	-	-	-	95	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	$ 4032.7
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	192	-	-	-	6
HCM Lane V/C Ratio	0.432	-	-	-	7.333
HCM Control Delay (s)	37.3	-	-	-	$ 4032.7
HCM Lane LOS	E	-	-	-	F
HCM 95th %tile Q(veh)	2	-	-	-	7.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	1	2	0	2	0	762	6	1	949	4
Future Vol, veh/h	2	0	1	2	0	2	0	762	6	1	949	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	2	0	1	2	0	2	0	762	6	1	949	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1719	1721	951	1719	1720	765	953	0	0	768	0	0
Stage 1	953	953	-	765	765	-	-	-	-	-	-	-
Stage 2	766	768	-	954	955	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	70	89	314	70	89	402	717	-	-	841	-	-
Stage 1	310	336	-	394	411	-	-	-	-	-	-	-
Stage 2	394	409	-	310	336	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	69	89	314	70	89	402	717	-	-	841	-	-
Mov Cap-2 Maneuver	69	89	-	70	89	-	-	-	-	-	-	-
Stage 1	310	335	-	394	411	-	-	-	-	-	-	-
Stage 2	392	409	-	308	335	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	45	36.3	0	0
HCM LOS	E	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	717	-	-	93	119	841	-	-
HCM Lane V/C Ratio	-	-	-	0.032	0.034	0.001	-	-
HCM Control Delay (s)	0	-	-	45	36.3	9.3	0	-
HCM Lane LOS	A	-	-	E	E	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	12.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	76	42	45	950	1137	141
Future Vol, veh/h	76	42	45	950	1137	141
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	76	42	45	950	1137	141

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1773	639	1278	0	-	0
Stage 1	1208	-	-	-	-	-
Stage 2	565	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	-	-
Pot Cap-1 Maneuver	~ 73	416	534	-	-	-
Stage 1	244	-	-	-	-	-
Stage 2	530	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 67	416	534	-	-	-
Mov Cap-2 Maneuver	~ 67	-	-	-	-	-
Stage 1	244	-	-	-	-	-
Stage 2	485	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	247	0.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	534	-	96	-	-
HCM Lane V/C Ratio	0.084	-	1.229	-	-
HCM Control Delay (s)	12.4	-	247	-	-
HCM Lane LOS	B	-	F	-	-
HCM 95th %tile Q(veh)	0.3	-	8.2	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	7772.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	693	179	715	762	225	558
Future Vol, veh/h	693	179	715	762	225	558
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	0	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	693	179	715	762	225	558

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	872	0	2594	436
Stage 1	-	-	-	-	783	-
Stage 2	-	-	-	-	1811	-
Critical Hdwy	-	-	4.16	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	2.23	-	3.53	3.33
Pot Cap-1 Maneuver	-	-	763	-	~ 20	565
Stage 1	-	-	-	-	408	-
Stage 2	-	-	-	-	~ 114	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	763	-	~ 1	565
Mov Cap-2 Maneuver	-	-	-	-	~ 1	-
Stage 1	-	-	-	-	408	-
Stage 2	-	-	-	-	~ 7	-

Approach	EB	WB	NB
HCM Control Delay, s	0	20.5	$ 31049.8
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	1	565	-	-	763	-
HCM Lane V/C Ratio	225	0.988	-	-	0.937	-
HCM Control Delay (s)	$ 107899.9	61.9	-	-	42.4	-
HCM Lane LOS	F	F	-	-	E	-
HCM 95th %tile Q(veh)	30.7	14	-	-	13.6	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	216	550	7	1	502	2	8	188	0	1	276	306
Future Vol, veh/h	216	550	7	1	502	2	8	188	0	1	276	306
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	8	8	8	10	10	10	8	8	8	8	8	8
Mvmt Flow	216	550	7	1	502	2	8	188	0	1	276	306

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	504	0	0	557	0	0	1782	1492	554	1585	1494	503
Stage 1	-	-	-	-	-	-	986	986	-	505	505	-
Stage 2	-	-	-	-	-	-	796	506	-	1080	989	-
Critical Hdwy	4.18	-	-	4.2	-	-	7.18	6.58	6.28	7.18	6.58	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Follow-up Hdwy	2.272	-	-	2.29	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	1030	-	-	975	-	-	61	~ 120	521	85	~ 119	557
Stage 1	-	-	-	-	-	-	291	318	-	538	531	-
Stage 2	-	-	-	-	-	-	372	530	-	257	317	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1030	-	-	975	-	-	-	~ 83	521	-	~ 83	557
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 83	-	-	~ 83	-
Stage 1	-	-	-	-	-	-	203	221	-	374	530	-
Stage 2	-	-	-	-	-	-	80	529	-	27	~ 221	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.6	0		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1030	-	-	975	-	-	-
HCM Lane V/C Ratio	-	0.21	-	-	0.001	-	-	-
HCM Control Delay (s)	-	9.4	0	-	8.7	0	-	-
HCM Lane LOS	-	A	A	-	A	A	-	-
HCM 95th %tile Q(veh)	-	0.8	-	-	0	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	65	50	61	137	61	30
Future Vol, veh/h	65	50	61	137	61	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	65	50	61	137	61	30

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	335	76	91	0	-	0
Stage 1	76	-	-	-	-	-
Stage 2	259	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	658	982	1498	-	-	-
Stage 1	944	-	-	-	-	-
Stage 2	782	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	629	982	1498	-	-	-
Mov Cap-2 Maneuver	629	-	-	-	-	-
Stage 1	944	-	-	-	-	-
Stage 2	748	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.7	2.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1498	-	746	-	-
HCM Lane V/C Ratio	0.041	-	0.154	-	-
HCM Control Delay (s)	7.5	0	10.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	22	12	187	125	7
Future Vol, veh/h	12	22	12	187	125	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	12	22	12	187	125	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	340	129	132	0	-	0
Stage 1	129	-	-	-	-	-
Stage 2	211	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	654	918	1447	-	-	-
Stage 1	894	-	-	-	-	-
Stage 2	822	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	648	918	1447	-	-	-
Mov Cap-2 Maneuver	648	-	-	-	-	-
Stage 1	894	-	-	-	-	-
Stage 2	815	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.7	0.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1447	-	800	-	-
HCM Lane V/C Ratio	0.008	-	0.043	-	-
HCM Control Delay (s)	7.5	0	9.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	12.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	204	108	177	171	104	165
Future Vol, veh/h	204	108	177	171	104	165
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	204	108	177	171	104	165

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	712	187	269	0	-	0
Stage 1	187	-	-	-	-	-
Stage 2	525	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	397	852	1289	-	-	-
Stage 1	843	-	-	-	-	-
Stage 2	591	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	337	852	1289	-	-	-
Mov Cap-2 Maneuver	337	-	-	-	-	-
Stage 1	843	-	-	-	-	-
Stage 2	501	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	33.3	4.2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1289	-	426	-	-
HCM Lane V/C Ratio	0.137	-	0.732	-	-
HCM Control Delay (s)	8.2	0	33.3	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.5	-	5.8	-	-

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	71	14	23	210	189	55
Future Vol, veh/h	71	14	23	210	189	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	150	0	150	-	-	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	71	14	23	210	189	55

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	445	189	189	0	-	0
Stage 1	189	-	-	-	-	-
Stage 2	256	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	569	850	1379	-	-	-
Stage 1	841	-	-	-	-	-
Stage 2	784	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	560	850	1379	-	-	-
Mov Cap-2 Maneuver	560	-	-	-	-	-
Stage 1	841	-	-	-	-	-
Stage 2	771	-	-	-	-	-

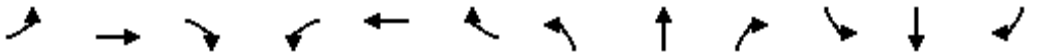
Approach	EB	NB	SB
HCM Control Delay, s	11.9	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1379	-	560	850	-	-
HCM Lane V/C Ratio	0.017	-	0.127	0.016	-	-
HCM Control Delay (s)	7.7	-	12.4	9.3	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	0.1	-	-

Cumulative Plus All Projects

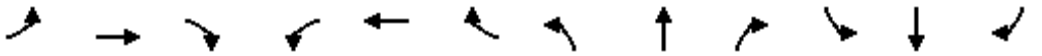
(Proposed Project)

County Standard Mitigation AM



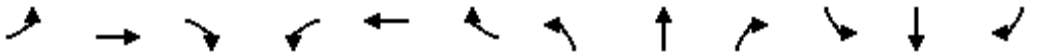
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	156	567	120	91	1052	907	674	1610	84	1209	1695	95
Future Volume (vph)	156	567	120	91	1052	907	674	1610	84	1209	1695	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		0.97	0.95	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	3380		3367	3471	2733	3367	4988	1553	3367	4988	1553
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	3380		3367	3471	2733	3367	4988	1553	3367	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	156	567	120	91	1052	907	674	1610	84	1209	1695	95
RTOR Reduction (vph)	0	13	0	0	0	589	0	0	58	0	0	56
Lane Group Flow (vph)	156	674	0	91	1052	318	674	1610	26	1209	1695	39
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	4.0	32.4		8.6	37.0	37.0	26.0	43.0	43.0	40.0	57.0	57.0
Effective Green, g (s)	4.0	32.4		8.6	37.0	37.0	26.0	43.0	43.0	40.0	57.0	57.0
Actuated g/C Ratio	0.03	0.23		0.06	0.26	0.26	0.19	0.31	0.31	0.29	0.41	0.41
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	96	782		206	917	722	625	1532	476	962	2030	632
v/s Ratio Prot	c0.05	0.20		0.03	c0.30		0.20	c0.32		c0.36	0.34	
v/s Ratio Perm						0.12			0.02			0.02
v/c Ratio	1.62	0.86		0.44	1.15	0.44	1.08	1.05	0.05	1.26	0.83	0.06
Uniform Delay, d1	68.0	51.7		63.4	51.5	42.9	57.0	48.5	34.2	50.0	37.3	25.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	323.6	9.6		1.5	79.1	0.4	59.0	37.7	0.0	124.1	3.1	0.0
Delay (s)	391.6	61.3		64.9	130.6	43.3	116.0	86.2	34.2	174.1	40.4	25.3
Level of Service	F	E		E	F	D	F	F	C	F	D	C
Approach Delay (s)		122.4			89.0			92.8			93.8	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	95.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	112.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	651	170	180	813	860	239	1794	159	468	811	72
Future Volume (vph)	53	651	170	180	813	860	239	1794	159	468	811	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.91	0.91	1.00	0.91		1.00	0.91	1.00
Frt	1.00	0.97		1.00	0.96	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	3396		1736	3177	1413	1736	4927		1736	4988	1553
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	3396		1736	3177	1413	1736	4927		1736	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	53	651	170	180	813	860	239	1794	159	468	811	72
RTOR Reduction (vph)	0	16	0	0	26	327	0	7	0	0	0	43
Lane Group Flow (vph)	53	805	0	180	1131	189	239	1946	0	468	811	29
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	8.7	39.0		16.0	46.3	46.3	24.1	48.0		31.0	54.9	54.9
Effective Green, g (s)	8.7	39.0		16.0	46.3	46.3	24.1	48.0		31.0	54.9	54.9
Actuated g/C Ratio	0.06	0.26		0.11	0.31	0.31	0.16	0.32		0.21	0.37	0.37
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	101	882		185	980	436	278	1576		358	1825	568
v/s Ratio Prot	0.03	0.24		c0.10	c0.36		0.14	c0.40		c0.27	0.16	
v/s Ratio Perm						0.13						0.02
v/c Ratio	0.52	0.91		0.97	1.15	0.43	0.86	1.23		1.31	0.44	0.05
Uniform Delay, d1	68.6	53.9		66.8	51.9	41.4	61.3	51.0		59.5	36.0	30.7
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.8	13.6		57.9	81.0	0.7	22.3	111.4		157.1	0.2	0.0
Delay (s)	73.5	67.5		124.7	132.8	42.1	83.6	162.4		216.6	36.2	30.8
Level of Service	E	E		F	F	D	F	F		F	D	C
Approach Delay (s)		67.8			106.8			153.8			98.4	
Approach LOS		E			F			F			F	

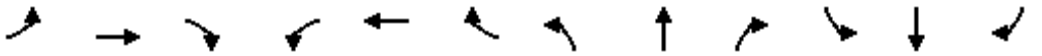
Intersection Summary			
HCM 2000 Control Delay	116.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	112.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	896	101	171	1075	376	110	636	184	309	410	71
Future Volume (vph)	56	896	101	171	1075	376	110	636	184	309	410	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	4.6		5.0	4.8	4.8	5.5	4.4	4.4	5.5	4.3	4.3
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	3452		1752	3505	1568	1752	1845	1568	1752	1845	1568
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1752	3452		1752	3505	1568	1752	1845	1568	1752	1845	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	56	896	101	171	1075	376	110	636	184	309	410	71
RTOR Reduction (vph)	0	8	0	0	0	228	0	0	86	0	0	45
Lane Group Flow (vph)	56	989	0	171	1075	148	110	636	98	309	410	26
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						2			8			4
Actuated Green, G (s)	4.2	32.3		8.0	35.7	35.7	9.9	33.6	33.6	16.5	40.3	40.3
Effective Green, g (s)	4.2	32.3		8.0	35.7	35.7	9.9	33.6	33.6	16.5	40.3	40.3
Actuated g/C Ratio	0.04	0.29		0.07	0.32	0.32	0.09	0.31	0.31	0.15	0.37	0.37
Clearance Time (s)	5.2	4.6		5.0	4.8	4.8	5.5	4.4	4.4	5.5	4.3	4.3
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lane Grp Cap (vph)	66	1014		127	1138	509	157	564	479	263	676	574
v/s Ratio Prot	0.03	0.29		c0.10	c0.31		0.06	c0.34		c0.18	0.22	
v/s Ratio Perm						0.09			0.06			0.02
v/c Ratio	0.85	0.98		1.35	0.94	0.29	0.70	1.13	0.20	1.17	0.61	0.05
Uniform Delay, d1	52.5	38.4		51.0	36.1	27.7	48.6	38.2	28.3	46.7	28.3	22.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	58.5	22.2		199.0	15.0	0.1	10.9	78.2	0.1	111.2	1.1	0.0
Delay (s)	111.1	60.6		250.0	51.2	27.8	59.5	116.3	28.3	157.9	29.4	22.4
Level of Service	F	E		F	D	C	E	F	C	F	C	C
Approach Delay (s)		63.3			66.7			92.2			79.1	
Approach LOS		E			E			F			E	

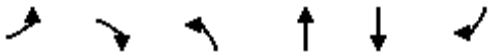
Intersection Summary			
HCM 2000 Control Delay	73.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	109.9	Sum of lost time (s)	19.9
Intersection Capacity Utilization	104.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	674	0	1756	0	0	0	0	1890	1447	0	1480	252
Future Volume (vph)	674	0	1756	0	0	0	0	1890	1447	0	1480	252
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4		6.4					5.1	4.0		4.6	4.0
Lane Util. Factor	0.97		0.88					0.91	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3367		2733					4988	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3367		2733					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	674	0	1756	0	0	0	0	1890	1447	0	1480	252
RTOR Reduction (vph)	0	0	8	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	674	0	1748	0	0	0	0	1890	1447	0	1480	252
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	71.6		71.6					46.9	130.0		47.4	130.0
Effective Green, g (s)	71.6		71.6					46.9	130.0		47.4	130.0
Actuated g/C Ratio	0.55		0.55					0.36	1.00		0.36	1.00
Clearance Time (s)	6.4		6.4					5.1			4.6	
Vehicle Extension (s)	1.0		1.0					1.0			1.0	
Lane Grp Cap (vph)	1854		1505					1799	1553		1818	1553
v/s Ratio Prot								c0.38			0.30	
v/s Ratio Perm	0.20		c0.64						0.93			0.16
v/c Ratio	0.36		1.16					1.05	0.93		0.81	0.16
Uniform Delay, d1	16.4		29.2					41.5	0.0		37.3	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0		80.4					35.9	11.5		2.8	0.2
Delay (s)	16.4		109.6					77.5	11.5		40.1	0.2
Level of Service	B		F					E	B		D	A
Approach Delay (s)		83.8			0.0			48.9			34.3	
Approach LOS		F			A			D			C	

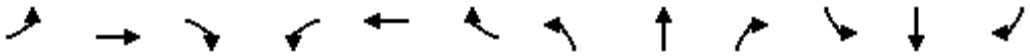
Intersection Summary			
HCM 2000 Control Delay	56.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	99.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1037	29	55	945	335	1033
Future Volume (vph)	1037	29	55	945	335	1033
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.88
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3400	1568	1752	3505	3505	2760
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3400	1568	1752	3505	3505	2760
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1037	29	55	945	335	1033
RTOR Reduction (vph)	0	18	0	0	0	685
Lane Group Flow (vph)	1037	11	55	945	335	348
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	17.1	17.1	1.6	21.2	15.6	15.6
Effective Green, g (s)	17.1	17.1	1.6	21.2	15.6	15.6
Actuated g/C Ratio	0.37	0.37	0.03	0.46	0.34	0.34
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1255	579	60	1604	1180	929
v/s Ratio Prot	c0.31		0.03	c0.27	0.10	
v/s Ratio Perm		0.01				0.13
v/c Ratio	0.83	0.02	0.92	0.59	0.28	0.37
Uniform Delay, d1	13.3	9.3	22.3	9.3	11.3	11.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.6	0.0	85.9	0.6	0.1	0.3
Delay (s)	17.8	9.3	108.1	9.9	11.4	11.9
Level of Service	B	A	F	A	B	B
Approach Delay (s)	17.6			15.3	11.8	
Approach LOS	B			B	B	

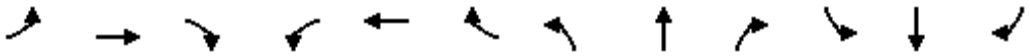
Intersection Summary			
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	46.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	322	418	1	1	638	7	7	308	0	0	161	236
Future Volume (vph)	322	418	1	1	638	7	7	308	0	0	161	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		1.00			1.00			1.00			0.92	
Flt Protected		0.98			1.00			1.00			1.00	
Satd. Flow (prot)		1722			1725			1757			1618	
Flt Permitted		0.98			1.00			0.63			1.00	
Satd. Flow (perm)		1722			1725			1111			1618	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	322	418	1	1	638	7	7	308	0	0	161	236
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	44	0
Lane Group Flow (vph)	0	741	0	0	646	0	0	315	0	0	353	0
Heavy Vehicles (%)	8%	8%	8%	10%	10%	10%	8%	8%	8%	8%	8%	8%
Turn Type	Split	NA		Split	NA		Perm	NA			NA	
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)		44.0			39.0			25.0			25.0	
Effective Green, g (s)		44.0			39.0			25.0			25.0	
Actuated g/C Ratio		0.37			0.32			0.21			0.21	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		631			560			231			337	
v/s Ratio Prot		c0.43			c0.37						0.22	
v/s Ratio Perm								c0.28				
v/c Ratio		1.17			1.15			1.36			1.05	
Uniform Delay, d1		38.0			40.5			47.5			47.5	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		94.4			88.1			188.9			61.7	
Delay (s)		132.4			128.6			236.4			109.2	
Level of Service		F			F			F			F	
Approach Delay (s)		132.4			128.6			236.4			109.2	
Approach LOS		F			F			F			F	

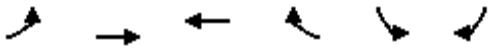
Intersection Summary			
HCM 2000 Control Delay	142.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	106.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	3	19	194	6	606	16	1816	105	226	1575	0
Future Volume (vph)	0	3	19	194	6	606	16	1816	105	226	1575	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt		0.87		1.00	1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1606		1752	1845	1568	1752	3476		1752	3505	
Flt Permitted		1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1606		1752	1845	1568	1752	3476		1752	3505	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	3	19	194	6	606	16	1816	105	226	1575	0
RTOR Reduction (vph)	0	18	0	0	0	160	0	3	0	0	0	0
Lane Group Flow (vph)	0	4	0	194	6	446	16	1918	0	226	1575	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)		6.1		27.5	37.6	37.6	2.0	78.4		18.0	94.4	
Effective Green, g (s)		6.1		27.5	37.6	37.6	2.0	78.4		18.0	94.4	
Actuated g/C Ratio		0.04		0.19	0.26	0.26	0.01	0.54		0.12	0.65	
Clearance Time (s)		4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		67		330	475	403	24	1866		216	2266	
v/s Ratio Prot		0.00		0.11	0.00		0.01	c0.55		c0.13	0.45	
v/s Ratio Perm						c0.28						
v/c Ratio		0.06		0.59	0.01	1.11	0.67	1.03		1.05	0.70	
Uniform Delay, d1		67.2		54.1	40.4	54.2	71.7	33.8		64.0	16.6	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.4		2.7	0.0	77.2	52.8	28.3		73.9	0.9	
Delay (s)		67.5		56.7	40.4	131.4	124.5	62.1		137.9	17.5	
Level of Service		E		E	D	F	F	E		F	B	
Approach Delay (s)		67.5			112.8			62.7			32.6	
Approach LOS		E			F			E			C	

Intersection Summary			
HCM 2000 Control Delay	59.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	146.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	97.7%	ICU Level of Service	F
Analysis Period (min)	15		

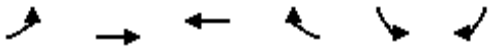
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	601	1365	2134	1713	0
Future Volume (vph)	0	601	1365	2134	1713	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95	0.95	1.00	0.97	
Frt		1.00	1.00	0.85	1.00	
Flt Protected		1.00	1.00	1.00	0.95	
Satd. Flow (prot)		3505	3505	1568	3400	
Flt Permitted		1.00	1.00	1.00	0.95	
Satd. Flow (perm)		3505	3505	1568	3400	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	601	1365	2134	1713	0
RTOR Reduction (vph)	0	0	0	518	0	0
Lane Group Flow (vph)	0	601	1365	1616	1713	0
Turn Type	Prot	NA	NA	Perm	Prot	
Protected Phases	4	5	5		6	
Permitted Phases				5		
Actuated Green, G (s)		63.0	63.0	63.0	49.0	
Effective Green, g (s)		63.0	63.0	63.0	49.0	
Actuated g/C Ratio		0.52	0.52	0.52	0.41	
Clearance Time (s)		4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1840	1840	823	1388	
v/s Ratio Prot		0.17	0.39		c0.50	
v/s Ratio Perm				c1.03		
v/c Ratio		0.33	0.74	1.96	1.23	
Uniform Delay, d1		16.3	22.2	28.5	35.5	
Progression Factor		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.1	1.7	437.9	111.8	
Delay (s)		16.4	23.8	466.4	147.3	
Level of Service		B	C	F	F	
Approach Delay (s)		16.4	293.7		147.3	
Approach LOS		B	F		F	

Intersection Summary			
HCM 2000 Control Delay	221.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.70		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	135.5%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	996	1289	2654	95	78	589
Future Volume (vph)	996	1289	2654	95	78	589
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	0.91	0.91		1.00	0.88
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3400	5036	5010		1752	2760
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3400	5036	5010		1752	2760
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	996	1289	2654	95	78	589
RTOR Reduction (vph)	0	0	2	0	0	540
Lane Group Flow (vph)	996	1289	2747	0	78	49
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	42.0	125.1	79.1		12.0	12.0
Effective Green, g (s)	42.0	125.1	79.1		12.0	12.0
Actuated g/C Ratio	0.29	0.86	0.55		0.08	0.08
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	984	4341	2731		144	228
v/s Ratio Prot	c0.29	0.26	c0.55		c0.04	
v/s Ratio Perm						0.02
v/c Ratio	1.01	0.30	1.01		0.54	0.21
Uniform Delay, d1	51.5	1.9	33.0		63.9	62.1
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	31.7	0.0	18.6		4.1	0.5
Delay (s)	83.3	1.9	51.6		68.0	62.6
Level of Service	F	A	D		E	E
Approach Delay (s)		37.4	51.6		63.2	
Approach LOS		D	D		E	

Intersection Summary			
HCM 2000 Control Delay	47.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	145.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	347	491	132	253	482	724	72	3426	490	574	2962	531
Future Volume (veh/h)	347	491	132	253	482	724	72	3426	490	574	2962	531
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	347	491	132	253	482	724	72	3426	490	574	2962	531
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	192	932	417	147	885	547	67	2290	713	325	2671	832
Arrive On Green	0.06	0.27	0.27	0.04	0.25	0.25	0.02	0.46	0.46	0.10	0.54	0.54
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	347	491	132	253	482	724	72	3426	490	574	2962	531
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	8.5	18.0	10.2	6.5	17.9	38.0	3.0	69.1	37.5	14.5	80.6	36.3
Cycle Q Clear(g_c), s	8.5	18.0	10.2	6.5	17.9	38.0	3.0	69.1	37.5	14.5	80.6	36.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	192	932	417	147	885	547	67	2290	713	325	2671	832
V/C Ratio(X)	1.80	0.53	0.32	1.72	0.54	1.32	1.07	1.50	0.69	1.77	1.11	0.64
Avail Cap(c_a), veh/h	192	932	417	147	885	547	67	2290	713	325	2671	832
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.0	47.2	44.3	72.0	48.8	49.0	73.8	40.7	32.2	68.0	35.0	24.7
Incr Delay (d2), s/veh	381.1	0.3	0.2	350.4	0.4	158.1	130.4	225.6	2.3	356.6	55.1	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.2	8.8	4.4	10.2	8.8	46.7	2.6	79.4	16.6	22.8	50.5	15.8
LnGrp Delay(d),s/veh	452.1	47.5	44.5	422.4	49.1	207.1	205.7	266.3	34.5	424.6	90.1	25.9
LnGrp LOS	F	D	D	F	D	F	F	F	C	F	F	C
Approach Vol, veh/h		970			1459			3988			4067	
Approach Delay, s/veh		191.8			192.2			236.7			128.9	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	85.4	14.0	42.6	20.0	73.9	12.0	44.6
Change Period (Y+Rc), s	5.5	4.8	5.5	* 4.6	5.5	* 4.8	5.5	4.6
Max Green Setting (Gmax), s	3.0	80.4	8.5	* 38	14.5	* 69	6.5	39.7
Max Q Clear Time (g_c+I1), s	5.0	82.6	10.5	40.0	16.5	71.1	8.5	20.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1

Intersection Summary		
HCM 2010 Ctrl Delay		184.5
HCM 2010 LOS		F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	308	23	151	409	890	34	2803	226	507	2340	0
Future Volume (veh/h)	0	308	23	151	409	890	34	2803	226	507	2340	0
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	0	308	23	151	409	890	34	2803	226	507	2340	0
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	3	554	248	117	826	590	60	2486	774	475	3098	965
Arrive On Green	0.00	0.16	0.16	0.03	0.24	0.24	0.02	0.50	0.50	0.14	0.62	0.00
Sat Flow, veh/h	3375	3471	1553	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	0	308	23	151	409	890	34	2803	226	507	2340	0
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	0.0	10.8	1.7	4.5	13.3	31.0	1.3	65.6	11.2	18.5	44.1	0.0
Cycle Q Clear(g_c), s	0.0	10.8	1.7	4.5	13.3	31.0	1.3	65.6	11.2	18.5	44.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	3	554	248	117	826	590	60	2486	774	475	3098	965
V/C Ratio(X)	0.00	0.56	0.09	1.30	0.50	1.51	0.56	1.13	0.29	1.07	0.76	0.00
Avail Cap(c_a), veh/h	77	781	349	117	826	590	77	2486	774	475	3098	965
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	51.0	47.2	63.6	43.5	41.1	64.1	33.0	19.4	56.6	17.8	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.1	182.4	0.2	237.8	3.0	63.2	0.1	60.8	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.2	0.7	5.1	6.4	60.3	0.6	44.5	4.9	12.6	20.4	0.0
LnGrp Delay(d),s/veh	0.0	51.3	47.2	246.0	43.7	278.8	67.1	96.2	19.4	117.4	18.8	0.0
LnGrp LOS		D	D	F	D	F	E	F	B	F	B	
Approach Vol, veh/h		331			1450			3063			2847	
Approach Delay, s/veh		51.0			209.1			90.2			36.3	
Approach LOS		D			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	87.0	0.0	36.7	24.0	70.9	10.0	26.7
Change Period (Y+Rc), s	5.5	5.3	5.5	* 5.7	5.5	* 5.3	5.5	* 5.7
Max Green Setting (Gmax), s	3.0	81.0	3.0	* 31	18.5	* 66	4.5	* 30
Max Q Clear Time (g_c+I1), s	3.3	46.1	0.0	33.0	20.5	67.6	6.5	12.8
Green Ext Time (p_c), s	0.0	30.4	0.0	0.0	0.0	0.0	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	91.0
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	1543	601	101	1965	990	778	1964	67	1065	1570	189
Future Volume (veh/h)	89	1543	601	101	1965	990	778	1964	67	1065	1570	189
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	89	1543	601	101	1965	0	778	1964	67	1065	1570	189
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	4	4	4	4	4	4
Cap, veh/h	66	1537	478	115	1625	506	710	1533	477	719	1523	474
Arrive On Green	0.02	0.31	0.31	0.03	0.33	0.00	0.21	0.31	0.31	0.21	0.31	0.31
Sat Flow, veh/h	3312	4893	1524	3312	4893	1524	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	89	1543	601	101	1965	0	778	1964	67	1065	1570	189
Grp Sat Flow(s),veh/h/ln	1656	1631	1524	1656	1631	1524	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	3.0	47.2	47.2	4.6	49.9	0.0	31.6	46.2	4.7	32.0	45.9	14.5
Cycle Q Clear(g_c), s	3.0	47.2	47.2	4.6	49.9	0.0	31.6	46.2	4.7	32.0	45.9	14.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	66	1537	478	115	1625	506	710	1533	477	719	1523	474
V/C Ratio(X)	1.35	1.00	1.26	0.88	1.21	0.00	1.10	1.28	0.14	1.48	1.03	0.40
Avail Cap(c_a), veh/h	66	1537	478	115	1625	506	710	1533	477	719	1523	474
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.7	51.6	51.6	72.2	50.2	0.0	59.4	52.1	37.7	59.2	52.2	41.3
Incr Delay (d2), s/veh	228.2	23.9	131.4	48.1	100.3	0.0	63.1	131.6	0.0	224.3	31.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	24.6	37.3	2.9	37.5	0.0	20.9	39.8	2.0	37.3	25.4	6.2
LnGrp Delay(d),s/veh	301.8	75.5	183.0	120.3	150.5	0.0	122.5	183.7	37.7	283.5	83.5	41.5
LnGrp LOS	F	F	F	F	F		F	F	D	F	F	D
Approach Vol, veh/h		2233			2066			2809			2824	
Approach Delay, s/veh		113.4			149.0			163.2			156.1	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	55.3	36.3	50.7	10.7	52.6	36.0	51.0
Change Period (Y+Rc), s	5.0	* 5.4	* 4.7	4.8	5.5	* 5.4	4.0	4.8
Max Green Setting (Gmax), s	3.0	* 50	* 32	45.9	5.2	* 47	32.0	46.2
Max Q Clear Time (g_c+I1), s	5.0	51.9	33.6	47.9	6.6	49.2	34.0	48.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	147.1
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	508	95	245	718	301	404	2078	347	141	1692	427
Future Volume (veh/h)	107	508	95	245	718	301	404	2078	347	141	1692	427
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1845	1845	1827	1827
Adj Flow Rate, veh/h	107	508	95	245	718	301	404	2078	347	141	1692	427
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	3	3	4	4
Cap, veh/h	148	665	298	312	823	368	362	2282	717	165	2024	630
Arrive On Green	0.04	0.19	0.19	0.09	0.23	0.23	0.11	0.46	0.46	0.05	0.41	0.41
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1568	3408	4988	1553
Grp Volume(v), veh/h	107	508	95	245	718	301	404	2078	347	141	1692	427
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1568	1704	1663	1553
Q Serve(g_s), s	3.0	13.3	5.1	6.8	19.1	17.6	10.4	37.5	14.9	4.0	29.6	21.8
Cycle Q Clear(g_c), s	3.0	13.3	5.1	6.8	19.1	17.6	10.4	37.5	14.9	4.0	29.6	21.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	665	298	312	823	368	362	2282	717	165	2024	630
V/C Ratio(X)	0.72	0.76	0.32	0.78	0.87	0.82	1.11	0.91	0.48	0.85	0.84	0.68
Avail Cap(c_a), veh/h	148	665	298	429	944	422	362	2307	725	165	2049	638
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.8	37.2	33.8	43.1	35.7	35.1	43.2	24.4	18.3	45.7	25.9	23.6
Incr Delay (d2), s/veh	14.1	4.7	0.2	4.2	7.4	9.2	82.0	5.8	0.2	31.2	3.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	6.9	2.2	3.4	10.1	8.6	8.9	18.3	6.5	2.6	14.0	9.7
LnGrp Delay(d),s/veh	59.9	41.9	34.1	47.3	43.0	44.3	125.3	30.2	18.5	77.0	28.8	25.9
LnGrp LOS	E	D	C	D	D	D	F	C	B	E	C	C
Approach Vol, veh/h		710			1264			2829			2260	
Approach Delay, s/veh		43.6			44.2			42.3			31.3	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	44.1	9.7	28.1	10.0	49.1	14.1	23.7
Change Period (Y+Rc), s	* 4.6	4.8	5.5	* 5.3	* 5.3	4.8	* 5.2	* 5.3
Max Green Setting (Gmax), s	* 10	39.8	4.2	* 26	* 4.7	44.8	* 12	* 18
Max Q Clear Time (g_c+I1), s	12.4	31.6	5.0	21.1	6.0	39.5	8.8	15.3
Green Ext Time (p_c), s	0.0	7.2	0.0	1.7	0.0	4.8	0.1	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	39.3
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1201	470	131	13	840	26	824	2331	129	9	864	607
Future Volume (veh/h)	1201	470	131	13	840	26	824	2331	129	9	864	607
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	1201	470	131	13	840	26	824	2331	129	9	864	607
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	1055	1985	618	28	465	145	744	2235	696	21	1186	369
Arrive On Green	0.31	0.40	0.40	0.01	0.09	0.09	0.22	0.45	0.45	0.01	0.24	0.24
Sat Flow, veh/h	3375	4988	1553	3375	4988	1553	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	1201	470	131	13	840	26	824	2331	129	9	864	607
Grp Sat Flow(s),veh/h/ln	1688	1663	1553	1688	1663	1553	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	46.9	9.4	8.3	0.6	14.0	2.3	33.1	67.3	7.5	0.4	24.0	35.7
Cycle Q Clear(g_c), s	46.9	9.4	8.3	0.6	14.0	2.3	33.1	67.3	7.5	0.4	24.0	35.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1055	1985	618	28	465	145	744	2235	696	21	1186	369
V/C Ratio(X)	1.14	0.24	0.21	0.46	1.81	0.18	1.11	1.04	0.19	0.43	0.73	1.64
Avail Cap(c_a), veh/h	1055	1985	618	67	465	145	744	2235	696	67	1186	369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.6	30.0	29.7	74.1	68.1	62.8	58.5	41.4	24.9	74.3	52.7	57.2
Incr Delay (d2), s/veh	74.2	0.3	0.8	4.3	371.0	2.7	66.3	31.4	0.6	5.0	3.9	301.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	32.7	4.4	3.7	0.3	22.4	1.1	22.3	37.3	3.3	0.2	11.5	46.3
LnGrp Delay(d),s/veh	125.8	30.3	30.5	78.4	439.1	65.5	124.8	72.8	25.5	79.3	56.7	358.7
LnGrp LOS	F	C	C	E	F	E	F	F	C	E	E	F
Approach Vol, veh/h		1802			879			3284			1480	
Approach Delay, s/veh		94.0			422.7			84.0			180.7	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	38.0	40.9	52.0	19.2	6.4	72.5	6.3	64.9
Change Period (Y+Rc), s	* 4.9	* 5.2	* 5.1	* 5.2	5.5	* 5.2	5.0	* 5.2
Max Green Setting (Gmax), s	* 33	* 36	* 47	* 14	3.0	* 65	3.0	* 58
Max Q Clear Time (g_c+I1), s	35.1	37.7	48.9	16.0	2.4	69.3	2.6	11.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.3

Intersection Summary	
HCM 2010 Ctrl Delay	145.6
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	2443	38	54	2492	8	433	42	218	7	16	55
Future Volume (veh/h)	14	2443	38	54	2492	8	433	42	218	7	16	55
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	14	2443	38	54	2492	8	433	42	218	7	16	55
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	21	2535	39	52	2663	9	458	585	497	12	104	89
Arrive On Green	0.01	0.51	0.51	0.03	0.53	0.53	0.26	0.32	0.32	0.01	0.06	0.06
Sat Flow, veh/h	1707	4964	77	1707	5036	16	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	14	1603	878	54	1614	886	433	42	218	7	16	55
Grp Sat Flow(s),veh/h/ln	1707	1631	1779	1707	1631	1790	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	1.1	62.4	62.9	4.0	60.9	61.0	31.9	2.1	14.6	0.5	1.1	4.5
Cycle Q Clear(g_c), s	1.1	62.4	62.9	4.0	60.9	61.0	31.9	2.1	14.6	0.5	1.1	4.5
Prop In Lane	1.00		0.04	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	21	1666	909	52	1725	946	458	585	497	12	104	89
V/C Ratio(X)	0.67	0.96	0.97	1.04	0.94	0.94	0.95	0.07	0.44	0.58	0.15	0.62
Avail Cap(c_a), veh/h	52	1696	925	52	1725	946	514	777	661	53	294	250
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.9	31.1	31.2	64.0	29.0	29.0	47.9	31.5	35.7	65.3	59.2	60.9
Incr Delay (d2), s/veh	22.7	14.1	21.7	138.0	10.3	16.3	24.8	0.0	0.6	26.6	0.6	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	31.3	36.2	3.9	29.8	34.3	18.7	1.1	6.4	0.3	0.6	2.1
LnGrp Delay(d),s/veh	87.7	45.1	52.9	202.9	39.2	45.4	72.7	31.5	36.3	91.9	59.8	67.1
LnGrp LOS	F	D	D	F	D	D	E	C	D	F	E	E
Approach Vol, veh/h		2495			2554			693			78	
Approach Delay, s/veh		48.1			44.8			58.8			67.8	
Approach LOS		D			D			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	73.8	38.8	11.9	5.1	76.2	4.4	46.3
Change Period (Y+Rc), s	3.5	6.4	4.4	* 4.4	3.5	6.4	3.5	4.4
Max Green Setting (Gmax), s	4.0	68.6	38.6	* 21	4.0	68.6	4.0	55.6
Max Q Clear Time (g_c+I1), s	6.0	64.9	33.9	6.5	3.1	63.0	2.5	16.6
Green Ext Time (p_c), s	0.0	2.5	0.5	0.9	0.0	5.6	0.0	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	48.2
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	1224	722	5	1316	264	607	466	20	127	191	54
Future Volume (veh/h)	82	1224	722	5	1316	264	607	466	20	127	191	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	82	1224	722	5	1316	264	607	466	20	127	191	54
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	48	1079	579	7	1360	269	491	575	489	151	218	185
Arrive On Green	0.03	0.49	0.49	0.00	0.47	0.47	0.28	0.31	0.31	0.09	0.12	0.12
Sat Flow, veh/h	1757	2205	1183	1757	2917	578	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	82	948	998	5	784	796	607	466	20	127	191	54
Grp Sat Flow(s),veh/h/ln	1757	1752	1636	1757	1752	1743	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	4.0	71.8	71.8	0.4	63.4	65.9	41.0	34.1	1.3	10.5	14.9	4.6
Cycle Q Clear(g_c), s	4.0	71.8	71.8	0.4	63.4	65.9	41.0	34.1	1.3	10.5	14.9	4.6
Prop In Lane	1.00		0.72	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	48	858	801	7	817	812	491	575	489	151	218	185
V/C Ratio(X)	1.71	1.11	1.25	0.76	0.96	0.98	1.24	0.81	0.04	0.84	0.88	0.29
Avail Cap(c_a), veh/h	48	858	801	36	824	819	491	575	489	263	251	214
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.4	37.5	37.5	73.0	37.8	38.5	52.9	46.5	35.2	66.1	63.6	59.1
Incr Delay (d2), s/veh	394.1	63.7	121.2	96.5	21.9	26.5	123.1	8.5	0.0	11.9	25.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	49.7	59.2	0.4	35.7	37.6	36.6	18.7	0.6	5.6	9.2	2.0
LnGrp Delay(d),s/veh	465.5	101.1	158.6	169.5	59.7	65.0	176.0	55.0	35.2	78.0	88.6	59.9
LnGrp LOS	F	F	F	F	E	E	F	D	D	E	F	E
Approach Vol, veh/h		2028			1585			1093			372	
Approach Delay, s/veh		144.2			62.7			121.8			80.8	
Approach LOS		F			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.6	49.8	4.6	75.8	45.0	21.4	8.0	72.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	22.0	39.0	3.0	70.0	41.0	20.0	4.0	69.0
Max Q Clear Time (g_c+I1), s	12.5	36.1	2.4	73.8	43.0	16.9	6.0	67.9
Green Ext Time (p_c), s	0.2	1.2	0.0	0.0	0.0	0.4	0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	109.3
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	324	2145	155	233	2230	3	122	2081	200	33	1828	164
Future Volume (veh/h)	324	2145	155	233	2230	3	122	2081	200	33	1828	164
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1792	1845	1845	1792	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	324	2145	155	233	2230	3	122	2081	200	33	1828	164
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	6	3	3	6	3	3	3	3	3	3	3
Cap, veh/h	341	2132	683	268	2027	650	122	1783	555	59	1691	526
Arrive On Green	0.10	0.44	0.44	0.08	0.41	0.41	0.04	0.35	0.35	0.02	0.34	0.34
Sat Flow, veh/h	3408	4893	1568	3408	4893	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	324	2145	155	233	2230	3	122	2081	200	33	1828	164
Grp Sat Flow(s),veh/h/ln	1704	1631	1568	1704	1631	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	13.2	61.0	8.7	9.5	58.0	0.2	5.0	49.6	13.2	1.3	47.0	10.9
Cycle Q Clear(g_c), s	13.2	61.0	8.7	9.5	58.0	0.2	5.0	49.6	13.2	1.3	47.0	10.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	341	2132	683	268	2027	650	122	1783	555	59	1691	526
V/C Ratio(X)	0.95	1.01	0.23	0.87	1.10	0.00	1.00	1.17	0.36	0.56	1.08	0.31
Avail Cap(c_a), veh/h	341	2132	683	268	2027	650	122	1783	555	97	1691	526
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.7	39.5	24.7	63.8	41.0	24.1	67.5	45.2	33.5	68.3	46.5	34.5
Incr Delay (d2), s/veh	35.9	21.0	0.2	25.1	53.3	0.0	82.2	81.6	0.4	8.1	47.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	31.6	3.8	5.4	36.1	0.1	3.7	36.4	5.8	0.7	29.2	4.7
LnGrp Delay(d),s/veh	98.5	60.5	24.9	88.9	94.3	24.1	149.7	126.8	33.9	76.3	94.0	34.8
LnGrp LOS	F	F	C	F	F	C	F	F	C	E	F	C
Approach Vol, veh/h		2624			2466			2403			2025	
Approach Delay, s/veh		63.1			93.7			120.2			88.9	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	53.6	15.0	65.0	9.0	51.0	18.0	62.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	48.0	11.0	61.0	5.0	47.0	14.0	58.0
Max Q Clear Time (g_c+I1), s	3.3	51.6	11.5	63.0	7.0	49.0	15.2	60.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	90.9
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	519	1052	812	142	1069	240	238	1601	452	108	1102	209
Future Volume (veh/h)	519	1052	812	142	1069	240	238	1601	452	108	1102	209
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	519	1052	812	142	1069	240	238	1601	452	108	1102	209
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	574	1809	563	136	1161	362	288	1572	703	156	1436	643
Arrive On Green	0.17	0.36	0.36	0.04	0.23	0.23	0.08	0.45	0.45	0.05	0.41	0.41
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	519	1052	812	142	1069	240	238	1601	452	108	1102	209
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	22.4	25.4	54.0	6.0	31.2	20.9	10.3	67.4	33.6	4.7	40.7	13.6
Cycle Q Clear(g_c), s	22.4	25.4	54.0	6.0	31.2	20.9	10.3	67.4	33.6	4.7	40.7	13.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	574	1809	563	136	1161	362	288	1572	703	156	1436	643
V/C Ratio(X)	0.90	0.58	1.44	1.04	0.92	0.66	0.83	1.02	0.64	0.69	0.77	0.33
Avail Cap(c_a), veh/h	658	1809	563	136	1161	362	408	1572	703	408	1539	688
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.3	39.0	48.2	72.2	56.5	52.5	67.7	41.5	32.1	70.7	38.2	30.2
Incr Delay (d2), s/veh	14.7	0.5	208.6	89.3	11.8	4.5	9.2	27.5	2.0	5.3	2.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.8	11.9	56.0	4.5	15.7	9.5	5.2	38.5	14.9	2.3	20.2	6.0
LnGrp Delay(d),s/veh	76.0	39.5	256.8	161.8	68.3	57.0	76.9	68.9	34.1	76.0	40.4	30.5
LnGrp LOS	E	D	F	F	E	E	E	F	C	E	D	C
Approach Vol, veh/h		2383			1451			2291			1419	
Approach Delay, s/veh		121.5			75.6			62.9			41.7	
Approach LOS		F			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	71.4	10.0	58.0	16.7	65.6	29.3	38.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	18.0	66.0	6.0	54.0	18.0	66.0	29.0	31.0
Max Q Clear Time (g_c+I1), s	6.7	69.4	8.0	56.0	12.3	42.7	24.4	33.2
Green Ext Time (p_c), s	0.2	0.0	0.0	0.0	0.4	18.9	0.9	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	79.8
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	40	32	332	30	387	57	2903	403	682	1898	59
Future Volume (veh/h)	76	40	32	332	30	387	57	2903	403	682	1898	59
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	76	40	32	332	30	387	57	2903	403	682	1898	59
Adj No. of Lanes	1	1	1	2	1	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	64	430	366	503	295	251	72	2470	769	551	3080	96
Arrive On Green	0.04	0.23	0.23	0.16	0.16	0.16	0.04	0.50	0.50	0.16	0.62	0.62
Sat Flow, veh/h	1757	1845	1568	2541	1845	1568	1740	4988	1553	3375	4970	154
Grp Volume(v), veh/h	76	40	32	332	30	387	57	2903	403	682	1269	688
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1271	1845	1568	1740	1663	1553	1688	1663	1800
Q Serve(g_s), s	5.5	2.5	2.4	18.9	2.1	24.0	4.9	74.3	26.5	24.5	35.2	35.3
Cycle Q Clear(g_c), s	5.5	2.5	2.4	18.9	2.1	24.0	4.9	74.3	26.5	24.5	35.2	35.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	64	430	366	503	295	251	72	2470	769	551	2061	1115
V/C Ratio(X)	1.18	0.09	0.09	0.66	0.10	1.54	0.79	1.18	0.52	1.24	0.62	0.62
Avail Cap(c_a), veh/h	64	430	366	503	295	251	123	2470	769	551	2061	1115
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.3	45.1	45.0	60.9	53.8	63.0	71.2	37.8	25.8	62.8	17.5	17.6
Incr Delay (d2), s/veh	168.8	0.0	0.0	2.6	0.1	263.1	6.9	83.4	0.3	121.6	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	1.3	1.0	6.8	1.1	28.7	2.5	53.2	11.5	20.7	16.2	17.6
LnGrp Delay(d),s/veh	241.1	45.1	45.0	63.4	53.9	326.1	78.1	121.3	26.1	184.4	17.9	18.3
LnGrp LOS	F	D	D	E	D	F	E	F	C	F	B	B
Approach Vol, veh/h		148			749			3363			2639	
Approach Delay, s/veh		145.7			198.8			109.1			61.0	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.3	98.2		40.5	30.0	79.5	11.0	29.5
Change Period (Y+Rc), s	* 5.1	* 5.2		5.5	5.5	* 5.2	5.5	5.5
Max Green Setting (Gmax), s	* 11	* 89		35.0	24.5	* 74	5.5	24.0
Max Q Clear Time (g_c+I1), s	6.9	37.3		4.5	26.5	76.3	7.5	26.0
Green Ext Time (p_c), s	0.0	39.1		0.7	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		101.3
HCM 2010 LOS		F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	225	1183	433	243	1482	844	374	2057	363	563	883	165
Future Volume (veh/h)	225	1183	433	243	1482	844	374	2057	363	563	883	165
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	225	1183	433	243	1482	844	374	2057	363	563	883	165
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	193	1426	444	286	1564	487	417	1771	551	438	1801	561
Arrive On Green	0.06	0.28	0.28	0.08	0.31	0.31	0.12	0.36	0.36	0.13	0.36	0.36
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	225	1183	433	243	1482	844	374	2057	363	563	883	165
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	8.5	33.1	41.1	10.6	43.2	46.7	16.4	53.4	29.6	19.5	20.7	11.4
Cycle Q Clear(g_c), s	8.5	33.1	41.1	10.6	43.2	46.7	16.4	53.4	29.6	19.5	20.7	11.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	193	1426	444	286	1564	487	417	1771	551	438	1801	561
V/C Ratio(X)	1.17	0.83	0.98	0.85	0.95	1.73	0.90	1.16	0.66	1.29	0.49	0.29
Avail Cap(c_a), veh/h	193	1426	444	315	1564	487	532	1771	551	438	1801	561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.0	50.5	53.4	68.0	50.7	51.9	65.0	48.5	40.8	65.5	37.3	34.3
Incr Delay (d2), s/veh	117.5	4.0	36.0	16.6	12.4	338.6	13.2	79.4	2.3	145.3	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	15.9	22.2	5.7	21.8	66.0	8.5	37.5	13.1	17.9	9.5	4.9
LnGrp Delay(d),s/veh	188.4	54.5	89.4	84.6	63.0	390.5	78.1	127.9	43.1	210.7	37.4	34.5
LnGrp LOS	F	D	F	F	E	F	E	F	D	F	D	C
Approach Vol, veh/h		1841			2569			2794			1611	
Approach Delay, s/veh		79.1			172.6			110.2			97.7	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.1	59.9	14.0	52.4	25.0	59.0	18.1	48.3
Change Period (Y+Rc), s	5.5	* 5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	23.7	* 49	8.5	* 47	19.5	* 53	13.9	* 41
Max Q Clear Time (g_c+I1), s	18.4	22.7	10.5	48.7	21.5	55.4	12.6	43.1
Green Ext Time (p_c), s	0.2	13.7	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	119.6
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	342	1413	670	185	2277	544	138	2334	224	507	694	90
Future Volume (veh/h)	342	1413	670	185	2277	544	138	2334	224	507	694	90
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1845	1845	1792	1792	1845	1845	1845	1827	1845	1827
Adj Flow Rate, veh/h	342	1413	670	185	2277	544	138	2334	224	507	694	0
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	3	3	6	6	3	3	3	4	3	4
Cap, veh/h	258	1657	531	228	1619	504	181	1805	562	337	2027	625
Arrive On Green	0.08	0.34	0.34	0.07	0.33	0.33	0.05	0.36	0.36	0.10	0.40	0.00
Sat Flow, veh/h	3312	4893	1568	3408	4893	1524	3408	5036	1568	3375	5036	1553
Grp Volume(v), veh/h	342	1413	670	185	2277	544	138	2334	224	507	694	0
Grp Sat Flow(s),veh/h/ln	1656	1631	1568	1704	1631	1524	1704	1679	1568	1688	1679	1553
Q Serve(g_s), s	11.7	40.4	50.9	8.1	49.8	49.8	6.0	53.9	16.1	15.0	14.4	0.0
Cycle Q Clear(g_c), s	11.7	40.4	50.9	8.1	49.8	49.8	6.0	53.9	16.1	15.0	14.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	1657	531	228	1619	504	181	1805	562	337	2027	625
V/C Ratio(X)	1.33	0.85	1.26	0.81	1.41	1.08	0.76	1.29	0.40	1.51	0.34	0.00
Avail Cap(c_a), veh/h	258	1657	531	231	1619	504	204	1805	562	337	2027	625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	69.3	46.2	49.7	69.2	50.3	50.3	70.2	48.2	36.1	67.7	31.1	0.0
Incr Delay (d2), s/veh	171.5	4.3	132.5	19.1	186.5	63.0	11.6	136.1	0.5	242.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.5	18.8	41.6	4.4	50.3	29.8	3.1	47.6	7.0	18.3	6.7	0.0
LnGrp Delay(d),s/veh	240.8	50.6	182.3	88.3	236.8	113.3	81.8	184.3	36.6	310.1	31.2	0.0
LnGrp LOS	F	D	F	F	F	F	F	F	D	F	C	
Approach Vol, veh/h		2425			3006			2696			1201	
Approach Delay, s/veh		113.8			205.3			166.8			148.9	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.4	65.6	16.0	55.4	20.0	59.0	14.9	56.5
Change Period (Y+Rc), s	* 5.4	5.1	* 4.3	5.6	5.0	5.1	* 4.8	* 5.6
Max Green Setting (Gmax), s	* 9	59.5	* 12	49.4	15.0	53.9	* 10	* 51
Max Q Clear Time (g_c+I1), s	8.0	16.4	13.7	51.8	17.0	55.9	10.1	52.9
Green Ext Time (p_c), s	0.0	35.2	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	163.1
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	401	1000	197	261	1301	40	534	2626	129	50	849	175
Future Volume (veh/h)	401	1000	197	261	1301	40	534	2626	129	50	849	175
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	401	1000	197	261	1301	40	534	2626	129	50	849	175
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	156	1164	362	312	1395	434	582	2588	806	69	1831	570
Arrive On Green	0.05	0.23	0.23	0.09	0.28	0.28	0.17	0.51	0.51	0.02	0.36	0.36
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	401	1000	197	261	1301	40	534	2626	129	50	849	175
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	6.8	28.2	16.4	11.2	37.3	2.8	22.8	76.2	6.5	2.2	19.1	11.9
Cycle Q Clear(g_c), s	6.8	28.2	16.4	11.2	37.3	2.8	22.8	76.2	6.5	2.2	19.1	11.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	156	1164	362	312	1395	434	582	2588	806	69	1831	570
V/C Ratio(X)	2.57	0.86	0.54	0.84	0.93	0.09	0.92	1.01	0.16	0.72	0.46	0.31
Avail Cap(c_a), veh/h	156	1164	362	428	1454	453	616	2588	806	69	1831	570
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.7	54.7	50.1	66.2	52.3	39.8	60.5	36.0	19.1	72.2	36.1	33.8
Incr Delay (d2), s/veh	722.7	6.6	1.7	10.0	11.0	0.1	18.3	21.4	0.1	31.2	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.9	13.8	7.3	5.7	18.8	1.2	12.2	40.4	2.8	1.3	8.9	5.1
LnGrp Delay(d),s/veh	793.5	61.3	51.8	76.3	63.2	39.9	78.8	57.4	19.2	103.5	36.2	33.9
LnGrp LOS	F	E	D	E	E	D	E	F	B	F	D	C
Approach Vol, veh/h		1598			1602			3289			1074	
Approach Delay, s/veh		243.9			64.8			59.4			38.9	
Approach LOS		F			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.8	58.9	19.1	39.5	8.5	81.2	12.3	46.3
Change Period (Y+Rc), s	5.5	5.0	5.5	* 5.2	5.5	5.0	5.5	* 5.2
Max Green Setting (Gmax), s	26.8	52.4	18.6	* 31	3.0	76.2	6.8	* 43
Max Q Clear Time (g_c+I1), s	24.8	21.1	13.2	30.2	4.2	78.2	8.8	39.3
Green Ext Time (p_c), s	0.5	28.7	0.4	0.7	0.0	0.0	0.0	1.7

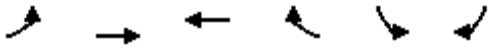
Intersection Summary	
HCM 2010 Ctrl Delay	96.6
HCM 2010 LOS	F

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	719	289	484	755	148	749
Future Volume (veh/h)	719	289	484	755	148	749
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1900	1845	1845	1845	1845
Adj Flow Rate, veh/h	719	289	484	755	148	749
Adj No. of Lanes	2	0	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	771	310	531	2350	394	825
Arrive On Green	0.32	0.32	0.30	0.67	0.22	0.22
Sat Flow, veh/h	2535	982	1757	3597	1757	1568
Grp Volume(v), veh/h	516	492	484	755	148	749
Grp Sat Flow(s),veh/h/ln	1752	1671	1757	1752	1757	1568
Q Serve(g_s), s	21.7	21.7	20.1	6.9	5.4	17.0
Cycle Q Clear(g_c), s	21.7	21.7	20.1	6.9	5.4	17.0
Prop In Lane		0.59	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	553	528	531	2350	394	825
V/C Ratio(X)	0.93	0.93	0.91	0.32	0.38	0.91
Avail Cap(c_a), veh/h	554	529	625	2540	394	825
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.2	25.2	25.5	5.2	24.9	16.3
Incr Delay (d2), s/veh	22.8	23.6	16.1	0.1	0.6	13.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.0	13.4	12.1	3.3	2.7	17.1
LnGrp Delay(d),s/veh	48.0	48.8	41.7	5.3	25.5	30.1
LnGrp LOS	D	D	D	A	C	C
Approach Vol, veh/h	1008			1239	897	
Approach Delay, s/veh	48.4			19.5	29.4	
Approach LOS	D			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		21.0	26.9	28.0				54.9
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		17.0	27.0	24.0				55.0
Max Q Clear Time (g_c+I1), s		19.0	22.1	23.7				8.9
Green Ext Time (p_c), s		0.0	0.8	0.3				18.8

Intersection Summary	
HCM 2010 Ctrl Delay	31.6
HCM 2010 LOS	C



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	309	1348	2599	851	557	192
Future Volume (veh/h)	309	1348	2599	851	557	192
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845
Adj Flow Rate, veh/h	309	1348	2599	851	557	192
Adj No. of Lanes	1	3	3	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	234	3458	2032	602	457	408
Arrive On Green	0.13	0.69	0.53	0.53	0.26	0.26
Sat Flow, veh/h	1757	5202	4023	1143	1757	1568
Grp Volume(v), veh/h	309	1348	2227	1223	557	192
Grp Sat Flow(s),veh/h/ln	1757	1679	1679	1643	1757	1568
Q Serve(g_s), s	20.0	17.2	79.0	79.0	39.0	15.5
Cycle Q Clear(g_c), s	20.0	17.2	79.0	79.0	39.0	15.5
Prop In Lane	1.00			0.70	1.00	1.00
Lane Grp Cap(c), veh/h	234	3458	1768	865	457	408
V/C Ratio(X)	1.32	0.39	1.26	1.41	1.22	0.47
Avail Cap(c_a), veh/h	234	3458	1768	865	457	408
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.0	10.1	35.5	35.5	55.5	46.8
Incr Delay (d2), s/veh	170.4	0.1	121.4	193.1	117.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.8	7.9	66.2	82.0	33.8	14.0
LnGrp Delay(d),s/veh	235.4	10.1	156.9	228.6	172.7	47.6
LnGrp LOS	F	B	F	F	F	D
Approach Vol, veh/h		1657	3450		749	
Approach Delay, s/veh		52.1	182.3		140.6	
Approach LOS		D	F		F	

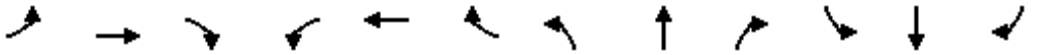
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				107.0		43.0	24.0	83.0
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				103.0		39.0	20.0	79.0
Max Q Clear Time (g_c+I1), s				19.2		41.0	22.0	81.0
Green Ext Time (p_c), s				82.5		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	140.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	1002	87	889	2010	312	177	935	933	350	539	122
Future Volume (veh/h)	154	1002	87	889	2010	312	177	935	933	350	539	122
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1792	1845	1845	1792	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	154	1002	87	889	2010	312	177	935	933	350	539	122
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	6	3	3	6	3	3	3	3	3	3	3
Cap, veh/h	170	1044	334	824	1982	635	233	1469	457	341	1628	507
Arrive On Green	0.05	0.21	0.21	0.24	0.41	0.41	0.07	0.29	0.29	0.10	0.32	0.32
Sat Flow, veh/h	3408	4893	1568	3408	4893	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	154	1002	87	889	2010	312	177	935	933	350	539	122
Grp Sat Flow(s),veh/h/ln	1704	1631	1568	1704	1631	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	5.4	24.3	5.5	29.0	48.6	17.7	6.1	19.4	35.0	12.0	9.7	6.9
Cycle Q Clear(g_c), s	5.4	24.3	5.5	29.0	48.6	17.7	6.1	19.4	35.0	12.0	9.7	6.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	170	1044	334	824	1982	635	233	1469	457	341	1628	507
V/C Ratio(X)	0.90	0.96	0.26	1.08	1.01	0.49	0.76	0.64	2.04	1.03	0.33	0.24
Avail Cap(c_a), veh/h	170	1044	334	824	1982	635	284	1469	457	341	1628	507
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.7	46.7	39.3	45.5	35.7	26.5	54.9	37.0	42.5	54.0	30.8	29.8
Incr Delay (d2), s/veh	42.5	19.0	0.6	55.0	23.8	0.8	9.2	0.9	475.7	55.8	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	12.8	2.5	19.9	26.2	7.8	3.2	9.1	75.5	8.3	4.5	3.0
LnGrp Delay(d),s/veh	99.2	65.7	39.9	100.5	59.5	27.4	64.2	37.9	518.2	109.8	30.9	30.0
LnGrp LOS	F	E	D	F	F	C	E	D	F	F	C	C
Approach Vol, veh/h		1243			3211			2045			1011	
Approach Delay, s/veh		68.0			67.7			259.3			58.1	
Approach LOS		E			E			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	33.0	32.0	12.2	42.8	10.0	55.0	16.0	39.0
Change Period (Y+Rc), s	4.0	6.4	4.0	4.0	4.0	6.4	4.0	4.0
Max Green Setting (Gmax), s	29.0	25.6	10.0	37.0	6.0	48.6	12.0	35.0
Max Q Clear Time (g_c+I1), s	31.0	26.3	8.1	11.7	7.4	50.6	14.0	37.0
Green Ext Time (p_c), s	0.0	0.0	0.1	17.9	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		118.6
HCM 2010 LOS		F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	586	27	156	684	16	31	809	160	11	282	14
Future Volume (veh/h)	89	586	27	156	684	16	31	809	160	11	282	14
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1759	1759	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	89	586	27	156	684	16	31	809	160	11	282	14
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	8	8	8	3	3	3	3	3	3
Cap, veh/h	122	644	30	187	717	17	69	918	181	69	548	27
Arrive On Green	0.07	0.38	0.38	0.11	0.42	0.42	0.04	0.31	0.31	0.04	0.31	0.31
Sat Flow, veh/h	1707	1700	78	1675	1712	40	1757	2918	577	1757	1743	87
Grp Volume(v), veh/h	89	0	613	156	0	700	31	486	483	11	0	296
Grp Sat Flow(s),veh/h/ln	1707	0	1779	1675	0	1752	1757	1752	1743	1757	0	1829
Q Serve(g_s), s	5.2	0.0	33.5	9.3	0.0	39.6	1.8	26.9	26.9	0.6	0.0	13.5
Cycle Q Clear(g_c), s	5.2	0.0	33.5	9.3	0.0	39.6	1.8	26.9	26.9	0.6	0.0	13.5
Prop In Lane	1.00		0.04	1.00		0.02	1.00		0.33	1.00		0.05
Lane Grp Cap(c), veh/h	122	0	673	187	0	734	69	551	548	69	0	575
V/C Ratio(X)	0.73	0.00	0.91	0.83	0.00	0.95	0.45	0.88	0.88	0.16	0.00	0.51
Avail Cap(c_a), veh/h	233	0	730	229	0	734	240	582	579	240	0	607
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.6	0.0	30.2	44.5	0.0	28.8	48.1	33.3	33.3	47.6	0.0	28.7
Incr Delay (d2), s/veh	8.0	0.0	14.9	19.2	0.0	22.6	4.6	14.2	14.3	1.1	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	19.1	5.3	0.0	23.7	0.9	15.1	15.1	0.3	0.0	6.9
LnGrp Delay(d),s/veh	54.6	0.0	45.1	63.7	0.0	51.4	52.7	47.5	47.6	48.6	0.0	29.4
LnGrp LOS	D		D	E		D	D	D	D	D		C
Approach Vol, veh/h		702			856			1000			307	
Approach Delay, s/veh		46.3			53.6			47.7			30.1	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	36.2	15.4	42.8	8.0	36.2	11.3	46.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	14.0	34.0	14.0	42.0	14.0	34.0	14.0	42.0
Max Q Clear Time (g_c+I1), s	2.6	28.9	11.3	35.5	3.8	15.5	7.2	41.6
Green Ext Time (p_c), s	0.0	3.3	0.1	3.3	0.0	8.1	0.1	0.3

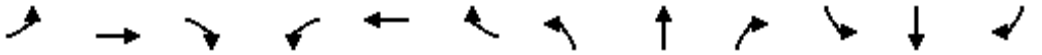
Intersection Summary	
HCM 2010 Ctrl Delay	47.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	525	47	944	25	63	161	986	1181	13	105	1715	1101
Future Volume (veh/h)	525	47	944	25	63	161	986	1181	13	105	1715	1101
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1900	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	559	0	944	25	63	161	986	1181	13	105	1715	0
Adj No. of Lanes	2	0	1	0	1	1	1	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	712	0	318	19	48	57	549	2814	31	126	1536	478
Arrive On Green	0.20	0.00	0.20	0.04	0.04	0.04	0.32	0.55	0.55	0.07	0.31	0.00
Sat Flow, veh/h	3480	0	1553	517	1302	1568	1740	5086	56	1740	4988	1553
Grp Volume(v), veh/h	559	0	944	88	0	161	986	772	422	105	1715	0
Grp Sat Flow(s),veh/h/ln	1740	0	1553	1819	0	1568	1740	1663	1817	1740	1663	1553
Q Serve(g_s), s	22.8	0.0	30.7	5.5	0.0	5.5	47.3	20.3	20.3	8.9	46.2	0.0
Cycle Q Clear(g_c), s	22.8	0.0	30.7	5.5	0.0	5.5	47.3	20.3	20.3	8.9	46.2	0.0
Prop In Lane	1.00		1.00	0.28		1.00	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	712	0	318	67	0	57	549	1839	1005	126	1536	478
V/C Ratio(X)	0.78	0.00	2.97	1.32	0.00	2.80	1.80	0.42	0.42	0.84	1.12	0.00
Avail Cap(c_a), veh/h	712	0	318	67	0	57	549	1839	1005	194	1536	478
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.5	0.0	59.6	72.3	0.0	72.3	51.3	19.5	19.5	68.7	51.9	0.0
Incr Delay (d2), s/veh	5.3	0.0	895.0	217.5	0.0	856.3	366.0	0.1	0.1	10.2	61.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.5	0.0	92.2	6.8	0.0	16.1	78.5	9.3	10.2	4.7	30.0	0.0
LnGrp Delay(d),s/veh	61.8	0.0	954.7	289.7	0.0	928.5	417.3	19.6	19.6	78.9	113.8	0.0
LnGrp LOS	E		F	F		F	F	B	B	E	F	
Approach Vol, veh/h		1503			249			2180			1820	
Approach Delay, s/veh		622.6			702.8			199.5			111.8	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	52.0	51.0		11.0	15.2	87.8		36.0
Change Period (Y+Rc), s	* 4.7	4.8		5.5	* 4.4	* 4.8		5.3
Max Green Setting (Gmax), s	* 47	46.2		5.5	* 17	* 77		30.7
Max Q Clear Time (g_c+I1), s	49.3	48.2		7.5	10.9	22.3		32.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	14.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	304.1
HCM 2010 LOS	F

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	921	47	489	1987	744	98	667	234	452	482	122
Future Volume (veh/h)	252	921	47	489	1987	744	98	667	234	452	482	122
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	252	921	47	489	1987	744	98	667	234	452	482	122
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	261	1649	513	541	2047	637	146	732	327	492	1088	487
Arrive On Green	0.08	0.33	0.33	0.16	0.41	0.41	0.04	0.21	0.21	0.14	0.31	0.31
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	252	921	47	489	1987	744	98	667	234	452	482	122
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	9.5	19.3	2.7	18.1	49.6	52.1	3.6	23.8	17.8	16.8	14.1	7.5
Cycle Q Clear(g_c), s	9.5	19.3	2.7	18.1	49.6	52.1	3.6	23.8	17.8	16.8	14.1	7.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	261	1649	513	541	2047	637	146	732	327	492	1088	487
V/C Ratio(X)	0.97	0.56	0.09	0.90	0.97	1.17	0.67	0.91	0.71	0.92	0.44	0.25
Avail Cap(c_a), veh/h	261	1649	513	729	2047	637	364	930	416	492	1088	487
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.0	35.5	29.9	52.9	37.3	38.0	60.4	49.5	47.1	54.1	35.3	33.1
Incr Delay (d2), s/veh	46.2	0.3	0.0	10.0	13.6	91.5	2.0	9.8	2.6	22.0	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	9.0	1.2	9.2	25.6	38.7	1.8	12.6	7.9	9.4	6.8	3.2
LnGrp Delay(d),s/veh	105.2	35.7	29.9	63.0	50.8	129.5	62.4	59.3	49.8	76.1	35.4	33.2
LnGrp LOS	F	D	C	E	D	F	E	E	D	E	D	C
Approach Vol, veh/h		1220			3220			999			1056	
Approach Delay, s/veh		49.9			70.9			57.4			52.6	
Approach LOS		D			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.3	57.0	11.0	44.9	25.4	46.9	24.0	31.9
Change Period (Y+Rc), s	5.5	* 4.9	5.5	* 5.1	* 5.1	* 4.9	5.5	* 5.1
Max Green Setting (Gmax), s	9.8	* 52	13.7	* 39	* 27	* 35	18.5	* 34
Max Q Clear Time (g_c+I1), s	11.5	54.1	5.6	16.1	20.1	21.3	18.8	25.8
Green Ext Time (p_c), s	0.0	0.0	0.0	1.8	0.3	9.2	0.0	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	61.9
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	616	797	163	96	1814	925	760	2133	202	149	970	733
Future Volume (veh/h)	616	797	163	96	1814	925	760	2133	202	149	970	733
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1759	1759	1759	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	616	797	163	96	1814	925	760	2133	202	149	970	733
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	8	8	8	4	4	4	4	4	4
Cap, veh/h	352	2005	624	136	1617	503	484	1879	585	124	1347	419
Arrive On Green	0.10	0.40	0.40	0.04	0.34	0.34	0.14	0.38	0.38	0.04	0.27	0.27
Sat Flow, veh/h	3408	5036	1568	3250	4803	1495	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	616	797	163	96	1814	925	760	2133	202	149	970	733
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1625	1601	1495	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	15.5	17.0	10.5	4.4	50.5	50.5	21.5	56.5	14.0	5.5	26.4	40.5
Cycle Q Clear(g_c), s	15.5	17.0	10.5	4.4	50.5	50.5	21.5	56.5	14.0	5.5	26.4	40.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	352	2005	624	136	1617	503	484	1879	585	124	1347	419
V/C Ratio(X)	1.75	0.40	0.26	0.71	1.12	1.84	1.57	1.14	0.35	1.20	0.72	1.75
Avail Cap(c_a), veh/h	352	2005	624	186	1617	503	484	1879	585	124	1347	419
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.3	32.3	30.3	71.0	49.8	49.7	64.3	46.7	33.5	72.3	49.6	54.8
Incr Delay (d2), s/veh	348.6	0.0	0.1	3.4	63.7	384.5	266.7	68.1	0.1	145.8	1.6	346.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.3	7.9	4.6	2.0	31.8	74.5	27.9	37.8	6.0	5.1	12.3	57.8
LnGrp Delay(d),s/veh	415.9	32.3	30.4	74.3	113.4	434.2	331.0	114.9	33.6	218.0	51.3	401.2
LnGrp LOS	F	C	C	E	F	F	F	F	C	F	D	F
Approach Vol, veh/h		1576			2835			3095			1852	
Approach Delay, s/veh		182.0			216.8			162.6			203.2	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.0	46.0	21.0	56.0	11.0	62.0	11.8	65.2
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	21.5	40.5	15.5	50.5	5.5	56.5	8.6	57.4
Max Q Clear Time (g_c+I1), s	23.5	42.5	17.5	52.5	7.5	58.5	6.4	19.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.4

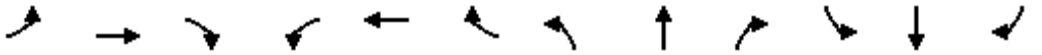
Intersection Summary	
HCM 2010 Ctrl Delay	190.3
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	601	553	129	383	1372	324	185	1555	158	117	817	860
Future Volume (veh/h)	601	553	129	383	1372	324	185	1555	158	117	817	860
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1845
Adj Flow Rate, veh/h	601	553	129	383	1372	324	185	1555	158	117	817	860
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	4	4	4	4	3
Cap, veh/h	540	555	248	1127	1159	519	131	1611	502	132	1650	519
Arrive On Green	0.16	0.16	0.16	0.33	0.33	0.33	0.04	0.32	0.32	0.04	0.33	0.33
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	4988	1553	3375	4988	1568
Grp Volume(v), veh/h	601	553	129	383	1372	324	185	1555	158	117	817	860
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1663	1553	1688	1663	1568
Q Serve(g_s), s	20.6	20.5	9.8	11.0	43.0	22.7	5.0	39.9	10.0	4.5	17.0	43.0
Cycle Q Clear(g_c), s	20.6	20.5	9.8	11.0	43.0	22.7	5.0	39.9	10.0	4.5	17.0	43.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	540	555	248	1127	1159	519	131	1611	502	132	1650	519
V/C Ratio(X)	1.11	1.00	0.52	0.34	1.18	0.62	1.41	0.97	0.31	0.88	0.50	1.66
Avail Cap(c_a), veh/h	540	555	248	1127	1159	519	131	1611	502	132	1650	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.7	54.7	50.2	32.8	43.5	36.7	62.5	43.3	33.2	62.2	34.8	43.5
Incr Delay (d2), s/veh	73.5	37.0	1.9	0.2	91.6	2.3	224.0	14.9	0.4	45.2	0.2	304.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.2	12.8	4.4	5.2	35.5	10.1	6.4	20.5	4.3	2.9	7.8	62.5
LnGrp Delay(d),s/veh	128.2	91.7	52.1	33.0	135.1	39.0	286.5	58.2	33.5	107.4	35.0	348.2
LnGrp LOS	F	F	D	C	F	D	F	E	C	F	D	F
Approach Vol, veh/h		1283			2079			1898			1794	
Approach Delay, s/veh		104.8			101.3			78.4			189.9	
Approach LOS		F			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.0	48.0		26.0	10.0	47.0		47.0
Change Period (Y+Rc), s	4.0	5.0		* 5.4	* 4.9	5.0		4.0
Max Green Setting (Gmax), s	5.0	43.0		* 21	* 5.1	42.0		43.0
Max Q Clear Time (g_c+I1), s	7.0	45.0		22.6	6.5	41.9		45.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.1		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		118.3
HCM 2010 LOS		F

Notes

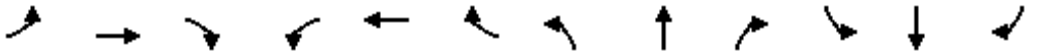


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	186	876	55	364	1869	393	81	1238	297	205	734	417
Future Volume (veh/h)	186	876	55	364	1869	393	81	1238	297	205	734	417
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1792	1845	1845	1845	1827	1845	1845
Adj Flow Rate, veh/h	186	876	55	364	1869	393	81	1238	297	205	734	417
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	6	3	3	3	4	3	3
Cap, veh/h	207	1502	468	435	1839	662	129	1158	518	235	1269	663
Arrive On Green	0.06	0.30	0.30	0.13	0.37	0.37	0.04	0.33	0.33	0.07	0.36	0.36
Sat Flow, veh/h	3408	5036	1568	3408	5036	1524	3408	3505	1568	3375	3505	1568
Grp Volume(v), veh/h	186	876	55	364	1869	393	81	1238	297	205	734	417
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1524	1704	1752	1568	1688	1752	1568
Q Serve(g_s), s	6.2	17.0	2.9	12.0	42.0	22.6	2.7	38.0	18.0	6.9	19.4	24.0
Cycle Q Clear(g_c), s	6.2	17.0	2.9	12.0	42.0	22.6	2.7	38.0	18.0	6.9	19.4	24.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	207	1502	468	435	1839	662	129	1158	518	235	1269	663
V/C Ratio(X)	0.90	0.58	0.12	0.84	1.02	0.59	0.63	1.07	0.57	0.87	0.58	0.63
Avail Cap(c_a), veh/h	207	1502	468	593	1839	662	178	1158	518	235	1269	663
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.6	34.3	29.3	49.0	36.5	24.8	54.5	38.5	31.8	53.0	29.6	26.1
Incr Delay (d2), s/veh	35.7	0.6	0.1	7.6	25.1	1.4	4.9	47.0	1.5	27.3	0.7	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	7.9	1.3	6.1	23.7	9.8	1.4	25.9	8.0	4.1	9.5	10.7
LnGrp Delay(d),s/veh	89.3	34.8	29.4	56.5	61.6	26.2	59.4	85.5	33.3	80.3	30.3	28.0
LnGrp LOS	F	C	C	E	F	C	E	F	C	F	C	C
Approach Vol, veh/h		1117			2626			1616			1356	
Approach Delay, s/veh		43.7			55.6			74.6			37.1	
Approach LOS		D			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.7	40.3	8.4	47.6	11.0	48.0	12.0	44.0
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	20.0	29.0	6.0	40.0	7.0	42.0	8.0	38.0
Max Q Clear Time (g_c+I1), s	14.0	19.0	4.7	26.0	8.2	44.0	8.9	40.0
Green Ext Time (p_c), s	0.7	9.5	0.0	11.8	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	54.4
HCM 2010 LOS	D

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1198	679	7	0	1154	15	8	30	5	7	6	547
Future Volume (veh/h)	1198	679	7	0	1154	15	8	30	5	7	6	547
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1810	1810	1900	1900	1845	1900	1900	1827	1827
Adj Flow Rate, veh/h	1198	679	0	0	1154	15	8	30	5	7	6	547
Adj No. of Lanes	2	2	1	1	2	0	0	1	0	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	5	5	5	3	3	3	4	4	4
Cap, veh/h	1161	2379	1064	1	1082	14	9	36	6	140	120	771
Arrive On Green	0.35	0.70	0.00	0.00	0.31	0.31	0.03	0.03	0.03	0.15	0.15	0.15
Sat Flow, veh/h	3312	3406	1524	1723	3475	45	333	1250	208	958	821	1553
Grp Volume(v), veh/h	1198	679	0	0	571	598	43	0	0	13	0	547
Grp Sat Flow(s),veh/h/ln	1656	1703	1524	1723	1719	1802	1791	0	0	1779	0	1553
Q Serve(g_s), s	52.9	11.3	0.0	0.0	47.0	47.0	3.6	0.0	0.0	0.9	0.0	22.0
Cycle Q Clear(g_c), s	52.9	11.3	0.0	0.0	47.0	47.0	3.6	0.0	0.0	0.9	0.0	22.0
Prop In Lane	1.00		1.00	1.00		0.03	0.19		0.12	0.54		1.00
Lane Grp Cap(c), veh/h	1161	2379	1064	1	535	561	51	0	0	259	0	771
V/C Ratio(X)	1.03	0.29	0.00	0.00	1.07	1.07	0.84	0.00	0.00	0.05	0.00	0.71
Avail Cap(c_a), veh/h	1161	2379	1064	34	535	561	51	0	0	259	0	771
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	49.0	8.6	0.0	0.0	52.0	52.0	73.0	0.0	0.0	55.5	0.0	29.5
Incr Delay (d2), s/veh	34.9	0.0	0.0	0.0	57.7	56.8	68.2	0.0	0.0	0.0	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	29.7	5.3	0.0	0.0	30.7	32.1	2.7	0.0	0.0	0.5	0.0	18.2
LnGrp Delay(d),s/veh	83.9	8.6	0.0	0.0	109.6	108.8	141.2	0.0	0.0	55.5	0.0	32.2
LnGrp LOS	F	A			F	F	F			E		C
Approach Vol, veh/h		1877			1169			43			560	
Approach Delay, s/veh		56.7			109.2			141.2			32.7	
Approach LOS		E			F			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	58.4	53.9		28.2	0.0	112.3		10.4
Change Period (Y+Rc), s	5.5	* 6.9		* 6.2	5.5	* 6.9		6.1
Max Green Setting (Gmax), s	52.9	* 47		* 22	3.0	* 96		4.3
Max Q Clear Time (g_c+I1), s	54.9	49.0		24.0	0.0	13.3		5.6
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	5.6		0.0

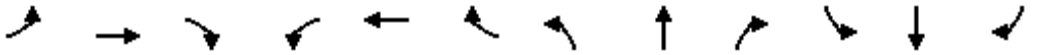
Intersection Summary		
HCM 2010 Ctrl Delay		70.8
HCM 2010 LOS		E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	609	404	58	61	775	97	2	621	43	93	1047	1120
Future Volume (veh/h)	609	404	58	61	775	97	2	621	43	93	1047	1120
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1810	1810	1810	1810	1810	1810
Adj Flow Rate, veh/h	609	404	58	61	775	97	2	621	43	93	1047	1120
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	5	5	5	5	5	5
Cap, veh/h	490	1942	605	106	1373	428	5	1371	427	136	1564	857
Arrive On Green	0.15	0.40	0.40	0.03	0.28	0.28	0.00	0.28	0.28	0.04	0.32	0.32
Sat Flow, veh/h	3312	4893	1524	3312	4893	1524	3343	4940	1538	3343	4940	2707
Grp Volume(v), veh/h	609	404	58	61	775	97	2	621	43	93	1047	1120
Grp Sat Flow(s),veh/h/ln	1656	1631	1524	1656	1631	1524	1672	1647	1538	1672	1647	1354
Q Serve(g_s), s	12.4	4.5	2.0	1.5	11.3	4.1	0.1	8.7	1.7	2.3	15.4	26.5
Cycle Q Clear(g_c), s	12.4	4.5	2.0	1.5	11.3	4.1	0.1	8.7	1.7	2.3	15.4	26.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	490	1942	605	106	1373	428	5	1371	427	136	1564	857
V/C Ratio(X)	1.24	0.21	0.10	0.58	0.56	0.23	0.37	0.45	0.10	0.69	0.67	1.31
Avail Cap(c_a), veh/h	490	2051	638	170	1577	491	120	1533	477	136	1564	857
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.7	16.6	15.8	40.0	25.7	23.1	41.8	25.0	22.5	39.7	24.8	28.6
Incr Delay (d2), s/veh	125.3	0.1	0.1	1.8	0.8	0.6	14.6	0.2	0.1	11.3	1.1	146.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.1	2.1	0.9	0.7	5.2	1.8	0.0	4.0	0.7	1.3	7.1	27.4
LnGrp Delay(d),s/veh	161.0	16.7	16.0	41.8	26.5	23.7	56.4	25.2	22.6	50.9	25.9	175.2
LnGrp LOS	F	B	B	D	C	C	E	C	C	D	C	F
Approach Vol, veh/h		1071			933			666			2260	
Approach Delay, s/veh		98.7			27.2			25.2			100.9	
Approach LOS		F			C			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	29.5	4.7	32.5	7.3	39.2	8.0	29.2
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	12.4	27.0	3.0	26.4	4.3	35.1	3.4	26.0
Max Q Clear Time (g_c+I1), s	14.4	13.3	2.1	28.5	3.5	6.5	4.3	10.7
Green Ext Time (p_c), s	0.0	10.2	0.0	0.0	0.0	17.6	0.0	12.5

Intersection Summary	
HCM 2010 Ctrl Delay	76.3
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	1304	169	175	1505	116	194	1576	174	126	368	126
Future Volume (veh/h)	320	1304	169	175	1505	116	194	1576	174	126	368	126
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	320	1304	169	175	1505	116	194	1576	174	126	368	126
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	307	1513	471	234	1406	438	254	1546	692	123	1411	631
Arrive On Green	0.09	0.30	0.30	0.07	0.28	0.28	0.08	0.45	0.45	0.04	0.41	0.41
Sat Flow, veh/h	3375	4988	1553	3375	4988	1553	3375	3471	1553	3375	3471	1553
Grp Volume(v), veh/h	320	1304	169	175	1505	116	194	1576	174	126	368	126
Grp Sat Flow(s),veh/h/ln	1688	1663	1553	1688	1663	1553	1688	1736	1553	1688	1736	1553
Q Serve(g_s), s	10.0	27.1	9.4	5.6	31.0	6.4	6.2	49.0	7.7	4.0	7.7	5.8
Cycle Q Clear(g_c), s	10.0	27.1	9.4	5.6	31.0	6.4	6.2	49.0	7.7	4.0	7.7	5.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	307	1513	471	234	1406	438	254	1546	692	123	1411	631
V/C Ratio(X)	1.04	0.86	0.36	0.75	1.07	0.27	0.76	1.02	0.25	1.03	0.26	0.20
Avail Cap(c_a), veh/h	307	1513	471	276	1406	438	307	1546	692	123	1411	631
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.0	36.1	30.0	50.2	39.5	30.7	49.9	30.5	19.0	53.0	21.7	21.1
Incr Delay (d2), s/veh	63.0	5.4	0.5	8.9	45.4	0.3	8.9	27.8	0.2	88.5	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	13.2	4.1	2.9	20.1	2.8	3.2	29.4	3.3	3.4	3.7	2.5
LnGrp Delay(d),s/veh	113.0	41.5	30.4	59.2	84.9	31.0	58.8	58.3	19.2	141.8	21.8	21.2
LnGrp LOS	F	D	C	E	F	C	E	F	B	F	C	C
Approach Vol, veh/h		1793			1796			1944			620	
Approach Delay, s/veh		53.2			78.9			54.9			46.1	
Approach LOS		D			E			D			D	

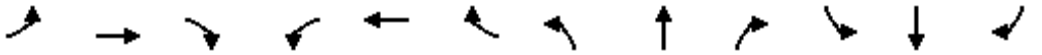
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	53.0	11.6	37.4	12.3	48.7	14.0	35.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	49.0	9.0	32.0	10.0	43.0	10.0	31.0
Max Q Clear Time (g_c+I1), s	6.0	51.0	7.6	29.1	8.2	9.7	12.0	33.0
Green Ext Time (p_c), s	0.0	0.0	0.1	2.8	0.1	21.9	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	60.5
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	1211	180	95	1807	395	135	1002	266	25	268	186
Future Volume (veh/h)	159	1211	180	95	1807	395	135	1002	266	25	268	186
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1827	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	159	1211	180	95	1807	395	135	1002	266	25	268	186
Adj No. of Lanes	1	2	0	1	2	1	2	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	3	3	3	3	3	3
Cap, veh/h	151	1572	233	116	1730	774	183	987	442	31	861	385
Arrive On Green	0.09	0.52	0.52	0.07	0.50	0.50	0.05	0.28	0.28	0.02	0.25	0.25
Sat Flow, veh/h	1740	3034	449	1740	3471	1553	3408	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	159	690	701	95	1807	395	135	1002	266	25	268	186
Grp Sat Flow(s),veh/h/ln	1740	1736	1748	1740	1736	1553	1704	1752	1568	1757	1752	1568
Q Serve(g_s), s	12.0	44.1	44.7	7.5	69.0	23.7	5.4	39.0	20.3	2.0	8.6	14.1
Cycle Q Clear(g_c), s	12.0	44.1	44.7	7.5	69.0	23.7	5.4	39.0	20.3	2.0	8.6	14.1
Prop In Lane	1.00		0.26	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	151	899	906	116	1730	774	183	987	442	31	861	385
V/C Ratio(X)	1.05	0.77	0.77	0.82	1.04	0.51	0.74	1.02	0.60	0.80	0.31	0.48
Avail Cap(c_a), veh/h	151	899	906	138	1730	774	246	987	442	51	861	385
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.2	26.7	26.8	63.8	34.7	23.4	64.5	49.7	43.0	67.8	42.7	44.7
Incr Delay (d2), s/veh	88.5	4.0	4.2	26.7	34.4	0.6	7.5	32.4	2.3	35.2	0.2	0.9
Initial Q Delay(d3),s/veh	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	22.1	22.5	4.5	41.2	10.3	2.7	23.2	9.1	1.3	4.2	6.2
LnGrp Delay(d),s/veh	151.8	30.7	31.0	90.5	69.1	23.9	72.1	82.2	45.3	103.0	42.9	45.6
LnGrp LOS	F	C	C	F	F	C	E	F	D	F	D	D
Approach Vol, veh/h		1550			2297			1403			479	
Approach Delay, s/veh		43.3			62.2			74.2			47.1	
Approach LOS		D			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	43.0	13.2	75.8	11.5	38.0	16.0	73.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	39.0	11.0	70.0	10.0	33.0	12.0	69.0
Max Q Clear Time (g_c+I1), s	4.0	41.0	9.5	46.7	7.4	16.1	14.0	71.0
Green Ext Time (p_c), s	0.0	0.0	0.0	22.0	0.1	9.9	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	58.8
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1	154	110	3	1	305	1893	37	0	1646	0
Future Volume (veh/h)	0	1	154	110	3	1	305	1893	37	0	1646	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1759	1845	1845	1845	1792	1792	1900	1792	1792	1900
Adj Flow Rate, veh/h	0	1	154	110	3	1	305	1893	37	0	1646	0
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	8	8	8	3	3	3	6	6	6	6	6	6
Cap, veh/h	164	173	434	137	144	122	328	2134	42	128	1727	0
Arrive On Green	0.00	0.10	0.10	0.08	0.08	0.08	0.19	0.62	0.62	0.00	0.51	0.00
Sat Flow, veh/h	1675	1759	1495	1757	1845	1568	1707	3417	67	1707	3495	0
Grp Volume(v), veh/h	0	1	154	110	3	1	305	940	990	0	1646	0
Grp Sat Flow(s),veh/h/ln	1675	1759	1495	1757	1845	1568	1707	1703	1781	1707	1703	0
Q Serve(g_s), s	0.0	0.1	10.5	7.9	0.2	0.1	22.6	59.5	60.4	0.0	59.3	0.0
Cycle Q Clear(g_c), s	0.0	0.1	10.5	7.9	0.2	0.1	22.6	59.5	60.4	0.0	59.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		0.00
Lane Grp Cap(c), veh/h	164	173	434	137	144	122	328	1064	1112	128	1727	0
V/C Ratio(X)	0.00	0.01	0.35	0.80	0.02	0.01	0.93	0.88	0.89	0.00	0.95	0.00
Avail Cap(c_a), veh/h	209	219	474	219	230	195	345	1166	1219	128	1748	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	52.3	36.1	58.3	54.7	54.7	51.0	20.2	20.4	0.0	30.2	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.5	10.5	0.1	0.0	30.1	7.8	7.9	0.0	12.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	4.4	4.2	0.1	0.0	13.4	30.0	31.9	0.0	30.6	0.0
LnGrp Delay(d),s/veh	0.0	52.3	36.6	68.8	54.8	54.7	81.1	28.1	28.3	0.0	42.5	0.0
LnGrp LOS		D	D	E	D	D	F	C	C		D	
Approach Vol, veh/h		155			114			2235			1646	
Approach Delay, s/veh		36.7			68.3			35.4			42.5	
Approach LOS		D			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.6	84.3		16.6	28.7	69.2		14.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	88.0		16.0	26.0	66.0		16.0
Max Q Clear Time (g_c+I1), s	0.0	62.4		12.5	24.6	61.3		9.9
Green Ext Time (p_c), s	0.0	17.9		0.1	0.1	3.9		0.1

Intersection Summary		
HCM 2010 Ctrl Delay		39.2
HCM 2010 LOS		D



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	491	27	21	1793	1644	421
Future Volume (veh/h)	491	27	21	1793	1644	421
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	491	27	21	1793	1644	421
Adj No. of Lanes	2	1	2	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	645	297	67	2360	2050	917
Arrive On Green	0.19	0.19	0.02	0.67	0.59	0.59
Sat Flow, veh/h	3408	1568	3408	3597	3597	1568
Grp Volume(v), veh/h	491	27	21	1793	1644	421
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1752	1752	1568
Q Serve(g_s), s	7.9	0.8	0.4	19.9	21.4	8.9
Cycle Q Clear(g_c), s	7.9	0.8	0.4	19.9	21.4	8.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	645	297	67	2360	2050	917
V/C Ratio(X)	0.76	0.09	0.31	0.76	0.80	0.46
Avail Cap(c_a), veh/h	936	431	234	2467	2050	917
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.4	19.5	28.2	6.4	9.4	6.9
Incr Delay (d2), s/veh	2.2	0.1	2.6	1.4	2.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.8	0.2	9.9	10.7	3.8
LnGrp Delay(d),s/veh	24.6	19.6	30.7	7.7	11.8	7.2
LnGrp LOS	C	B	C	A	B	A
Approach Vol, veh/h	518			1814	2065	
Approach Delay, s/veh	24.3			8.0	10.9	
Approach LOS	C			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		43.2		15.0	5.2	38.1		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		41.0		16.0	4.0	33.0		
Max Q Clear Time (g_c+I1), s		21.9		9.9	2.4	23.4		
Green Ext Time (p_c), s		17.3		1.1	0.0	9.5		

Intersection Summary	
HCM 2010 Ctrl Delay	11.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	255	536	511	86	1274	4	270	1018	63	2	1420	320
Future Volume (veh/h)	255	536	511	86	1274	4	270	1018	63	2	1420	320
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	255	536	511	86	1274	4	270	1018	63	2	1420	320
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	262	1348	603	131	1213	543	236	1583	708	7	1348	603
Arrive On Green	0.08	0.38	0.38	0.04	0.35	0.35	0.07	0.45	0.45	0.00	0.38	0.38
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	255	536	511	86	1274	4	270	1018	63	2	1420	320
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	9.7	14.4	38.7	3.2	45.0	0.2	9.0	29.2	3.0	0.1	50.0	20.5
Cycle Q Clear(g_c), s	9.7	14.4	38.7	3.2	45.0	0.2	9.0	29.2	3.0	0.1	50.0	20.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	262	1348	603	131	1213	543	236	1583	708	7	1348	603
V/C Ratio(X)	0.97	0.40	0.85	0.66	1.05	0.01	1.14	0.64	0.09	0.27	1.05	0.53
Avail Cap(c_a), veh/h	262	1348	603	131	1213	543	236	1583	708	105	1348	603
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.9	29.1	36.5	61.7	42.5	27.9	60.5	27.5	20.4	64.8	40.0	30.9
Incr Delay (d2), s/veh	47.8	0.2	10.9	11.3	40.1	0.0	103.0	0.9	0.1	19.0	39.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	7.0	18.6	1.7	28.5	0.1	7.6	14.3	1.3	0.1	31.6	9.0
LnGrp Delay(d),s/veh	107.7	29.2	47.4	72.9	82.6	27.9	163.5	28.4	20.4	83.7	79.9	31.8
LnGrp LOS	F	C	D	E	F	C	F	C	C	F	F	C
Approach Vol, veh/h		1302			1364			1351			1742	
Approach Delay, s/veh		51.7			81.8			55.1			71.1	
Approach LOS		D			F			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.3	62.7	9.0	54.0	13.0	54.0	14.0	49.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	55.0	5.0	50.0	9.0	50.0	10.0	45.0
Max Q Clear Time (g_c+I1), s	2.1	31.2	5.2	40.7	11.0	52.0	11.7	47.0
Green Ext Time (p_c), s	0.0	20.0	0.0	7.8	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	65.5
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	579	272	403	1250	852	641	1107	238	370	326	0
Future Volume (veh/h)	0	579	272	403	1250	852	641	1107	238	370	326	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	0	579	272	403	1250	852	641	1107	238	370	326	0
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	4	1012	315	498	1989	619	741	1196	535	409	855	382
Arrive On Green	0.00	0.20	0.20	0.15	0.39	0.39	0.22	0.34	0.34	0.12	0.24	0.00
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	0	579	272	403	1250	852	641	1107	238	370	326	0
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	0.0	8.7	14.0	9.6	16.7	32.9	15.1	25.4	9.8	8.9	6.5	0.0
Cycle Q Clear(g_c), s	0.0	8.7	14.0	9.6	16.7	32.9	15.1	25.4	9.8	8.9	6.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	4	1012	315	498	1989	619	741	1196	535	409	855	382
V/C Ratio(X)	0.00	0.57	0.86	0.81	0.63	1.38	0.87	0.93	0.44	0.91	0.38	0.00
Avail Cap(c_a), veh/h	163	1147	357	654	1989	619	858	1218	545	409	855	382
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	30.1	32.2	34.5	20.3	25.2	31.5	26.5	21.3	36.2	26.3	0.0
Incr Delay (d2), s/veh	0.0	0.5	17.6	5.7	0.6	179.2	8.3	11.8	0.6	23.3	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.1	7.6	4.9	7.8	45.0	8.0	14.1	4.3	5.5	3.2	0.0
LnGrp Delay(d),s/veh	0.0	30.6	49.8	40.2	20.9	204.4	39.8	38.3	21.9	59.5	26.6	0.0
LnGrp LOS		C	D	D	C	F	D	D	C	E	C	
Approach Vol, veh/h		851			2505			1986			696	
Approach Delay, s/veh		36.8			86.4			36.8			44.1	
Approach LOS		D			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	32.5	16.2	20.8	22.1	24.3	0.0	36.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	29.0	16.0	19.0	21.0	18.0	4.0	31.0
Max Q Clear Time (g_c+I1), s	10.9	27.4	11.6	16.0	17.1	8.5	0.0	34.9
Green Ext Time (p_c), s	0.0	1.1	0.6	0.8	1.0	6.7	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	58.2
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	9999	9999	9999	9999	9999	9999	9999	9999	9999	9999	9999	9999
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h												
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h												
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS												
Approach Vol, veh/h		0			0			0			0	
Approach Delay, s/veh		0.0			0.0			0.0			0.0	
Approach LOS												

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	52.0	15.0	52.0	32.0	25.0	12.0	55.0
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	0.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1111	1049	8	669	987	0	132	2018	955	38	645	879
Future Volume (veh/h)	1111	1049	8	669	987	0	132	2018	955	38	645	879
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	1111	1049	8	669	987	0	132	2018	955	38	645	879
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	913	1105	344	735	843	262	185	2070	644	68	1897	591
Arrive On Green	0.27	0.22	0.22	0.22	0.17	0.00	0.05	0.41	0.41	0.02	0.38	0.38
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	1111	1049	8	669	987	0	132	2018	955	38	645	879
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	32.0	24.5	0.5	22.9	20.0	0.0	4.6	47.1	49.1	1.3	10.9	45.0
Cycle Q Clear(g_c), s	32.0	24.5	0.5	22.9	20.0	0.0	4.6	47.1	49.1	1.3	10.9	45.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	913	1105	344	735	843	262	185	2070	644	68	1897	591
V/C Ratio(X)	1.22	0.95	0.02	0.91	1.17	0.00	0.71	0.98	1.48	0.56	0.34	1.49
Avail Cap(c_a), veh/h	913	1105	344	799	843	262	200	2070	644	86	1897	591
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.7	46.0	36.6	45.7	49.7	0.0	55.6	34.6	35.2	58.0	26.6	37.2
Incr Delay (d2), s/veh	107.8	16.3	0.0	13.8	89.5	0.0	10.5	14.3	225.2	7.0	0.1	228.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	28.6	13.0	0.2	12.2	16.2	0.0	2.4	24.4	61.5	0.7	5.1	57.0
LnGrp Delay(d),s/veh	151.5	62.3	36.6	59.5	139.2	0.0	66.1	48.9	260.4	65.1	26.7	266.0
LnGrp LOS	F	E	D	E	F		E	D	F	E	C	F
Approach Vol, veh/h		2168			1656			3105			1562	
Approach Delay, s/veh		107.9			107.0			114.7			162.3	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	53.1	29.8	30.2	10.5	49.0	36.0	24.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	49.0	28.0	24.0	7.0	45.0	32.0	20.0
Max Q Clear Time (g_c+I1), s	3.3	51.1	24.9	26.5	6.6	47.0	34.0	22.0
Green Ext Time (p_c), s	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	120.2
HCM 2010 LOS	F



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	356	423	2840	459	697	733
Future Volume (veh/h)	356	423	2840	459	697	733
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	356	423	2840	459	697	733
Adj No. of Lanes	2	1	3	1	2	3
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	417	192	2742	854	682	3973
Arrive On Green	0.12	0.12	0.54	0.54	0.20	0.79
Sat Flow, veh/h	3408	1568	5202	1568	3408	5202
Grp Volume(v), veh/h	356	423	2840	459	697	733
Grp Sat Flow(s),veh/h/ln	1704	1568	1679	1568	1704	1679
Q Serve(g_s), s	9.2	11.0	49.0	17.0	18.0	3.2
Cycle Q Clear(g_c), s	9.2	11.0	49.0	17.0	18.0	3.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	417	192	2742	854	682	3973
V/C Ratio(X)	0.85	2.21	1.04	0.54	1.02	0.18
Avail Cap(c_a), veh/h	417	192	2742	854	682	3973
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.7	39.5	20.5	13.2	36.0	2.3
Incr Delay (d2), s/veh	15.8	559.9	27.3	0.7	40.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	34.5	29.3	7.4	12.2	1.5
LnGrp Delay(d),s/veh	54.5	599.4	47.8	13.9	76.3	2.4
LnGrp LOS	D	F	F	B	F	A
Approach Vol, veh/h	779		3299			1430
Approach Delay, s/veh	350.4		43.1			38.4
Approach LOS	F		D			D

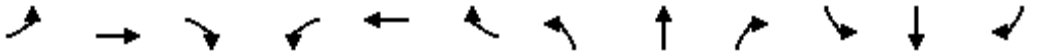
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	22.0	53.0				75.0		15.0
Change Period (Y+Rc), s	4.0	4.0				4.0		4.0
Max Green Setting (Gmax), s	18.0	49.0				71.0		11.0
Max Q Clear Time (g_c+I1), s	20.0	51.0				5.2		13.0
Green Ext Time (p_c), s	0.0	0.0				61.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	85.3
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	325	948	632	23	1695	36	1181	808	21	45	811	575
Future Volume (veh/h)	325	948	632	23	1695	36	1181	808	21	45	811	575
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	325	948	632	23	1695	36	1181	808	21	45	811	575
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	288	1716	534	44	1356	422	944	1753	784	78	863	386
Arrive On Green	0.08	0.34	0.34	0.01	0.27	0.27	0.28	0.50	0.50	0.02	0.25	0.25
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	325	948	632	23	1695	36	1181	808	21	45	811	575
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	11.0	19.9	44.3	0.9	35.0	2.2	36.0	19.5	0.9	1.7	29.5	32.0
Cycle Q Clear(g_c), s	11.0	19.9	44.3	0.9	35.0	2.2	36.0	19.5	0.9	1.7	29.5	32.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	288	1716	534	44	1356	422	944	1753	784	78	863	386
V/C Ratio(X)	1.13	0.55	1.18	0.52	1.25	0.09	1.25	0.46	0.03	0.58	0.94	1.49
Avail Cap(c_a), veh/h	288	1716	534	79	1356	422	944	1753	784	131	863	386
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.5	34.8	42.8	63.7	47.5	35.5	47.0	21.1	16.5	62.9	48.1	49.0
Incr Delay (d2), s/veh	91.7	0.4	100.1	9.1	118.9	0.1	121.9	0.2	0.0	6.6	17.8	233.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	9.3	34.0	0.5	31.1	1.0	32.9	9.5	0.4	0.9	16.4	38.9
LnGrp Delay(d),s/veh	151.2	35.2	142.9	72.8	166.4	35.6	168.9	21.3	16.5	69.4	65.9	282.8
LnGrp LOS	F	D	F	E	F	D	F	C	B	E	E	F
Approach Vol, veh/h		1905			1754			2010			1431	
Approach Delay, s/veh		90.7			162.4			108.0			153.2	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	69.0	5.7	48.3	40.0	36.0	15.0	39.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	63.0	3.0	43.0	36.0	32.0	11.0	35.0
Max Q Clear Time (g_c+I1), s	3.7	21.5	2.9	46.3	38.0	34.0	13.0	37.0
Green Ext Time (p_c), s	0.0	21.7	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	125.9
HCM 2010 LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	1565	114	354	2409	9	8	1738	111	15	1399	70
Future Volume (veh/h)	95	1565	114	354	2409	9	8	1738	111	15	1399	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	95	1565	114	354	2409	9	8	1738	111	15	1399	70
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	92	1669	520	369	2078	647	26	1541	689	42	1558	697
Arrive On Green	0.03	0.33	0.33	0.11	0.41	0.41	0.01	0.44	0.44	0.01	0.44	0.44
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	95	1565	114	354	2409	9	8	1738	111	15	1399	70
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	4.0	44.6	7.7	15.3	61.0	0.5	0.3	65.0	6.3	0.6	54.6	3.8
Cycle Q Clear(g_c), s	4.0	44.6	7.7	15.3	61.0	0.5	0.3	65.0	6.3	0.6	54.6	3.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	92	1669	520	369	2078	647	26	1541	689	42	1558	697
V/C Ratio(X)	1.03	0.94	0.22	0.96	1.16	0.01	0.31	1.13	0.16	0.35	0.90	0.10
Avail Cap(c_a), veh/h	92	1669	520	369	2078	647	92	1541	689	92	1558	697
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.9	47.9	35.6	65.6	43.4	25.7	73.0	41.4	25.0	72.4	38.0	23.9
Incr Delay (d2), s/veh	102.2	10.6	0.2	36.3	77.5	0.0	6.6	66.5	0.1	4.9	7.4	0.1
Initial Q Delay(d3),s/veh	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	22.4	3.4	9.0	43.0	0.2	0.2	45.5	2.8	0.3	28.0	1.7
LnGrp Delay(d),s/veh	174.6	58.6	35.8	101.9	121.0	25.7	79.6	107.9	25.1	77.3	45.3	23.9
LnGrp LOS	F	E	D	F	F	C	E	F	C	E	D	C
Approach Vol, veh/h		1774			2772			1857			1484	
Approach Delay, s/veh		63.3			118.2			102.8			44.6	
Approach LOS		E			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.8	69.0	20.0	53.0	5.1	69.7	8.0	65.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	65.0	16.0	49.0	4.0	65.0	4.0	61.0
Max Q Clear Time (g_c+I1), s	2.6	67.0	17.3	46.6	2.3	56.6	6.0	63.0
Green Ext Time (p_c), s	0.0	0.0	0.0	2.4	0.0	8.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	88.4
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	235	668	0	1034	709	75	0	688	1213	120	772	240
Future Volume (veh/h)	235	668	0	1034	709	75	0	688	1213	120	772	240
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	235	668	0	1034	709	75	0	688	1213	120	772	240
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	291	620	193	944	1584	493	3	1537	687	131	1779	796
Arrive On Green	0.09	0.12	0.00	0.28	0.31	0.31	0.00	0.44	0.44	0.04	0.51	0.51
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	235	668	0	1034	709	75	0	688	1213	120	772	240
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	8.8	16.0	0.0	36.0	14.6	4.5	0.0	17.8	57.0	4.6	18.1	11.6
Cycle Q Clear(g_c), s	8.8	16.0	0.0	36.0	14.6	4.5	0.0	17.8	57.0	4.6	18.1	11.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	291	620	193	944	1584	493	3	1537	687	131	1779	796
V/C Ratio(X)	0.81	1.08	0.00	1.10	0.45	0.15	0.00	0.45	1.76	0.92	0.43	0.30
Avail Cap(c_a), veh/h	393	620	193	944	1584	493	105	1537	687	131	1779	796
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.4	57.0	0.0	47.0	35.5	32.1	0.0	25.5	36.5	62.3	20.2	18.6
Incr Delay (d2), s/veh	8.7	58.9	0.0	58.9	0.2	0.1	0.0	0.2	349.9	53.6	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	10.8	0.0	24.6	6.8	2.0	0.0	8.6	91.5	3.1	8.7	5.0
LnGrp Delay(d),s/veh	67.1	115.9	0.0	105.9	35.7	32.2	0.0	25.7	386.4	115.8	20.4	18.8
LnGrp LOS	E	F		F	D	C		C	F	F	C	B
Approach Vol, veh/h		903			1818			1901			1132	
Approach Delay, s/veh		103.2			75.5			255.9			30.2	
Approach LOS		F			E			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	61.0	40.0	20.0	0.0	70.0	15.1	44.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	57.0	36.0	16.0	4.0	58.0	15.0	37.0
Max Q Clear Time (g_c+I1), s	6.6	59.0	38.0	18.0	0.0	20.1	10.8	16.6
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	27.8	0.3	10.2

Intersection Summary	
HCM 2010 Ctrl Delay	130.5
HCM 2010 LOS	F

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

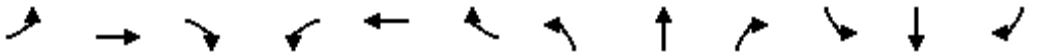
Approach	EB	NB	SB
Entry Lanes	1	2	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	135	943	1020
Demand Flow Rate, veh/h	139	972	1050
Vehicles Circulating, veh/h	975	79	27
Vehicles Exiting, veh/h	102	1035	1024
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	9.8	8.7	8.7
Approach LOS	A	A	A

Lane	Left	Left	Right	Left	Right
Designated Moves	LR	LT	TR	LT	TR
Assumed Moves	LR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Critical Headway, s	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	139	457	515	494	556
Cap Entry Lane, veh/h	571	1065	1069	1107	1109
Entry HV Adj Factor	0.971	0.970	0.971	0.970	0.972
Flow Entry, veh/h	135	443	500	479	540
Cap Entry, veh/h	555	1033	1038	1074	1078
V/C Ratio	0.243	0.429	0.482	0.446	0.501
Control Delay, s/veh	9.8	8.2	9.1	8.3	9.2
LOS	A	A	A	A	A
95th %tile Queue, veh	1	2	3	2	3

Cumulative Plus All Projects

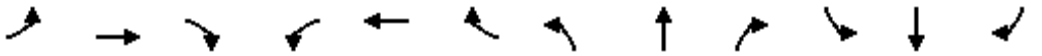
(Proposed Project)

County Standard Mitigation PM



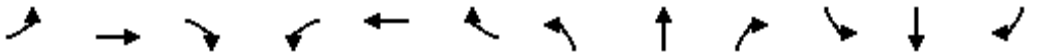
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	258	671	258	152	959	962	469	1242	38	1284	1880	150
Future Volume (vph)	258	671	258	152	959	962	469	1242	38	1284	1880	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		0.97	0.95	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	3327		3367	3471	2733	3367	4988	1553	3367	4988	1553
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	3327		3367	3471	2733	3367	4988	1553	3367	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	258	671	258	152	959	962	469	1242	38	1284	1880	150
RTOR Reduction (vph)	0	31	0	0	0	738	0	0	29	0	0	62
Lane Group Flow (vph)	258	898	0	152	959	224	469	1242	9	1284	1880	88
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	8.0	32.0		6.0	30.0	30.0	20.5	31.0	31.0	45.0	55.5	55.5
Effective Green, g (s)	8.0	32.0		6.0	30.0	30.0	20.5	31.0	31.0	45.0	55.5	55.5
Actuated g/C Ratio	0.06	0.25		0.05	0.23	0.23	0.16	0.24	0.24	0.35	0.43	0.43
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	207	818		155	801	630	530	1189	370	1165	2129	663
v/s Ratio Prot	0.08	c0.27		0.05	c0.28		0.14	c0.25		c0.38	0.38	
v/s Ratio Perm						0.08			0.01			0.06
v/c Ratio	1.25	1.10		0.98	1.20	0.35	0.88	1.04	0.02	1.10	0.88	0.13
Uniform Delay, d1	61.0	49.0		61.9	50.0	41.9	53.6	49.5	37.9	42.5	34.3	22.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	144.6	61.7		66.2	100.8	0.3	16.1	38.5	0.0	59.0	4.7	0.1
Delay (s)	205.6	110.7		128.2	150.8	42.2	69.7	88.0	37.9	101.5	39.0	22.7
Level of Service	F	F		F	F	D	E	F	D	F	D	C
Approach Delay (s)		131.3			98.7			82.0			62.5	
Approach LOS		F			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	85.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	107.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	670	242	219	721	518	243	895	182	775	1677	99
Future Volume (vph)	81	670	242	219	721	518	243	895	182	775	1677	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.91	0.91	1.00	0.91		1.00	0.91	1.00
Frt	1.00	0.96		1.00	0.98	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	3365		1736	3244	1413	1736	4861		1736	4988	1553
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	3365		1736	3244	1413	1736	4861		1736	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	81	670	242	219	721	518	243	895	182	775	1677	99
RTOR Reduction (vph)	0	25	0	0	10	285	0	21	0	0	0	38
Lane Group Flow (vph)	81	887	0	219	851	93	243	1056	0	775	1677	61
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	12.1	31.0		18.0	36.9	36.9	23.6	31.0		54.0	61.4	61.4
Effective Green, g (s)	12.1	31.0		18.0	36.9	36.9	23.6	31.0		54.0	61.4	61.4
Actuated g/C Ratio	0.08	0.21		0.12	0.25	0.25	0.16	0.21		0.36	0.41	0.41
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	141	695		208	798	347	273	1004		624	2041	635
v/s Ratio Prot	0.05	c0.26		c0.13	0.26		0.14	c0.22		c0.45	0.34	
v/s Ratio Perm						0.07						0.04
v/c Ratio	0.57	1.28		1.05	1.07	0.27	0.89	1.05		1.24	0.82	0.10
Uniform Delay, d1	66.5	59.5		66.0	56.6	45.6	61.9	59.5		48.0	39.4	27.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.6	135.6		77.0	51.2	0.4	28.1	43.1		122.1	2.8	0.1
Delay (s)	72.0	195.1		143.0	107.7	46.1	90.0	102.6		170.1	42.2	27.3
Level of Service	E	F		F	F	D	F	F		F	D	C
Approach Delay (s)		185.0			97.0			100.3			80.5	
Approach LOS		F			F			F			F	

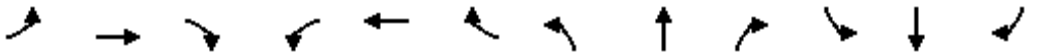
Intersection Summary			
HCM 2000 Control Delay	104.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	116.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	858	161	185	829	363	131	433	129	342	522	24
Future Volume (vph)	67	858	161	185	829	363	131	433	129	342	522	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	4.6		5.0	4.8	4.8	5.5	4.4	4.4	5.5	4.3	4.3
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	3422		1752	3505	1568	1752	1845	1568	1752	1845	1568
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1752	3422		1752	3505	1568	1752	1845	1568	1752	1845	1568
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	67	858	161	185	829	363	131	433	129	342	522	24
RTOR Reduction (vph)	0	12	0	0	0	233	0	0	98	0	0	16
Lane Group Flow (vph)	67	1007	0	185	829	130	131	433	31	342	522	8
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						2			8			4
Actuated Green, G (s)	6.6	39.9		14.0	46.9	46.9	11.9	31.1	31.1	26.0	45.3	45.3
Effective Green, g (s)	6.6	39.9		14.0	46.9	46.9	11.9	31.1	31.1	26.0	45.3	45.3
Actuated g/C Ratio	0.05	0.31		0.11	0.36	0.36	0.09	0.24	0.24	0.20	0.35	0.35
Clearance Time (s)	5.2	4.6		5.0	4.8	4.8	5.5	4.4	4.4	5.5	4.3	4.3
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lane Grp Cap (vph)	88	1046		187	1259	563	159	439	373	349	640	544
v/s Ratio Prot	0.04	c0.29		c0.11	0.24		0.07	c0.23		c0.20	0.28	
v/s Ratio Perm						0.08			0.02			0.01
v/c Ratio	0.76	0.96		0.99	0.66	0.23	0.82	0.99	0.08	0.98	0.82	0.02
Uniform Delay, d1	61.2	44.6		58.2	35.1	29.2	58.3	49.5	38.6	52.0	38.8	28.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	28.8	19.3		61.9	1.0	0.1	26.8	38.9	0.0	42.1	7.5	0.0
Delay (s)	90.0	63.8		120.1	36.0	29.3	85.0	88.4	38.6	94.1	46.3	28.0
Level of Service	F	E		F	D	C	F	F	D	F	D	C
Approach Delay (s)		65.4			45.5			78.5			64.2	
Approach LOS		E			D			E			E	

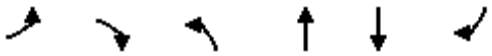
Intersection Summary			
HCM 2000 Control Delay	60.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	130.5	Sum of lost time (s)	19.9
Intersection Capacity Utilization	97.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	455	0	1458	0	0	0	0	1878	1036	0	1957	521
Future Volume (vph)	455	0	1458	0	0	0	0	1878	1036	0	1957	521
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4		6.4					5.1	4.0		4.6	4.0
Lane Util. Factor	0.97		0.88					0.91	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3367		2733					4988	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3367		2733					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	455	0	1458	0	0	0	0	1878	1036	0	1957	521
RTOR Reduction (vph)	0	0	12	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	455	0	1446	0	0	0	0	1878	1036	0	1957	521
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	49.6		49.6					38.9	100.0		39.4	100.0
Effective Green, g (s)	49.6		49.6					38.9	100.0		39.4	100.0
Actuated g/C Ratio	0.50		0.50					0.39	1.00		0.39	1.00
Clearance Time (s)	6.4		6.4					5.1			4.6	
Vehicle Extension (s)	1.0		1.0					1.0			1.0	
Lane Grp Cap (vph)	1670		1355					1940	1553		1965	1553
v/s Ratio Prot								0.38			c0.39	
v/s Ratio Perm	0.14		c0.53						0.67			0.34
v/c Ratio	0.27		1.07					0.97	0.67		1.00	0.34
Uniform Delay, d1	14.7		25.2					29.9	0.0		30.2	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0		44.6					13.5	2.3		19.2	0.6
Delay (s)	14.7		69.8					43.4	2.3		49.4	0.6
Level of Service	B		E					D	A		D	A
Approach Delay (s)		56.7			0.0			28.8			39.1	
Approach LOS		E			A			C			D	

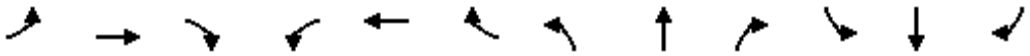
Intersection Summary			
HCM 2000 Control Delay	39.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	98.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1183	24	42	360	800	837
Future Volume (vph)	1183	24	42	360	800	837
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.88
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3400	1568	1752	3505	3505	2760
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3400	1568	1752	3505	3505	2760
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1183	24	42	360	800	837
RTOR Reduction (vph)	0	14	0	0	0	546
Lane Group Flow (vph)	1183	10	42	360	800	291
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	22.6	22.6	1.6	24.9	19.3	19.3
Effective Green, g (s)	22.6	22.6	1.6	24.9	19.3	19.3
Actuated g/C Ratio	0.41	0.41	0.03	0.45	0.35	0.35
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1384	638	50	1572	1218	959
v/s Ratio Prot	c0.35		c0.02	0.10	c0.23	
v/s Ratio Perm		0.01				0.11
v/c Ratio	0.85	0.02	0.84	0.23	0.66	0.30
Uniform Delay, d1	15.0	9.8	26.8	9.4	15.3	13.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.4	0.0	69.8	0.1	1.3	0.2
Delay (s)	20.3	9.8	96.7	9.5	16.6	13.4
Level of Service	C	A	F	A	B	B
Approach Delay (s)	20.1			18.6	14.9	
Approach LOS	C			B	B	

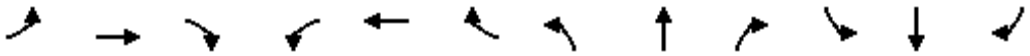
Intersection Summary			
HCM 2000 Control Delay	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	55.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	216	550	7	1	502	2	8	188	0	1	276	306
Future Volume (vph)	216	550	7	1	502	2	8	188	0	1	276	306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		1.00			1.00			1.00			0.93	
Flt Protected		0.99			1.00			1.00			1.00	
Satd. Flow (prot)		1733			1726			1756			1634	
Flt Permitted		0.99			1.00			0.96			1.00	
Satd. Flow (perm)		1733			1726			1682			1634	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	216	550	7	1	502	2	8	188	0	1	276	306
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	28	0
Lane Group Flow (vph)	0	773	0	0	505	0	0	196	0	0	555	0
Heavy Vehicles (%)	8%	8%	8%	10%	10%	10%	8%	8%	8%	8%	8%	8%
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)		52.0			35.0			41.0			41.0	
Effective Green, g (s)		52.0			35.0			41.0			41.0	
Actuated g/C Ratio		0.37			0.25			0.29			0.29	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		643			431			492			478	
v/s Ratio Prot		c0.45			c0.29							
v/s Ratio Perm								0.12			0.34	
v/c Ratio		1.20			1.17			0.40			1.16	
Uniform Delay, d1		44.0			52.5			39.6			49.5	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		105.4			99.4			0.5			93.3	
Delay (s)		149.4			151.9			40.2			142.8	
Level of Service		F			F			D			F	
Approach Delay (s)		149.4			151.9			40.2			142.8	
Approach LOS		F			F			D			F	

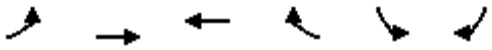
Intersection Summary			
HCM 2000 Control Delay	137.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	111.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	15	38	145	6	210	41	1466	172	715	1465	6
Future Volume (vph)	11	15	38	145	6	210	41	1466	172	715	1465	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.89		1.00	1.00	0.85	1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1646		1752	1845	1568	1752	3450		1752	3503	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1752	1646		1752	1845	1568	1752	3450		1752	3503	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	11	15	38	145	6	210	41	1466	172	715	1465	6
RTOR Reduction (vph)	0	36	0	0	0	187	0	6	0	0	0	0
Lane Group Flow (vph)	11	17	0	145	6	23	41	1632	0	715	1471	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	1.9	7.7		10.0	15.8	15.8	6.2	58.9		50.1	102.8	
Effective Green, g (s)	1.9	7.7		10.0	15.8	15.8	6.2	58.9		50.1	102.8	
Actuated g/C Ratio	0.01	0.05		0.07	0.11	0.11	0.04	0.41		0.35	0.72	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	23	88		122	204	173	76	1424		615	2523	
v/s Ratio Prot	0.01	c0.01		c0.08	0.00		0.02	c0.47		c0.41	0.42	
v/s Ratio Perm						0.01						
v/c Ratio	0.48	0.19		1.19	0.03	0.13	0.54	1.15		1.16	0.58	
Uniform Delay, d1	69.9	64.5		66.3	56.6	57.3	66.9	41.9		46.3	9.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	14.8	1.1		140.9	0.1	0.4	7.2	74.5		90.2	0.3	
Delay (s)	84.8	65.6		207.2	56.7	57.6	74.0	116.4		136.5	10.0	
Level of Service	F	E		F	E	E	E	F		F	A	
Approach Delay (s)		68.9			117.7			115.4			51.3	
Approach LOS		E			F			F			D	

Intersection Summary			
HCM 2000 Control Delay	82.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	142.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	110.3%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	1200	801	1662	1901	0
Future Volume (vph)	2	1200	801	1662	1901	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	
Frt	1.00	1.00	1.00	0.85	1.00	
Flt Protected	0.95	1.00	1.00	1.00	0.95	
Satd. Flow (prot)	3400	3505	3505	1568	3400	
Flt Permitted	0.95	1.00	1.00	1.00	0.95	
Satd. Flow (perm)	3400	3505	3505	1568	3400	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2	1200	801	1662	1901	0
RTOR Reduction (vph)	0	0	0	717	0	0
Lane Group Flow (vph)	2	1200	801	945	1901	0
Turn Type	Prot	NA	NA	Perm	Prot	
Protected Phases	4	5	5		6	
Permitted Phases				5		
Actuated Green, G (s)	1.1	46.0	46.0	46.0	76.1	
Effective Green, g (s)	1.1	46.0	46.0	46.0	76.1	
Actuated g/C Ratio	0.01	0.34	0.34	0.34	0.56	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	27	1192	1192	533	1913	
v/s Ratio Prot	c0.00	0.34	0.23		c0.56	
v/s Ratio Perm				c0.60		
v/c Ratio	0.07	1.01	0.67	1.77	0.99	
Uniform Delay, d1	66.5	44.6	38.1	44.6	29.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.2	27.7	1.5	355.8	19.0	
Delay (s)	67.7	72.3	39.7	400.4	48.3	
Level of Service	E	E	D	F	D	
Approach Delay (s)		72.3	283.1		48.3	
Approach LOS		E	F		D	

Intersection Summary			
HCM 2000 Control Delay	157.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.28		
Actuated Cycle Length (s)	135.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	112.9%	ICU Level of Service	H
Analysis Period (min)	15		

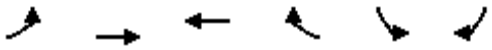
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	412	668	1143	343	461	2720
Future Volume (vph)	412	668	1143	343	461	2720
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	0.91	1.00	0.97	0.91
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3400	1568	5036	1568	3400	5036
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3400	1568	5036	1568	3400	5036
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	412	668	1143	343	461	2720
RTOR Reduction (vph)	0	293	0	226	0	0
Lane Group Flow (vph)	412	375	1143	117	461	2720
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	3		2		1	6
Permitted Phases		3		2		
Actuated Green, G (s)	12.0	12.0	17.0	17.0	9.0	30.0
Effective Green, g (s)	12.0	12.0	17.0	17.0	9.0	30.0
Actuated g/C Ratio	0.24	0.24	0.34	0.34	0.18	0.60
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	816	376	1712	533	612	3021
v/s Ratio Prot	0.12		0.23		0.14	c0.54
v/s Ratio Perm		c0.24		0.07		
v/c Ratio	0.50	1.00	0.67	0.22	0.75	0.90
Uniform Delay, d1	16.4	19.0	14.1	11.8	19.4	8.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	45.6	1.0	0.2	5.2	4.1
Delay (s)	16.9	64.6	15.1	12.0	24.7	12.8
Level of Service	B	E	B	B	C	B
Approach Delay (s)	46.4		14.4			14.6
Approach LOS	D		B			B

Intersection Summary			
HCM 2000 Control Delay	20.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	819	2149	1723	71	132	772
Future Volume (vph)	819	2149	1723	71	132	772
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	0.91	0.91		1.00	0.88
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3400	5036	5006		1752	2760
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3400	5036	5006		1752	2760
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	819	2149	1723	71	132	772
RTOR Reduction (vph)	0	0	6	0	0	639
Lane Group Flow (vph)	819	2149	1788	0	132	133
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	18.1	47.2	25.1		11.5	11.5
Effective Green, g (s)	18.1	47.2	25.1		11.5	11.5
Actuated g/C Ratio	0.27	0.71	0.38		0.17	0.17
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	922	3563	1883		302	475
v/s Ratio Prot	c0.24	0.43	c0.36		c0.08	
v/s Ratio Perm						0.05
v/c Ratio	0.89	0.60	0.95		0.44	0.28
Uniform Delay, d1	23.3	5.0	20.2		24.7	24.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	10.4	0.3	11.0		1.0	0.3
Delay (s)	33.7	5.3	31.2		25.7	24.3
Level of Service	C	A	C		C	C
Approach Delay (s)		13.1	31.2		24.5	
Approach LOS		B	C		C	

Intersection Summary			
HCM 2000 Control Delay	20.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	66.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	253	469	138	509	487	776	125	3141	276	687	3065	408
Future Volume (veh/h)	253	469	138	509	487	776	125	3141	276	687	3065	408
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	253	469	138	509	487	776	125	3141	276	687	3065	408
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	303	968	433	410	1078	768	175	1309	408	616	1961	611
Arrive On Green	0.09	0.28	0.28	0.12	0.31	0.31	0.05	0.26	0.26	0.18	0.39	0.39
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	253	469	138	509	487	776	125	3141	276	687	3065	408
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	9.4	14.4	9.0	15.5	14.4	39.6	4.7	33.8	20.5	23.5	50.6	27.8
Cycle Q Clear(g_c), s	9.4	14.4	9.0	15.5	14.4	39.6	4.7	33.8	20.5	23.5	50.6	27.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	303	968	433	410	1078	768	175	1309	408	616	1961	611
V/C Ratio(X)	0.83	0.48	0.32	1.24	0.45	1.01	0.71	2.40	0.68	1.12	1.56	0.67
Avail Cap(c_a), veh/h	349	1007	451	410	1078	768	254	1309	408	616	1961	611
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.7	38.9	37.0	56.6	35.8	32.8	60.1	47.5	42.6	52.6	39.1	32.1
Incr Delay (d2), s/veh	12.6	0.1	0.2	127.4	0.1	34.9	2.0	631.8	3.7	72.1	255.7	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	7.0	3.9	14.5	7.0	34.7	2.2	92.0	9.2	17.0	69.5	12.3
LnGrp Delay(d),s/veh	70.4	39.1	37.1	184.1	36.0	67.7	62.1	679.3	46.2	124.7	294.8	34.4
LnGrp LOS	E	D	D	F	D	F	E	F	D	F	F	C
Approach Vol, veh/h		860			1772			3542			4160	
Approach Delay, s/veh		48.0			92.4			608.2			241.2	
Approach LOS		D			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.2	55.4	16.9	44.2	29.0	38.6	21.0	40.1
Change Period (Y+Rc), s	5.5	4.8	5.5	* 4.6	5.5	* 4.8	5.5	4.6
Max Green Setting (Gmax), s	9.7	47.4	13.2	* 40	23.5	* 34	15.5	37.0
Max Q Clear Time (g_c+I1), s	6.7	52.6	11.4	41.6	25.5	35.8	17.5	16.4
Green Ext Time (p_c), s	0.1	0.0	0.0	0.0	0.0	0.0	0.0	3.1

Intersection Summary	
HCM 2010 Ctrl Delay	325.4
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	585	23	206	193	715	9	2261	139	749	2580	3
Future Volume (veh/h)	0	585	23	206	193	715	9	2261	139	749	2580	3
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	0	585	23	206	193	715	9	2261	139	749	2580	3
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	2	631	282	173	945	735	21	2094	652	672	3056	952
Arrive On Green	0.00	0.18	0.18	0.05	0.27	0.27	0.01	0.42	0.42	0.20	0.61	0.61
Sat Flow, veh/h	3375	3471	1553	3408	3505	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	0	585	23	206	193	715	9	2261	139	749	2580	3
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1704	1752	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	0.0	24.6	1.8	7.5	6.3	39.9	0.4	62.2	8.4	29.5	61.5	0.1
Cycle Q Clear(g_c), s	0.0	24.6	1.8	7.5	6.3	39.9	0.4	62.2	8.4	29.5	61.5	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	2	631	282	173	945	735	21	2094	652	672	3056	952
V/C Ratio(X)	0.00	0.93	0.08	1.19	0.20	0.97	0.43	1.08	0.21	1.11	0.84	0.00
Avail Cap(c_a), veh/h	68	680	304	173	945	735	68	2094	652	672	3056	952
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	59.6	50.3	70.3	41.8	38.4	73.3	43.0	27.4	59.3	23.0	11.1
Incr Delay (d2), s/veh	0.0	17.6	0.0	130.2	0.0	26.4	4.9	45.1	0.1	70.4	2.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	13.3	0.8	6.6	3.1	33.9	0.2	37.2	3.6	20.3	28.6	0.0
LnGrp Delay(d),s/veh	0.0	77.2	50.4	200.5	41.9	64.8	78.3	88.0	27.4	129.8	25.2	11.1
LnGrp LOS		E	D	F	D	E	E	F	C	F	C	B
Approach Vol, veh/h		608			1114			2409			3332	
Approach Delay, s/veh		76.2			85.9			84.5			48.7	
Approach LOS		E			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	96.1	0.0	45.6	35.0	67.5	13.0	32.6
Change Period (Y+Rc), s	5.5	5.3	5.5	* 5.7	5.5	* 5.3	5.5	* 5.7
Max Green Setting (Gmax), s	3.0	88.6	3.0	* 33	29.5	* 62	7.5	* 29
Max Q Clear Time (g_c+I1), s	2.4	63.5	0.0	41.9	31.5	64.2	9.5	26.6
Green Ext Time (p_c), s	0.0	21.8	0.0	0.0	0.0	0.0	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	68.1
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	158	1747	810	62	1515	893	624	1673	106	1002	1638	122
Future Volume (veh/h)	158	1747	810	62	1515	893	624	1673	106	1002	1638	122
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	158	1747	810	62	1515	0	624	1673	106	1002	1638	122
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	4	4	4	4	4	4
Cap, veh/h	154	1673	521	66	1560	486	591	1434	446	741	1633	508
Arrive On Green	0.05	0.34	0.34	0.02	0.32	0.00	0.17	0.29	0.29	0.22	0.33	0.33
Sat Flow, veh/h	3312	4893	1524	3312	4893	1524	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	158	1747	810	62	1515	0	624	1673	106	1002	1638	122
Grp Sat Flow(s),veh/h/ln	1656	1631	1524	1656	1631	1524	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	7.0	51.4	51.4	2.8	45.9	0.0	26.3	43.2	7.8	33.0	49.2	8.6
Cycle Q Clear(g_c), s	7.0	51.4	51.4	2.8	45.9	0.0	26.3	43.2	7.8	33.0	49.2	8.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	154	1673	521	66	1560	486	591	1434	446	741	1633	508
V/C Ratio(X)	1.02	1.04	1.55	0.94	0.97	0.00	1.06	1.17	0.24	1.35	1.00	0.24
Avail Cap(c_a), veh/h	154	1673	521	66	1560	486	591	1434	446	741	1633	508
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.7	49.4	49.4	73.6	50.5	0.0	62.0	53.6	41.0	58.7	50.5	36.9
Incr Delay (d2), s/veh	79.0	34.4	258.9	87.9	16.4	0.0	52.8	83.1	0.1	167.2	23.1	0.1
Initial Q Delay(d3),s/veh	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	28.4	59.0	2.1	23.0	0.0	16.6	30.8	3.4	32.6	26.0	3.7
LnGrp Delay(d),s/veh	151.0	83.9	308.3	161.4	66.9	0.0	114.8	136.7	41.1	225.9	73.6	37.0
LnGrp LOS	F	F	F	F	E		F	F	D	F	F	D
Approach Vol, veh/h		2715			1577			2403			2762	
Approach Delay, s/veh		154.8			70.6			126.8			127.2	
Approach LOS		F			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	53.3	31.0	54.0	8.5	56.8	37.0	48.0
Change Period (Y+Rc), s	5.0	* 5.4	* 4.7	4.8	5.5	* 5.4	4.0	4.8
Max Green Setting (Gmax), s	7.0	* 48	* 26	49.2	3.0	* 51	33.0	43.2
Max Q Clear Time (g_c+I1), s	9.0	47.9	28.3	51.2	4.8	53.4	35.0	45.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	125.6
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	453	724	305	272	602	199	182	1691	232	307	1910	166
Future Volume (veh/h)	453	724	305	272	602	199	182	1691	232	307	1910	166
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1845	1845	1827	1827
Adj Flow Rate, veh/h	453	724	305	272	602	199	182	1691	232	307	1910	166
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	3	3	4	4
Cap, veh/h	490	880	394	332	708	317	139	1968	619	220	2117	659
Arrive On Green	0.14	0.25	0.25	0.10	0.20	0.20	0.04	0.39	0.39	0.06	0.42	0.42
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3375	4988	1568	3408	4988	1553
Grp Volume(v), veh/h	453	724	305	272	602	199	182	1691	232	307	1910	166
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1688	1663	1568	1704	1663	1553
Q Serve(g_s), s	14.1	20.9	19.4	8.4	17.7	12.4	4.4	33.3	11.3	6.9	38.3	7.4
Cycle Q Clear(g_c), s	14.1	20.9	19.4	8.4	17.7	12.4	4.4	33.3	11.3	6.9	38.3	7.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	490	880	394	332	708	317	139	1968	619	220	2117	659
V/C Ratio(X)	0.92	0.82	0.77	0.82	0.85	0.63	1.31	0.86	0.38	1.40	0.90	0.25
Avail Cap(c_a), veh/h	490	880	394	407	802	359	139	2003	630	220	2152	670
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.3	37.8	37.3	47.4	41.2	39.0	51.3	29.7	23.0	50.1	28.8	19.9
Incr Delay (d2), s/veh	23.0	5.9	8.5	8.6	7.1	1.7	182.5	3.8	0.1	204.3	5.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	10.8	9.3	4.3	9.3	5.5	5.6	15.9	4.9	9.5	18.6	3.2
LnGrp Delay(d),s/veh	68.3	43.8	45.7	56.0	48.2	40.8	233.8	33.5	23.2	254.4	34.3	19.9
LnGrp LOS	E	D	D	E	D	D	F	C	C	F	C	B
Approach Vol, veh/h		1482			1073			2105			2383	
Approach Delay, s/veh		51.7			48.8			49.7			61.6	
Approach LOS		D			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	50.2	20.9	26.9	12.2	47.0	15.6	32.2
Change Period (Y+Rc), s	* 4.6	4.8	5.5	* 5.3	* 5.3	4.8	* 5.2	* 5.3
Max Green Setting (Gmax), s	* 4.4	46.2	15.4	* 25	* 6.9	43.0	* 13	* 27
Max Q Clear Time (g_c+I1), s	6.4	40.3	16.1	19.7	8.9	35.3	10.4	22.9
Green Ext Time (p_c), s	0.0	5.2	0.0	1.9	0.0	6.6	0.1	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	54.0
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	808	610	679	91	743	56	189	1125	11	115	2135	1109
Future Volume (veh/h)	808	610	679	91	743	56	189	1125	11	115	2135	1109
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	808	610	679	91	743	56	189	1125	11	115	2135	1109
Adj No. of Lanes	2	2	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	817	1171	524	104	625	195	184	2144	667	140	2101	654
Arrive On Green	0.24	0.34	0.34	0.03	0.13	0.13	0.05	0.43	0.43	0.04	0.42	0.42
Sat Flow, veh/h	3375	3471	1553	3375	4988	1553	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	808	610	679	91	743	56	189	1125	11	115	2135	1109
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1688	1663	1553	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	31.0	18.4	43.9	3.5	16.3	4.3	7.1	21.6	0.5	4.4	54.8	54.8
Cycle Q Clear(g_c), s	31.0	18.4	43.9	3.5	16.3	4.3	7.1	21.6	0.5	4.4	54.8	54.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	817	1171	524	104	625	195	184	2144	667	140	2101	654
V/C Ratio(X)	0.99	0.52	1.30	0.88	1.19	0.29	1.03	0.52	0.02	0.82	1.02	1.69
Avail Cap(c_a), veh/h	817	1171	524	104	625	195	184	2150	669	140	2101	654
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.1	34.7	43.1	62.8	56.9	51.6	61.5	27.3	21.3	61.9	37.7	37.7
Incr Delay (d2), s/veh	28.6	1.7	146.9	50.2	100.5	3.7	73.3	0.9	0.0	29.1	23.7	319.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.7	9.1	40.2	2.4	13.3	2.0	5.2	10.1	0.2	2.6	29.7	81.5
LnGrp Delay(d),s/veh	77.7	36.3	190.0	113.0	157.4	55.3	135.1	28.2	21.4	90.9	61.4	356.9
LnGrp LOS	E	D	F	F	F	E	F	C	C	F	F	F
Approach Vol, veh/h		2097			890			1325			3359	
Approach Delay, s/veh		102.0			146.5			43.4			160.0	
Approach LOS		F			F			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	60.0	36.6	21.5	10.9	61.1	9.0	49.1
Change Period (Y+Rc), s	* 4.9	* 5.2	* 5.1	* 5.2	5.5	* 5.2	5.0	* 5.2
Max Green Setting (Gmax), s	* 7.1	* 55	* 32	* 16	5.4	* 56	4.0	* 44
Max Q Clear Time (g_c+I1), s	9.1	56.8	33.0	18.3	6.4	23.6	5.5	45.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	32.3	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	122.4
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	2366	294	149	2269	5	93	30	92	4	32	23
Future Volume (veh/h)	14	2366	294	149	2269	5	93	30	92	4	32	23
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	14	2366	294	149	2269	5	93	30	92	4	32	23
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	3	3	3	3	3	3
Cap, veh/h	21	2873	348	173	3723	8	116	194	165	7	68	58
Arrive On Green	0.01	0.65	0.65	0.10	0.74	0.74	0.07	0.11	0.11	0.00	0.04	0.04
Sat Flow, veh/h	1707	4425	535	1707	5042	11	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	14	1728	932	149	1468	806	93	30	92	4	32	23
Grp Sat Flow(s),veh/h/ln	1707	1631	1698	1707	1631	1790	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	1.0	50.3	54.4	10.9	27.3	27.3	6.6	1.9	7.1	0.3	2.2	1.8
Cycle Q Clear(g_c), s	1.0	50.3	54.4	10.9	27.3	27.3	6.6	1.9	7.1	0.3	2.2	1.8
Prop In Lane	1.00		0.32	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	21	2118	1102	173	2409	1322	116	194	165	7	68	58
V/C Ratio(X)	0.67	0.82	0.85	0.86	0.61	0.61	0.81	0.15	0.56	0.55	0.47	0.40
Avail Cap(c_a), veh/h	75	2147	1118	194	2409	1322	178	433	368	55	304	259
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.6	16.7	17.4	56.3	7.9	7.9	58.7	51.8	54.1	63.3	60.1	59.9
Incr Delay (d2), s/veh	22.1	2.7	6.5	27.0	0.6	1.1	10.6	0.3	2.6	37.3	4.6	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	23.1	27.1	6.5	12.2	13.6	3.6	1.0	3.2	0.2	1.2	0.9
LnGrp Delay(d),s/veh	84.8	19.4	23.9	83.3	8.5	9.0	69.3	52.1	56.8	100.6	64.7	64.0
LnGrp LOS	F	B	C	F	A	A	E	D	E	F	E	E
Approach Vol, veh/h		2674			2423			215			59	
Approach Delay, s/veh		21.3			13.3			61.5			66.8	
Approach LOS		C			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.4	89.1	12.8	9.1	5.1	100.4	4.0	17.8
Change Period (Y+Rc), s	3.5	6.4	4.4	* 4.4	3.5	6.4	3.5	4.4
Max Green Setting (Gmax), s	14.5	83.8	12.9	* 21	5.6	92.7	4.0	29.9
Max Q Clear Time (g_c+I1), s	12.9	56.4	8.6	4.2	3.0	29.3	2.3	9.1
Green Ext Time (p_c), s	0.0	26.3	0.0	0.5	0.0	63.1	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	19.8
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	1210	512	29	1147	166	618	139	8	158	415	90
Future Volume (veh/h)	68	1210	512	29	1147	166	618	139	8	158	415	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	68	1210	512	29	1147	166	618	139	8	158	415	90
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	83	1006	408	37	1190	172	450	652	554	184	373	317
Arrive On Green	0.05	0.41	0.41	0.02	0.39	0.39	0.26	0.35	0.35	0.10	0.20	0.20
Sat Flow, veh/h	1757	2434	988	1757	3075	444	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	68	857	865	29	652	661	618	139	8	158	415	90
Grp Sat Flow(s),veh/h/ln	1757	1752	1670	1757	1752	1766	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	5.7	61.3	61.3	2.4	53.9	54.4	38.0	7.8	0.5	13.1	30.0	7.2
Cycle Q Clear(g_c), s	5.7	61.3	61.3	2.4	53.9	54.4	38.0	7.8	0.5	13.1	30.0	7.2
Prop In Lane	1.00		0.59	1.00		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	83	724	690	37	678	684	450	652	554	184	373	317
V/C Ratio(X)	0.82	1.18	1.25	0.79	0.96	0.97	1.37	0.21	0.01	0.86	1.11	0.28
Avail Cap(c_a), veh/h	83	724	690	71	696	702	450	652	554	426	373	317
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.1	43.5	43.5	72.4	44.4	44.6	55.2	33.5	31.2	65.4	59.2	50.1
Incr Delay (d2), s/veh	45.7	96.2	125.7	30.3	24.7	25.6	182.0	0.2	0.0	11.1	80.9	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	48.9	52.3	1.5	30.7	31.3	41.1	4.0	0.2	7.0	23.6	3.2
LnGrp Delay(d),s/veh	115.8	139.7	169.3	102.6	69.1	70.2	237.2	33.7	31.2	76.5	140.1	50.6
LnGrp LOS	F	F	F	F	E	E	F	C	C	E	F	D
Approach Vol, veh/h		1790			1342			765			663	
Approach Delay, s/veh		153.1			70.4			198.1			112.8	
Approach LOS		F			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.5	56.5	7.1	65.3	42.0	34.0	11.0	61.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	36.0	32.0	6.0	60.0	38.0	30.0	7.0	59.0
Max Q Clear Time (g_c+I1), s	15.1	9.8	4.4	63.3	40.0	32.0	7.7	56.4
Green Ext Time (p_c), s	0.4	3.8	0.0	0.0	0.0	0.0	0.0	1.1

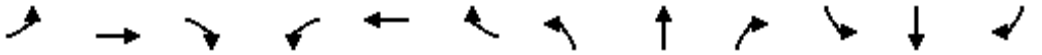
Intersection Summary	
HCM 2010 Ctrl Delay	130.4
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	283	2137	108	198	2093	1	169	1669	220	5	1865	171
Future Volume (veh/h)	283	2137	108	198	2093	1	169	1669	220	5	1865	171
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1792	1845	1845	1792	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	283	2137	108	198	2093	1	169	1669	220	5	1865	171
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	6	3	3	6	3	3	3	3	3	3	3
Cap, veh/h	313	2044	655	255	1960	628	223	1865	581	13	1555	484
Arrive On Green	0.09	0.42	0.42	0.07	0.40	0.40	0.07	0.37	0.37	0.00	0.31	0.31
Sat Flow, veh/h	3408	4893	1568	3408	4893	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	283	2137	108	198	2093	1	169	1669	220	5	1865	171
Grp Sat Flow(s),veh/h/ln	1704	1631	1568	1704	1631	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	9.9	50.0	5.2	6.8	48.0	0.0	5.8	37.4	12.3	0.2	37.0	10.1
Cycle Q Clear(g_c), s	9.9	50.0	5.2	6.8	48.0	0.0	5.8	37.4	12.3	0.2	37.0	10.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	313	2044	655	255	1960	628	223	1865	581	13	1555	484
V/C Ratio(X)	0.90	1.05	0.16	0.78	1.07	0.00	0.76	0.90	0.38	0.38	1.20	0.35
Avail Cap(c_a), veh/h	313	2044	655	313	1960	628	228	1865	581	114	1555	484
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.9	34.9	21.8	54.5	35.9	21.5	55.1	35.5	27.6	59.5	41.4	32.1
Incr Delay (d2), s/veh	28.0	33.1	0.1	9.5	41.2	0.0	13.5	6.1	0.4	17.3	96.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	28.6	2.3	3.6	28.9	0.0	3.2	18.4	5.4	0.1	30.8	4.5
LnGrp Delay(d),s/veh	81.9	68.0	21.9	64.0	77.1	21.5	68.6	41.6	28.0	76.9	137.6	32.6
LnGrp LOS	F	F	C	E	F	C	E	D	C	E	F	C
Approach Vol, veh/h		2528			2292			2058			2041	
Approach Delay, s/veh		67.6			75.9			42.4			128.7	
Approach LOS		E			E			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.5	48.4	13.0	54.0	11.8	41.0	15.0	52.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	41.0	11.0	48.0	8.0	37.0	11.0	48.0
Max Q Clear Time (g_c+I1), s	2.2	39.4	8.8	52.0	7.8	39.0	11.9	50.0
Green Ext Time (p_c), s	0.0	1.6	0.1	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	77.9
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	233	817	124	499	947	130	70	1104	652	196	1352	462
Future Volume (veh/h)	233	817	124	499	947	130	70	1104	652	196	1352	462
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	233	817	124	499	947	130	70	1104	652	196	1352	462
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	307	1041	324	480	1295	403	120	1333	596	289	1506	674
Arrive On Green	0.09	0.21	0.21	0.14	0.26	0.26	0.04	0.38	0.38	0.08	0.43	0.43
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	233	817	124	499	947	130	70	1104	652	196	1352	462
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	5.7	13.1	5.8	12.0	14.7	5.7	1.7	24.3	32.4	4.8	30.5	20.3
Cycle Q Clear(g_c), s	5.7	13.1	5.8	12.0	14.7	5.7	1.7	24.3	32.4	4.8	30.5	20.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	307	1041	324	480	1295	403	120	1333	596	289	1506	674
V/C Ratio(X)	0.76	0.78	0.38	1.04	0.73	0.32	0.58	0.83	1.09	0.68	0.90	0.69
Avail Cap(c_a), veh/h	320	1063	331	480	1299	404	120	1333	596	719	1685	754
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	32.0	29.1	36.6	29.0	25.7	40.5	23.9	26.4	37.9	22.6	19.7
Incr Delay (d2), s/veh	9.7	3.9	0.7	52.0	2.1	0.5	7.1	4.5	64.9	2.8	6.3	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	6.4	2.6	9.1	7.0	2.5	0.9	12.5	24.6	2.3	16.0	9.1
LnGrp Delay(d),s/veh	47.6	35.9	29.9	88.7	31.1	26.1	47.6	28.4	91.4	40.7	28.9	21.9
LnGrp LOS	D	D	C	F	C	C	D	C	F	D	C	C
Approach Vol, veh/h		1174			1576			1826			2010	
Approach Delay, s/veh		37.6			48.9			51.6			28.5	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	36.4	16.0	21.6	7.0	40.7	11.7	25.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	18.0	26.0	12.0	18.0	3.0	41.0	8.0	22.0
Max Q Clear Time (g_c+I1), s	6.8	34.4	14.0	15.1	3.7	32.5	7.7	16.7
Green Ext Time (p_c), s	0.5	0.0	0.0	2.5	0.0	4.1	0.0	4.5

Intersection Summary	
HCM 2010 Ctrl Delay	41.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	31	17	531	44	548	48	2122	349	520	2580	59
Future Volume (veh/h)	73	31	17	531	44	548	48	2122	349	520	2580	59
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	73	31	17	531	44	548	48	2122	349	520	2580	59
Adj No. of Lanes	1	1	1	2	1	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	81	174	148	586	388	329	61	2206	687	529	2843	65
Arrive On Green	0.05	0.09	0.09	0.17	0.21	0.21	0.04	0.44	0.44	0.16	0.57	0.57
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1740	4988	1553	3375	5018	114
Grp Volume(v), veh/h	73	31	17	531	44	548	48	2122	349	520	1706	933
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1740	1663	1553	1688	1663	1807
Q Serve(g_s), s	6.2	2.3	1.5	22.9	2.9	31.5	4.1	61.9	24.2	23.0	68.4	69.5
Cycle Q Clear(g_c), s	6.2	2.3	1.5	22.9	2.9	31.5	4.1	61.9	24.2	23.0	68.4	69.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	81	174	148	586	388	329	61	2206	687	529	1884	1024
V/C Ratio(X)	0.90	0.18	0.11	0.91	0.11	1.66	0.78	0.96	0.51	0.98	0.91	0.91
Avail Cap(c_a), veh/h	81	174	148	659	388	329	63	2209	688	529	1885	1024
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.2	62.5	62.2	60.9	47.9	59.2	71.8	40.6	30.1	63.0	28.9	29.1
Incr Delay (d2), s/veh	67.1	0.2	0.1	15.3	0.0	311.7	42.3	11.4	0.3	34.5	6.5	11.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	1.2	0.7	12.0	1.5	42.2	2.7	30.6	10.4	13.3	33.0	37.8
LnGrp Delay(d),s/veh	138.2	62.7	62.3	76.2	48.0	370.9	114.0	52.0	30.3	97.5	35.4	40.9
LnGrp LOS	F	E	E	E	D	F	F	D	C	F	D	D
Approach Vol, veh/h		121			1123			2519			3159	
Approach Delay, s/veh		108.2			218.9			50.2			47.3	
Approach LOS		F			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.4	90.1	29.8	19.6	29.0	71.5	12.4	37.0
Change Period (Y+Rc), s	* 5.1	* 5.2	4.0	5.5	5.5	* 5.2	5.5	5.5
Max Green Setting (Gmax), s	* 5.4	* 85	29.0	10.9	23.5	* 66	6.9	31.5
Max Q Clear Time (g_c+I1), s	6.1	71.5	24.9	4.3	25.0	63.9	8.2	33.5
Green Ext Time (p_c), s	0.0	12.2	0.8	0.4	0.0	2.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	77.2
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	199	1244	479	559	1047	725	513	1101	152	851	1873	184
Future Volume (veh/h)	199	1244	479	559	1047	725	513	1101	152	851	1873	184
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	199	1244	479	559	1047	725	513	1101	152	851	1873	184
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	208	1160	361	509	1605	500	437	1166	363	805	1709	532
Arrive On Green	0.06	0.23	0.23	0.15	0.32	0.32	0.13	0.23	0.23	0.24	0.34	0.34
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	199	1244	479	559	1047	725	513	1101	152	851	1873	184
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	8.8	34.7	34.7	22.5	26.9	48.0	19.5	32.7	12.5	35.9	51.6	13.3
Cycle Q Clear(g_c), s	8.8	34.7	34.7	22.5	26.9	48.0	19.5	32.7	12.5	35.9	51.6	13.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	208	1160	361	509	1605	500	437	1166	363	805	1709	532
V/C Ratio(X)	0.96	1.07	1.33	1.10	0.65	1.45	1.17	0.94	0.42	1.06	1.10	0.35
Avail Cap(c_a), veh/h	208	1160	361	509	1605	500	437	1166	363	805	1709	532
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.5	58.0	58.0	64.1	44.1	51.3	65.6	56.7	49.0	57.4	49.5	36.9
Incr Delay (d2), s/veh	49.3	48.0	164.7	69.2	0.8	213.8	100.0	14.8	0.3	48.1	53.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	21.2	31.6	15.4	12.6	50.5	15.1	16.6	5.4	22.0	32.0	5.7
LnGrp Delay(d),s/veh	119.8	106.0	222.6	133.3	44.9	265.1	165.5	71.5	49.3	105.4	102.5	37.1
LnGrp LOS	F	F	F	F	D	F	F	E	D	F	F	D
Approach Vol, veh/h		1922			2331			1766			2908	
Approach Delay, s/veh		136.5			134.6			96.9			99.2	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	57.2	14.7	53.7	41.4	40.8	28.0	40.4
Change Period (Y+Rc), s	5.5	* 5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	19.5	* 52	9.2	* 48	35.9	* 35	22.5	* 34
Max Q Clear Time (g_c+I1), s	21.5	53.6	10.8	50.0	37.9	34.7	24.5	36.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	116.0
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	253	2158	132	441	1460	511	579	903	128	555	2277	161
Future Volume (veh/h)	253	2158	132	441	1460	511	579	903	128	555	2277	161
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1845	1845	1792	1792	1845	1845	1845	1827	1845	1827
Adj Flow Rate, veh/h	253	2158	132	441	1460	511	579	903	128	555	2277	0
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	3	3	6	6	3	3	3	4	3	4
Cap, veh/h	294	1655	530	231	1569	488	331	1418	442	595	1804	556
Arrive On Green	0.09	0.34	0.34	0.07	0.32	0.32	0.10	0.28	0.28	0.18	0.36	0.00
Sat Flow, veh/h	3312	4893	1568	3408	4893	1524	3408	5036	1568	3375	5036	1553
Grp Volume(v), veh/h	253	2158	132	441	1460	511	579	903	128	555	2277	0
Grp Sat Flow(s),veh/h/ln	1656	1631	1568	1704	1631	1524	1704	1679	1568	1688	1679	1553
Q Serve(g_s), s	11.3	50.9	9.2	10.2	43.5	48.3	14.6	23.6	9.6	24.4	53.9	0.0
Cycle Q Clear(g_c), s	11.3	50.9	9.2	10.2	43.5	48.3	14.6	23.6	9.6	24.4	53.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	294	1655	530	231	1569	488	331	1418	442	595	1804	556
V/C Ratio(X)	0.86	1.30	0.25	1.91	0.93	1.05	1.75	0.64	0.29	0.93	1.26	0.00
Avail Cap(c_a), veh/h	297	1655	530	231	1569	488	331	1418	442	628	1804	556
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	67.7	49.8	36.0	70.2	49.5	51.1	67.9	47.3	42.3	61.1	48.3	0.0
Incr Delay (d2), s/veh	20.8	141.3	0.1	424.9	10.1	53.3	350.3	1.0	0.4	19.9	122.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	44.5	4.0	18.4	21.1	27.5	22.9	11.1	4.2	13.1	45.4	0.0
LnGrp Delay(d),s/veh	88.4	191.1	36.1	495.0	59.6	104.4	418.2	48.3	42.7	81.1	171.0	0.0
LnGrp LOS	F	F	D	F	E	F	F	D	D	F	F	
Approach Vol, veh/h		2543			2412			1610			2832	
Approach Delay, s/veh		172.8			148.7			180.9			153.4	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	59.0	17.6	53.9	31.5	47.5	15.0	56.5
Change Period (Y+Rc), s	* 5.4	5.1	* 4.3	5.6	5.0	5.1	* 4.8	* 5.6
Max Green Setting (Gmax), s	* 15	53.9	* 14	47.6	28.0	40.9	* 10	* 51
Max Q Clear Time (g_c+I1), s	16.6	55.9	13.3	50.3	26.4	25.6	12.2	52.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	12.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	162.2
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	158	1180	370	112	1086	50	176	1163	290	40	2521	321
Future Volume (veh/h)	158	1180	370	112	1086	50	176	1163	290	40	2521	321
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	158	1180	370	112	1086	50	176	1163	290	40	2521	321
Adj No. of Lanes	2	3	1	2	3	1	1	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	93	1117	348	139	1185	369	126	2847	886	70	2590	806
Arrive On Green	0.03	0.22	0.22	0.04	0.24	0.24	0.07	0.57	0.57	0.02	0.51	0.51
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	1757	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	158	1180	370	112	1086	50	176	1163	290	40	2521	321
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1757	1679	1568	1704	1679	1568
Q Serve(g_s), s	3.8	31.0	31.0	4.6	29.4	3.5	10.0	18.2	13.8	1.6	68.1	17.5
Cycle Q Clear(g_c), s	3.8	31.0	31.0	4.6	29.4	3.5	10.0	18.2	13.8	1.6	68.1	17.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	93	1117	348	139	1185	369	126	2847	886	70	2590	806
V/C Ratio(X)	1.71	1.06	1.06	0.81	0.92	0.14	1.40	0.41	0.33	0.57	0.97	0.40
Avail Cap(c_a), veh/h	93	1117	348	139	1185	369	126	2847	886	83	2597	809
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.0	54.4	54.4	66.5	52.1	42.2	64.9	17.2	16.2	67.9	33.0	20.7
Incr Delay (d2), s/veh	359.0	43.2	66.3	28.3	11.1	0.2	221.0	0.1	0.2	7.2	12.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	18.7	19.8	2.7	14.9	1.5	12.5	8.4	6.0	0.8	34.4	7.6
LnGrp Delay(d),s/veh	427.0	97.6	120.7	94.8	63.3	42.4	285.9	17.3	16.4	75.1	45.0	20.9
LnGrp LOS	F	F	F	F	E	D	F	B	B	E	D	C
Approach Vol, veh/h		1708			1248			1629			2882	
Approach Delay, s/veh		133.1			65.2			46.1			42.8	
Approach LOS		F			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.5	76.9	11.2	36.2	8.4	84.0	9.3	38.1
Change Period (Y+Rc), s	5.5	5.0	5.5	* 5.2	5.5	5.0	5.5	* 5.2
Max Green Setting (Gmax), s	10.0	72.1	5.7	* 31	3.4	78.7	3.8	* 33
Max Q Clear Time (g_c+I1), s	12.0	70.1	6.6	33.0	3.6	20.2	5.8	31.4
Green Ext Time (p_c), s	0.0	1.8	0.0	0.0	0.0	42.3	0.0	1.4

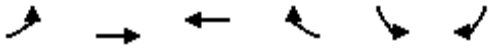
Intersection Summary	
HCM 2010 Ctrl Delay	67.9
HCM 2010 LOS	E

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	693	179	715	762	225	558
Future Volume (veh/h)	693	179	715	762	225	558
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1900	1845	1845	1845	1845
Adj Flow Rate, veh/h	693	179	715	762	225	558
Adj No. of Lanes	2	0	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	695	179	752	2542	322	958
Arrive On Green	0.25	0.25	0.43	0.73	0.18	0.18
Sat Flow, veh/h	2851	712	1757	3597	1757	1568
Grp Volume(v), veh/h	440	432	715	762	225	558
Grp Sat Flow(s),veh/h/ln	1752	1719	1757	1752	1757	1568
Q Serve(g_s), s	21.9	21.9	34.3	6.7	10.5	16.0
Cycle Q Clear(g_c), s	21.9	21.9	34.3	6.7	10.5	16.0
Prop In Lane		0.41	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	441	433	752	2542	322	958
V/C Ratio(X)	1.00	1.00	0.95	0.30	0.70	0.58
Avail Cap(c_a), veh/h	441	433	804	2647	322	958
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.7	32.7	24.1	4.2	33.4	10.3
Incr Delay (d2), s/veh	42.1	42.7	20.2	0.1	6.6	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.7	15.5	20.7	3.2	5.6	8.3
LnGrp Delay(d),s/veh	74.8	75.4	44.3	4.3	40.0	11.2
LnGrp LOS	E	E	D	A	D	B
Approach Vol, veh/h	872			1477	783	
Approach Delay, s/veh	75.1			23.6	19.5	
Approach LOS	E			C	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		20.0	41.4	26.0				67.4
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		16.0	40.0	22.0				66.0
Max Q Clear Time (g_c+I1), s		18.0	36.3	23.9				8.7
Green Ext Time (p_c), s		0.0	1.1	0.0				17.5

Intersection Summary	
HCM 2010 Ctrl Delay	36.9
HCM 2010 LOS	D



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	141	2268	1668	647	801	316
Future Volume (veh/h)	141	2268	1668	647	801	316
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1845	1845
Adj Flow Rate, veh/h	141	2268	1668	647	801	316
Adj No. of Lanes	1	3	3	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	132	2644	1508	561	717	640
Arrive On Green	0.08	0.52	0.42	0.42	0.41	0.41
Sat Flow, veh/h	1757	5202	3784	1346	1757	1568
Grp Volume(v), veh/h	141	2268	1542	773	801	316
Grp Sat Flow(s),veh/h/ln	1757	1679	1679	1607	1757	1568
Q Serve(g_s), s	9.0	46.7	50.0	50.0	49.0	17.9
Cycle Q Clear(g_c), s	9.0	46.7	50.0	50.0	49.0	17.9
Prop In Lane	1.00			0.84	1.00	1.00
Lane Grp Cap(c), veh/h	132	2644	1399	670	717	640
V/C Ratio(X)	1.07	0.86	1.10	1.15	1.12	0.49
Avail Cap(c_a), veh/h	132	2644	1399	670	717	640
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.5	24.6	35.0	35.0	35.5	26.3
Incr Delay (d2), s/veh	98.4	3.0	57.3	85.5	70.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	22.2	34.3	38.0	37.7	16.8
LnGrp Delay(d),s/veh	153.9	27.7	92.3	120.5	105.9	26.9
LnGrp LOS	F	C	F	F	F	C
Approach Vol, veh/h		2409	2315		1117	
Approach Delay, s/veh		35.1	101.7		83.5	
Approach LOS		D	F		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				67.0		53.0	13.0	54.0
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				63.0		49.0	9.0	50.0
Max Q Clear Time (g_c+I1), s				48.7		51.0	11.0	52.0
Green Ext Time (p_c), s				14.2		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	70.8
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	282	1789	102	1020	1188	350	76	642	784	395	811	90
Future Volume (veh/h)	282	1789	102	1020	1188	350	76	642	784	395	811	90
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1792	1845	1845	1792	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	282	1789	102	1020	1188	350	76	642	784	395	811	90
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	6	3	3	6	3	3	3	3	3	3	3
Cap, veh/h	336	1629	522	755	2230	715	118	1079	336	341	1408	439
Arrive On Green	0.10	0.33	0.33	0.22	0.46	0.46	0.03	0.21	0.21	0.10	0.28	0.28
Sat Flow, veh/h	3408	4893	1568	3408	4893	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	282	1789	102	1020	1188	350	76	642	784	395	811	90
Grp Sat Flow(s),veh/h/ln	1704	1631	1568	1704	1631	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	11.4	46.6	6.5	31.0	24.4	21.9	3.1	16.1	30.0	14.0	19.4	6.1
Cycle Q Clear(g_c), s	11.4	46.6	6.5	31.0	24.4	21.9	3.1	16.1	30.0	14.0	19.4	6.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	336	1629	522	755	2230	715	118	1079	336	341	1408	439
V/C Ratio(X)	0.84	1.10	0.20	1.35	0.53	0.49	0.64	0.59	2.33	1.16	0.58	0.21
Avail Cap(c_a), veh/h	438	1629	522	755	2230	715	170	1079	336	341	1408	439
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.0	46.7	33.3	54.5	27.4	26.7	66.7	49.5	55.0	63.0	43.3	38.5
Incr Delay (d2), s/veh	10.8	54.3	0.3	166.9	0.3	0.7	5.8	0.9	609.3	99.3	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	29.2	2.9	32.1	11.1	9.6	1.6	7.5	69.8	11.3	9.1	2.7
LnGrp Delay(d),s/veh	72.8	101.0	33.6	221.4	27.7	27.4	72.5	50.4	664.3	162.3	43.9	38.8
LnGrp LOS	E	F	C	F	C	C	E	D	F	F	D	D
Approach Vol, veh/h		2173			2558			1502			1296	
Approach Delay, s/veh		94.2			104.9			371.9			79.6	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.0	53.0	8.8	43.2	17.8	70.2	18.0	34.0
Change Period (Y+Rc), s	4.0	6.4	4.0	4.0	4.0	6.4	4.0	4.0
Max Green Setting (Gmax), s	31.0	46.6	7.0	37.0	18.0	59.6	14.0	30.0
Max Q Clear Time (g_c+I1), s	33.0	48.6	5.1	21.4	13.4	26.4	16.0	32.0
Green Ext Time (p_c), s	0.0	0.0	0.0	11.6	0.4	31.8	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	150.7
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	592	33	162	623	19	37	287	160	4	647	91
Future Volume (veh/h)	22	592	33	162	623	19	37	287	160	4	647	91
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1759	1759	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	22	592	33	162	623	19	37	287	160	4	647	91
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	8	8	8	3	3	3	3	3	3
Cap, veh/h	48	585	33	166	711	22	62	903	490	50	640	90
Arrive On Green	0.03	0.35	0.35	0.10	0.42	0.42	0.04	0.41	0.41	0.03	0.40	0.40
Sat Flow, veh/h	1707	1682	94	1675	1698	52	1757	2195	1191	1757	1583	223
Grp Volume(v), veh/h	22	0	625	162	0	642	37	228	219	4	0	738
Grp Sat Flow(s),veh/h/ln	1707	0	1776	1675	0	1750	1757	1752	1634	1757	0	1805
Q Serve(g_s), s	1.8	0.0	49.0	13.6	0.0	47.5	2.9	12.4	12.9	0.3	0.0	57.0
Cycle Q Clear(g_c), s	1.8	0.0	49.0	13.6	0.0	47.5	2.9	12.4	12.9	0.3	0.0	57.0
Prop In Lane	1.00		0.05	1.00		0.03	1.00		0.73	1.00		0.12
Lane Grp Cap(c), veh/h	48	0	617	166	0	733	62	721	672	50	0	730
V/C Ratio(X)	0.45	0.00	1.01	0.97	0.00	0.88	0.60	0.32	0.33	0.08	0.00	1.01
Avail Cap(c_a), veh/h	170	0	617	166	0	733	174	721	672	174	0	730
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	67.4	0.0	46.0	63.3	0.0	37.6	67.0	28.1	28.2	66.7	0.0	42.0
Incr Delay (d2), s/veh	6.5	0.0	39.3	61.7	0.0	11.6	9.0	0.2	0.3	0.7	0.0	36.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	30.8	9.2	0.0	25.2	1.6	6.1	5.8	0.2	0.0	35.7
LnGrp Delay(d),s/veh	73.9	0.0	85.3	125.0	0.0	49.2	76.0	28.3	28.5	67.4	0.0	78.0
LnGrp LOS	E		F	F		D	E	C	C	E		F
Approach Vol, veh/h		647			804			484			742	
Approach Delay, s/veh		84.9			64.5			32.1			77.9	
Approach LOS		F			E			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	62.0	18.0	53.0	9.0	61.0	8.0	63.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	14.0	57.0	14.0	49.0	14.0	57.0	14.0	49.0
Max Q Clear Time (g_c+I1), s	2.3	14.9	15.6	51.0	4.9	59.0	3.8	49.5
Green Ext Time (p_c), s	0.0	10.8	0.0	0.0	0.0	0.0	0.0	0.0

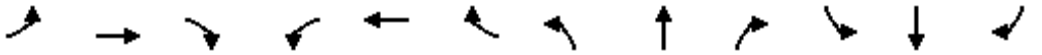
Intersection Summary	
HCM 2010 Ctrl Delay	67.3
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1023	44	920	27	77	110	654	2127	17	146	1016	934
Future Volume (veh/h)	1023	44	920	27	77	110	654	2127	17	146	1016	934
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1900	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	1054	0	920	27	77	110	654	2127	17	146	1016	0
Adj No. of Lanes	2	0	1	0	1	1	1	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	981	0	438	22	62	72	426	2253	18	111	1284	400
Arrive On Green	0.28	0.00	0.28	0.05	0.05	0.05	0.25	0.44	0.44	0.06	0.26	0.00
Sat Flow, veh/h	3480	0	1553	473	1348	1568	1740	5104	41	1740	4988	1553
Grp Volume(v), veh/h	1054	0	920	104	0	110	654	1385	759	146	1016	0
Grp Sat Flow(s),veh/h/ln	1740	0	1553	1821	0	1568	1740	1663	1820	1740	1663	1553
Q Serve(g_s), s	33.7	0.0	33.7	5.5	0.0	5.5	29.3	47.7	47.8	7.6	22.7	0.0
Cycle Q Clear(g_c), s	33.7	0.0	33.7	5.5	0.0	5.5	29.3	47.7	47.8	7.6	22.7	0.0
Prop In Lane	1.00		1.00	0.26		1.00	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	981	0	438	84	0	72	426	1468	803	111	1284	400
V/C Ratio(X)	1.07	0.00	2.10	1.24	0.00	1.53	1.53	0.94	0.94	1.32	0.79	0.00
Avail Cap(c_a), veh/h	981	0	438	84	0	72	426	1485	813	111	1301	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	42.9	0.0	42.9	57.0	0.0	57.0	45.1	32.0	32.0	56.0	41.4	0.0
Incr Delay (d2), s/veh	51.1	0.0	503.8	176.8	0.0	294.6	251.9	12.2	19.0	194.0	3.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	23.0	0.0	75.7	6.9	0.0	8.3	43.8	24.2	28.1	9.6	10.8	0.0
LnGrp Delay(d),s/veh	94.0	0.0	546.7	233.8	0.0	351.6	297.1	44.2	51.0	250.0	44.5	0.0
LnGrp LOS	F		F	F		F	F	D	D	F	D	
Approach Vol, veh/h		1974			214			2798			1162	
Approach Delay, s/veh		305.0			294.4			105.1			70.3	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	34.0	35.6		11.0	12.0	57.6		39.0
Change Period (Y+Rc), s	* 4.7	4.8		5.5	* 4.4	* 4.8		5.3
Max Green Setting (Gmax), s	* 29	31.2		5.5	* 7.6	* 53		33.7
Max Q Clear Time (g_c+I1), s	31.3	24.7		7.5	9.6	49.8		35.7
Green Ext Time (p_c), s	0.0	5.0		0.0	0.0	3.0		0.0

Intersection Summary			
HCM 2010 Ctrl Delay		169.3	
HCM 2010 LOS		F	

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	1656	130	438	1173	428	85	515	427	580	714	299
Future Volume (veh/h)	159	1656	130	438	1173	428	85	515	427	580	714	299
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	159	1656	130	438	1173	428	85	515	427	580	714	299
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	204	1556	485	457	1916	597	127	820	367	617	1324	592
Arrive On Green	0.06	0.31	0.31	0.13	0.38	0.38	0.04	0.23	0.23	0.18	0.38	0.38
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	159	1656	130	438	1173	428	85	515	427	580	714	299
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	6.7	44.9	9.1	18.6	27.3	33.8	3.6	19.2	34.0	24.4	23.1	21.3
Cycle Q Clear(g_c), s	6.7	44.9	9.1	18.6	27.3	33.8	3.6	19.2	34.0	24.4	23.1	21.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	204	1556	485	457	1916	597	127	820	367	617	1324	592
V/C Ratio(X)	0.78	1.06	0.27	0.96	0.61	0.72	0.67	0.63	1.16	0.94	0.54	0.50
Avail Cap(c_a), veh/h	277	1556	485	457	1916	597	171	820	367	617	1324	592
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.3	50.2	37.8	62.5	36.3	38.3	69.1	50.0	55.7	58.7	35.3	34.8
Incr Delay (d2), s/veh	6.3	42.0	0.1	31.1	0.4	3.6	2.3	1.2	99.5	22.3	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	26.8	3.9	10.7	12.8	15.2	1.7	9.4	24.9	13.4	11.3	9.3
LnGrp Delay(d),s/veh	73.7	92.2	37.9	93.6	36.8	41.9	71.3	51.1	155.2	81.0	35.6	35.0
LnGrp LOS	E	F	D	F	D	D	E	D	F	F	D	D
Approach Vol, veh/h		1945			2039			1027			1593	
Approach Delay, s/veh		87.1			50.1			96.1			52.0	
Approach LOS		F			D			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.2	60.2	10.9	60.0	24.6	49.8	31.8	39.1
Change Period (Y+Rc), s	5.5	* 4.9	5.5	* 5.1	* 5.1	* 4.9	5.5	* 5.1
Max Green Setting (Gmax), s	11.8	* 52	7.3	* 53	* 20	* 45	26.3	* 34
Max Q Clear Time (g_c+I1), s	8.7	35.8	5.6	25.1	20.6	46.9	26.4	36.0
Green Ext Time (p_c), s	0.0	9.8	0.0	2.7	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	68.6
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	725	1572	357	116	867	372	253	1286	104	729	1852	841
Future Volume (veh/h)	725	1572	357	116	867	372	253	1286	104	729	1852	841
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1759	1759	1759	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	725	1572	357	116	867	372	253	1286	104	729	1852	841
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	8	8	8	4	4	4	4	4	4
Cap, veh/h	669	1698	529	135	875	272	277	1293	403	692	1906	593
Arrive On Green	0.20	0.34	0.34	0.04	0.18	0.18	0.08	0.26	0.26	0.20	0.38	0.38
Sat Flow, veh/h	3408	5036	1568	3250	4803	1495	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	725	1572	357	116	867	372	253	1286	104	729	1852	841
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1625	1601	1495	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	27.5	42.1	27.4	5.0	25.2	25.5	10.4	36.0	7.4	28.7	51.1	53.5
Cycle Q Clear(g_c), s	27.5	42.1	27.4	5.0	25.2	25.5	10.4	36.0	7.4	28.7	51.1	53.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	669	1698	529	135	875	272	277	1293	403	692	1906	593
V/C Ratio(X)	1.08	0.93	0.68	0.86	0.99	1.37	0.91	0.99	0.26	1.05	0.97	1.42
Avail Cap(c_a), veh/h	669	1698	529	135	875	272	277	1293	403	692	1906	593
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.2	44.7	39.8	66.7	57.1	57.3	63.8	51.7	41.2	55.7	42.5	43.3
Incr Delay (d2), s/veh	59.4	9.0	2.8	38.3	28.1	186.4	31.5	23.6	0.1	49.2	14.4	197.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.4	20.9	12.3	3.0	13.4	24.7	6.1	19.4	3.2	18.1	26.0	55.4
LnGrp Delay(d),s/veh	115.6	53.7	42.6	105.0	85.2	243.6	95.3	75.4	41.3	104.8	56.9	240.8
LnGrp LOS	F	D	D	F	F	F	F	E	D	F	E	F
Approach Vol, veh/h		2654			1355			1643			3422	
Approach Delay, s/veh		69.1			130.4			76.3			112.3	
Approach LOS		E			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	59.0	33.0	31.0	34.2	41.8	11.3	52.7
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	11.5	53.5	27.5	25.5	28.7	36.3	5.8	47.2
Max Q Clear Time (g_c+I1), s	12.4	55.5	29.5	27.5	30.7	38.0	7.0	44.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	95.9
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	770	1155	171	169	798	163	139	896	318	252	1431	465
Future Volume (veh/h)	770	1155	171	169	798	163	139	896	318	252	1431	465
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1845
Adj Flow Rate, veh/h	770	1155	171	169	798	163	139	896	318	252	1431	465
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	4	4	4	4	3
Cap, veh/h	1068	1098	491	710	730	327	142	1133	353	305	1413	444
Arrive On Green	0.31	0.31	0.31	0.21	0.21	0.21	0.04	0.23	0.23	0.09	0.28	0.28
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	4988	1553	3375	4988	1568
Grp Volume(v), veh/h	770	1155	171	169	798	163	139	896	318	252	1431	465
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1663	1553	1688	1663	1568
Q Serve(g_s), s	24.0	37.6	10.1	5.0	25.0	11.0	4.9	20.3	23.9	8.8	34.0	34.0
Cycle Q Clear(g_c), s	24.0	37.6	10.1	5.0	25.0	11.0	4.9	20.3	23.9	8.8	34.0	34.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1068	1098	491	710	730	327	142	1133	353	305	1413	444
V/C Ratio(X)	0.72	1.05	0.35	0.24	1.09	0.50	0.98	0.79	0.90	0.83	1.01	1.05
Avail Cap(c_a), veh/h	1068	1098	491	710	730	327	142	1133	353	318	1413	444
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.5	41.2	31.8	39.6	47.5	42.0	57.4	43.7	45.1	53.6	43.0	43.0
Incr Delay (d2), s/veh	2.4	41.8	0.4	0.2	61.5	1.2	68.9	3.9	25.2	15.7	27.1	55.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.7	24.5	4.4	2.3	18.3	4.9	3.7	9.7	12.7	4.8	19.1	21.5
LnGrp Delay(d),s/veh	39.0	83.0	32.2	39.7	109.0	43.1	126.3	47.6	70.3	69.4	70.1	98.4
LnGrp LOS	D	F	C	D	F	D	F	D	E	E	F	F
Approach Vol, veh/h		2096			1130			1353			2148	
Approach Delay, s/veh		62.7			89.1			61.0			76.2	
Approach LOS		E			F			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.0	39.0		43.0	15.8	32.2		29.0
Change Period (Y+Rc), s	4.0	5.0		* 5.4	* 4.9	5.0		4.0
Max Green Setting (Gmax), s	5.0	34.0		* 38	* 11	26.8		25.0
Max Q Clear Time (g_c+I1), s	6.9	36.0		39.6	10.8	25.9		27.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	71.1
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	409	1696	105	330	996	256	63	695	346	302	1169	288
Future Volume (veh/h)	409	1696	105	330	996	256	63	695	346	302	1169	288
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1792	1845	1845	1845	1827	1845	1845
Adj Flow Rate, veh/h	409	1696	105	330	996	256	63	695	346	302	1169	288
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	6	3	3	3	4	3	3
Cap, veh/h	431	1643	512	323	1484	577	108	996	446	284	1181	726
Arrive On Green	0.13	0.33	0.33	0.09	0.29	0.29	0.03	0.28	0.28	0.08	0.34	0.34
Sat Flow, veh/h	3408	5036	1568	3408	5036	1524	3408	3505	1568	3375	3505	1568
Grp Volume(v), veh/h	409	1696	105	330	996	256	63	695	346	302	1169	288
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1524	1704	1752	1568	1688	1752	1568
Q Serve(g_s), s	11.3	31.0	4.6	9.0	16.5	11.9	1.7	16.8	19.3	8.0	31.5	11.5
Cycle Q Clear(g_c), s	11.3	31.0	4.6	9.0	16.5	11.9	1.7	16.8	19.3	8.0	31.5	11.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	431	1643	512	323	1484	577	108	996	446	284	1181	726
V/C Ratio(X)	0.95	1.03	0.21	1.02	0.67	0.44	0.59	0.70	0.78	1.06	0.99	0.40
Avail Cap(c_a), veh/h	431	1643	512	323	1484	577	108	996	446	284	1181	726
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.2	32.0	23.1	43.0	29.5	22.0	45.4	30.4	31.2	43.5	31.3	16.8
Incr Delay (d2), s/veh	30.9	30.9	0.2	55.8	1.2	0.5	7.9	2.2	8.4	70.8	23.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	19.0	2.0	6.7	7.8	5.1	0.9	8.4	9.3	6.5	19.2	5.0
LnGrp Delay(d),s/veh	72.1	62.9	23.3	98.9	30.6	22.6	53.3	32.5	39.6	114.3	55.1	17.1
LnGrp LOS	E	F	C	F	C	C	D	C	D	F	E	B
Approach Vol, veh/h		2210			1582			1104			1759	
Approach Delay, s/veh		62.7			43.6			35.9			59.0	
Approach LOS		E			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	37.0	7.0	38.0	16.0	34.0	12.0	33.0
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	9.0	31.0	3.0	32.0	12.0	28.0	8.0	27.0
Max Q Clear Time (g_c+I1), s	11.0	33.0	3.7	33.5	13.3	18.5	10.0	21.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	8.9	0.0	5.1

Intersection Summary	
HCM 2010 Ctrl Delay	52.8
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	547	1011	9	2	722	6	7	15	2	5	21	1089
Future Volume (veh/h)	547	1011	9	2	722	6	7	15	2	5	21	1089
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1810	1810	1900	1900	1845	1900	1900	1827	1827
Adj Flow Rate, veh/h	547	1011	0	2	722	6	7	15	2	5	21	1089
Adj No. of Lanes	2	2	1	1	2	0	0	1	0	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	5	5	5	3	3	3	4	4	4
Cap, veh/h	623	1533	686	3	921	8	8	18	2	87	366	681
Arrive On Green	0.19	0.45	0.00	0.00	0.26	0.26	0.02	0.02	0.02	0.25	0.25	0.25
Sat Flow, veh/h	3312	3406	1524	1723	3494	29	523	1120	149	348	1462	1553
Grp Volume(v), veh/h	547	1011	0	2	355	373	24	0	0	26	0	1089
Grp Sat Flow(s),veh/h/ln	1656	1703	1524	1723	1719	1804	1792	0	0	1810	0	1553
Q Serve(g_s), s	14.1	20.4	0.0	0.1	16.8	16.8	1.2	0.0	0.0	1.0	0.0	22.0
Cycle Q Clear(g_c), s	14.1	20.4	0.0	0.1	16.8	16.8	1.2	0.0	0.0	1.0	0.0	22.0
Prop In Lane	1.00		1.00	1.00		0.02	0.29		0.08	0.19		1.00
Lane Grp Cap(c), veh/h	623	1533	686	3	453	476	29	0	0	454	0	681
V/C Ratio(X)	0.88	0.66	0.00	0.71	0.78	0.78	0.84	0.00	0.00	0.06	0.00	1.60
Avail Cap(c_a), veh/h	2623	3777	1690	59	621	652	61	0	0	454	0	681
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.6	18.9	0.0	43.8	30.0	30.0	43.0	0.0	0.0	25.0	0.0	24.6
Incr Delay (d2), s/veh	1.6	0.2	0.0	79.2	3.0	2.8	20.2	0.0	0.0	0.0	0.0	276.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	9.6	0.0	0.1	8.4	8.8	0.7	0.0	0.0	0.5	0.0	68.6
LnGrp Delay(d),s/veh	36.3	19.0	0.0	123.0	32.9	32.8	63.2	0.0	0.0	25.0	0.0	300.6
LnGrp LOS	D	B		F	C	C	E			C		F
Approach Vol, veh/h		1558			730			24			1115	
Approach Delay, s/veh		25.1			33.1			63.2			294.2	
Approach LOS		C			C			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	22.0	30.0		28.2	5.6	46.4		7.5
Change Period (Y+Rc), s	5.5	* 6.9		* 6.2	5.5	* 6.9		6.1
Max Green Setting (Gmax), s	69.5	* 32		* 22	3.0	* 97		3.0
Max Q Clear Time (g_c+I1), s	16.1	18.8		24.0	2.1	22.4		3.2
Green Ext Time (p_c), s	0.4	4.3		0.0	0.0	5.4		0.0

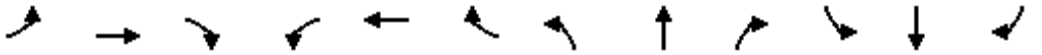
Intersection Summary		
HCM 2010 Ctrl Delay		114.6
HCM 2010 LOS		F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	984	765	4	62	455	87	53	835	72	85	660	713
Future Volume (veh/h)	984	765	4	62	455	87	53	835	72	85	660	713
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1810	1810	1810	1810	1810	1810
Adj Flow Rate, veh/h	984	765	4	62	455	87	53	835	72	85	660	713
Adj No. of Lanes	3	3	1	2	3	1	2	3	1	2	3	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	5	5	5	5	5	5
Cap, veh/h	1143	2137	665	106	1132	352	92	1331	414	130	1387	760
Arrive On Green	0.24	0.44	0.44	0.03	0.23	0.23	0.03	0.27	0.27	0.04	0.28	0.28
Sat Flow, veh/h	4814	4893	1524	3312	4893	1524	3343	4940	1538	3343	4940	2707
Grp Volume(v), veh/h	984	765	4	62	455	87	53	835	72	85	660	713
Grp Sat Flow(s),veh/h/ln	1605	1631	1524	1656	1631	1524	1672	1647	1538	1672	1647	1354
Q Serve(g_s), s	18.6	9.9	0.1	1.8	7.5	4.4	1.5	14.1	3.4	2.4	10.5	24.5
Cycle Q Clear(g_c), s	18.6	9.9	0.1	1.8	7.5	4.4	1.5	14.1	3.4	2.4	10.5	24.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1143	2137	665	106	1132	352	92	1331	414	130	1387	760
V/C Ratio(X)	0.86	0.36	0.01	0.59	0.40	0.25	0.57	0.63	0.17	0.65	0.48	0.94
Avail Cap(c_a), veh/h	1615	2754	857	195	1400	436	106	1351	421	130	1387	760
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.7	17.9	15.1	45.4	31.0	29.8	45.7	30.5	26.6	45.0	28.4	33.4
Incr Delay (d2), s/veh	2.6	0.2	0.0	1.9	0.5	0.8	2.2	0.9	0.2	8.9	0.3	19.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	4.5	0.1	0.8	3.4	1.9	0.7	6.5	1.5	1.3	4.8	11.2
LnGrp Delay(d),s/veh	37.4	18.1	15.1	47.3	31.5	30.6	47.9	31.4	26.8	54.0	28.6	52.6
LnGrp LOS	D	B	B	D	C	C	D	C	C	D	C	D
Approach Vol, veh/h		1753			604			960			1458	
Approach Delay, s/veh		28.9			33.0			32.0			41.8	
Approach LOS		C			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.2	28.0	7.2	32.7	7.6	47.5	8.3	31.6
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	31.9	27.2	3.0	26.7	5.6	53.5	3.7	26.0
Max Q Clear Time (g_c+I1), s	20.6	9.5	3.5	26.5	3.8	11.9	4.4	16.1
Green Ext Time (p_c), s	1.9	12.5	0.0	0.2	0.0	22.1	0.0	7.9

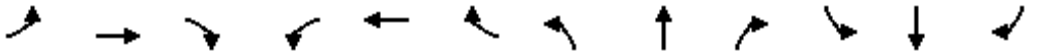
Intersection Summary	
HCM 2010 Ctrl Delay	34.0
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	1202	449	45	1624	199	186	771	64	32	1395	152
Future Volume (veh/h)	188	1202	449	45	1624	199	186	771	64	32	1395	152
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	188	1202	449	45	1624	199	186	771	64	32	1395	152
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	188	1734	540	101	1607	500	188	1458	652	83	1350	604
Arrive On Green	0.06	0.35	0.35	0.03	0.32	0.32	0.06	0.42	0.42	0.02	0.39	0.39
Sat Flow, veh/h	3375	4988	1553	3375	4988	1553	3375	3471	1553	3375	3471	1553
Grp Volume(v), veh/h	188	1202	449	45	1624	199	186	771	64	32	1395	152
Grp Sat Flow(s),veh/h/ln	1688	1663	1553	1688	1663	1553	1688	1736	1553	1688	1736	1553
Q Serve(g_s), s	5.0	18.6	23.9	1.2	29.0	9.0	5.0	14.9	2.2	0.8	35.0	6.0
Cycle Q Clear(g_c), s	5.0	18.6	23.9	1.2	29.0	9.0	5.0	14.9	2.2	0.8	35.0	6.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	188	1734	540	101	1607	500	188	1458	652	83	1350	604
V/C Ratio(X)	1.00	0.69	0.83	0.44	1.01	0.40	0.99	0.53	0.10	0.39	1.03	0.25
Avail Cap(c_a), veh/h	188	1734	540	150	1607	500	188	1458	652	150	1350	604
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	25.2	26.9	42.9	30.5	23.7	42.5	19.5	15.8	43.2	27.5	18.6
Incr Delay (d2), s/veh	66.4	1.2	10.6	3.0	25.1	0.5	63.2	0.4	0.1	2.9	33.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	8.8	11.8	0.6	17.0	3.9	3.9	7.1	1.0	0.4	23.0	2.6
LnGrp Delay(d),s/veh	108.9	26.4	37.5	45.9	55.6	24.2	105.7	19.8	15.9	46.2	61.0	18.8
LnGrp LOS	F	C	D	D	F	C	F	B	B	D	F	B
Approach Vol, veh/h		1839			1868			1021			1579	
Approach Delay, s/veh		37.6			52.0			35.2			56.7	
Approach LOS		D			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	41.8	6.7	35.3	9.0	39.0	9.0	33.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	36.0	4.0	30.0	5.0	35.0	5.0	29.0
Max Q Clear Time (g_c+I1), s	2.8	16.9	3.2	25.9	7.0	37.0	7.0	31.0
Green Ext Time (p_c), s	0.0	15.2	0.0	4.0	0.0	0.0	0.0	0.0

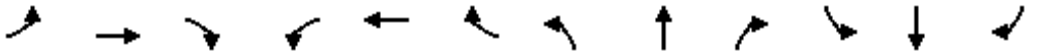
Intersection Summary	
HCM 2010 Ctrl Delay	46.2
HCM 2010 LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	152	1434	136	278	1394	10	248	288	140	302	1162	147
Future Volume (veh/h)	152	1434	136	278	1394	10	248	288	140	302	1162	147
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1827	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	152	1434	136	278	1394	10	248	288	140	302	1162	147
Adj No. of Lanes	1	2	0	1	2	1	2	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	4	4	4	3	3	3	3	3	3
Cap, veh/h	149	1260	119	236	1537	688	170	603	270	325	1076	482
Arrive On Green	0.09	0.39	0.39	0.14	0.44	0.44	0.05	0.17	0.17	0.19	0.31	0.31
Sat Flow, veh/h	1740	3207	302	1740	3471	1553	3408	3505	1568	1757	3505	1568
Grp Volume(v), veh/h	152	772	798	278	1394	10	248	288	140	302	1162	147
Grp Sat Flow(s),veh/h/ln	1740	1736	1774	1740	1736	1553	1704	1752	1568	1757	1752	1568
Q Serve(g_s), s	12.0	55.0	55.0	19.0	52.3	0.5	7.0	10.4	11.4	23.7	43.0	10.0
Cycle Q Clear(g_c), s	12.0	55.0	55.0	19.0	52.3	0.5	7.0	10.4	11.4	23.7	43.0	10.0
Prop In Lane	1.00		0.17	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	149	682	697	236	1537	688	170	603	270	325	1076	482
V/C Ratio(X)	1.02	1.13	1.15	1.18	0.91	0.01	1.46	0.48	0.52	0.93	1.08	0.31
Avail Cap(c_a), veh/h	149	682	697	236	1537	688	170	603	270	351	1076	482
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.0	42.5	42.5	60.5	36.3	21.9	66.5	52.3	52.7	56.1	48.5	37.1
Incr Delay (d2), s/veh	78.8	77.1	81.6	114.9	8.1	0.0	234.4	0.6	1.8	29.4	51.5	0.4
Initial Q Delay(d3),s/veh	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	40.9	42.7	16.7	26.7	0.2	8.8	5.1	5.1	14.1	28.5	4.4
LnGrp Delay(d),s/veh	143.0	119.6	124.1	175.4	44.5	21.9	300.9	52.9	54.4	85.5	100.0	37.4
LnGrp LOS	F	F	F	F	D	C	F	D	D	F	F	D
Approach Vol, veh/h		1722			1682			676			1611	
Approach Delay, s/veh		123.7			66.0			144.2			91.6	
Approach LOS		F			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.9	28.1	23.0	59.0	11.0	47.0	16.0	66.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	28.0	22.0	19.0	55.0	7.0	43.0	12.0	62.0
Max Q Clear Time (g_c+I1), s	25.7	13.4	21.0	57.0	9.0	45.0	14.0	54.3
Green Ext Time (p_c), s	0.2	6.3	0.0	0.0	0.0	0.0	0.0	7.3

Intersection Summary	
HCM 2010 Ctrl Delay	100.0
HCM 2010 LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	6	258	50	9	1	193	1512	55	1	1853	0
Future Volume (veh/h)	1	6	258	50	9	1	193	1512	55	1	1853	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1759	1845	1845	1845	1792	1792	1900	1792	1792	1900
Adj Flow Rate, veh/h	1	6	258	50	9	1	193	1512	55	1	1853	0
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	8	8	8	3	3	3	6	6	6	6	6	6
Cap, veh/h	210	220	374	78	82	69	214	1777	65	299	1976	0
Arrive On Green	0.13	0.13	0.13	0.04	0.04	0.04	0.13	0.53	0.53	0.18	0.58	0.00
Sat Flow, veh/h	1675	1759	1495	1757	1845	1568	1707	3352	122	1707	3495	0
Grp Volume(v), veh/h	1	6	258	50	9	1	193	766	801	1	1853	0
Grp Sat Flow(s),veh/h/ln	1675	1759	1495	1757	1845	1568	1707	1703	1771	1707	1703	0
Q Serve(g_s), s	0.1	0.4	16.0	3.6	0.6	0.1	14.3	49.2	49.6	0.1	64.0	0.0
Cycle Q Clear(g_c), s	0.1	0.4	16.0	3.6	0.6	0.1	14.3	49.2	49.6	0.1	64.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.07	1.00		0.00
Lane Grp Cap(c), veh/h	210	220	374	78	82	69	214	903	939	299	1976	0
V/C Ratio(X)	0.00	0.03	0.69	0.64	0.11	0.01	0.90	0.85	0.85	0.00	0.94	0.00
Avail Cap(c_a), veh/h	210	220	374	220	231	196	214	1172	1219	299	2024	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	49.0	49.1	43.4	60.1	58.7	58.4	55.2	25.7	25.8	43.5	24.7	0.0
Incr Delay (d2), s/veh	0.0	0.0	5.3	8.6	0.6	0.1	36.4	4.8	4.8	0.0	9.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	8.8	1.9	0.3	0.0	8.9	24.2	25.3	0.0	32.3	0.0
LnGrp Delay(d),s/veh	49.0	49.1	48.7	68.7	59.3	58.5	91.6	30.4	30.5	43.5	33.7	0.0
LnGrp LOS	D	D	D	E	E	E	F	C	C	D	C	
Approach Vol, veh/h		265			60			1760			1854	
Approach Delay, s/veh		48.7			67.1			37.2			33.7	
Approach LOS		D			E			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	26.4	71.8		20.0	20.0	78.2		9.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	88.0		16.0	16.0	76.0		16.0
Max Q Clear Time (g_c+I1), s	2.1	51.6		18.0	16.3	66.0		5.6
Green Ext Time (p_c), s	1.8	16.2		0.0	0.0	8.2		0.1

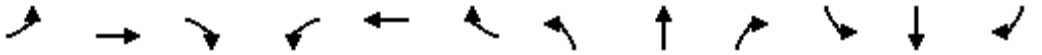
Intersection Summary	
HCM 2010 Ctrl Delay	36.8
HCM 2010 LOS	D

Notes

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	354	47	22	1335	1718	455
Future Volume (veh/h)	354	47	22	1335	1718	455
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	354	47	22	1335	1718	455
Adj No. of Lanes	2	1	2	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	519	239	71	2459	2130	953
Arrive On Green	0.15	0.15	0.02	0.70	0.61	0.61
Sat Flow, veh/h	3408	1568	3408	3597	3597	1568
Grp Volume(v), veh/h	354	47	22	1335	1718	455
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1752	1752	1568
Q Serve(g_s), s	5.4	1.4	0.3	10.0	20.6	8.8
Cycle Q Clear(g_c), s	5.4	1.4	0.3	10.0	20.6	8.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	519	239	71	2459	2130	953
V/C Ratio(X)	0.68	0.20	0.31	0.54	0.81	0.48
Avail Cap(c_a), veh/h	997	458	249	2626	2130	953
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.9	20.3	26.4	3.9	8.3	5.9
Incr Delay (d2), s/veh	1.6	0.4	2.5	0.2	2.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	1.3	0.2	4.7	10.5	3.8
LnGrp Delay(d),s/veh	23.5	20.7	28.9	4.1	10.6	6.3
LnGrp LOS	C	C	C	A	B	A
Approach Vol, veh/h	401			1357	2173	
Approach Delay, s/veh	23.2			4.5	9.7	
Approach LOS	C			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		42.4		12.3	5.1	37.3		
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s		41.0		16.0	4.0	33.0		
Max Q Clear Time (g_c+I1), s		12.0		7.4	2.3	22.6		
Green Ext Time (p_c), s		26.3		1.0	0.0	10.0		

Intersection Summary	
HCM 2010 Ctrl Delay	9.3
HCM 2010 LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	334	1107	309	76	721	3	566	1221	90	4	1036	328
Future Volume (veh/h)	334	1107	309	76	721	3	566	1221	90	4	1036	328
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	334	1107	309	76	721	3	566	1221	90	4	1036	328
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	381	1101	493	129	842	377	571	1630	729	14	1057	473
Arrive On Green	0.11	0.31	0.31	0.04	0.24	0.24	0.17	0.46	0.46	0.00	0.30	0.30
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	334	1107	309	76	721	3	566	1221	90	4	1036	328
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	8.6	28.1	15.1	2.0	17.6	0.1	14.8	25.6	2.9	0.1	26.2	16.5
Cycle Q Clear(g_c), s	8.6	28.1	15.1	2.0	17.6	0.1	14.8	25.6	2.9	0.1	26.2	16.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	381	1101	493	129	842	377	571	1630	729	14	1057	473
V/C Ratio(X)	0.88	1.01	0.63	0.59	0.86	0.01	0.99	0.75	0.12	0.28	0.98	0.69
Avail Cap(c_a), veh/h	381	1101	493	152	861	385	571	1630	729	152	1057	473
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	30.7	26.2	42.4	32.5	25.9	37.2	19.7	13.6	44.4	31.0	27.6
Incr Delay (d2), s/veh	20.0	28.5	2.5	4.2	8.4	0.0	35.3	2.0	0.1	10.0	22.8	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	17.8	6.8	1.0	9.5	0.1	9.7	12.7	1.3	0.1	16.0	7.7
LnGrp Delay(d),s/veh	59.2	59.2	28.7	46.6	40.9	25.9	72.5	21.6	13.7	54.5	53.8	31.9
LnGrp LOS	E	F	C	D	D	C	E	C	B	D	D	C
Approach Vol, veh/h		1750			800			1877			1368	
Approach Delay, s/veh		53.8			41.4			36.6			48.6	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.4	45.6	7.4	32.1	19.0	31.0	14.0	25.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	38.0	4.0	28.0	15.0	27.0	10.0	22.0
Max Q Clear Time (g_c+I1), s	2.1	27.6	4.0	30.1	16.8	28.2	10.6	19.6
Green Ext Time (p_c), s	0.0	9.3	0.0	0.0	0.0	0.0	0.0	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	45.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	988	632	220	663	701	335	511	377	809	971	0
Future Volume (veh/h)	0	988	632	220	663	701	335	511	377	809	971	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	0	988	632	220	663	701	335	511	377	809	971	0
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	5	1276	397	227	1880	585	409	794	355	818	1215	544
Arrive On Green	0.00	0.25	0.25	0.07	0.37	0.37	0.12	0.23	0.23	0.24	0.35	0.00
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	0	988	632	220	663	701	335	511	377	809	971	0
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	0.0	13.7	19.0	4.8	7.1	28.0	7.2	9.9	17.0	17.7	18.8	0.0
Cycle Q Clear(g_c), s	0.0	13.7	19.0	4.8	7.1	28.0	7.2	9.9	17.0	17.7	18.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	5	1276	397	227	1880	585	409	794	355	818	1215	544
V/C Ratio(X)	0.00	0.77	1.59	0.97	0.35	1.20	0.82	0.64	1.06	0.99	0.80	0.00
Avail Cap(c_a), veh/h	182	1276	397	227	1880	585	409	794	355	818	1215	544
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	26.0	28.0	34.9	17.0	23.5	32.2	26.3	29.0	28.4	22.1	0.0
Incr Delay (d2), s/veh	0.0	3.0	277.7	50.6	0.1	104.7	12.4	1.8	64.7	28.7	3.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.7	38.8	3.9	3.3	29.1	4.1	5.0	13.7	11.6	9.7	0.0
LnGrp Delay(d),s/veh	0.0	29.0	305.7	85.5	17.1	128.2	44.6	28.0	93.7	57.1	26.0	0.0
LnGrp LOS		C	F	F	B	F	D	C	F	E	C	
Approach Vol, veh/h		1620			1584			1223			1780	
Approach Delay, s/veh		137.0			75.8			52.8			40.1	
Approach LOS		F			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	21.0	9.0	23.0	13.0	30.0	0.0	32.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	18.0	17.0	5.0	19.0	9.0	26.0	4.0	20.0
Max Q Clear Time (g_c+I1), s	19.7	19.0	6.8	21.0	9.2	20.8	0.0	30.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	77.0
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	9999	9999	9999	9999	9999	9999	9999	9999	9999	9999	9999	9999
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h												
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h												
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS												
Approach Vol, veh/h		0			0			0			0	
Approach Delay, s/veh		0.0			0.0			0.0			0.0	
Approach LOS												

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	28.0	6.0	35.0	16.0	17.0	11.0	30.0
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	0.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	958	912	90	946	894	0	75	759	762	41	1914	934
Future Volume (veh/h)	958	912	90	946	894	0	75	759	762	41	1914	934
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	958	912	90	946	894	0	75	759	762	41	1914	934
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	884	768	239	992	927	289	120	2022	630	73	1952	608
Arrive On Green	0.26	0.15	0.15	0.29	0.18	0.00	0.04	0.40	0.40	0.02	0.39	0.39
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	958	912	90	946	894	0	75	759	762	41	1914	934
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	31.0	18.2	6.2	32.6	21.1	0.0	2.6	12.7	48.0	1.4	44.9	46.3
Cycle Q Clear(g_c), s	31.0	18.2	6.2	32.6	21.1	0.0	2.6	12.7	48.0	1.4	44.9	46.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	884	768	239	992	927	289	120	2022	630	73	1952	608
V/C Ratio(X)	1.08	1.19	0.38	0.95	0.96	0.00	0.62	0.38	1.21	0.56	0.98	1.54
Avail Cap(c_a), veh/h	884	768	239	998	927	289	143	2022	630	86	1952	608
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.3	50.7	45.6	41.6	48.4	0.0	56.9	25.2	35.8	58.0	36.2	36.6
Incr Delay (d2), s/veh	55.6	97.5	1.0	18.4	21.4	0.0	6.1	0.1	109.0	6.7	16.0	249.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.3	15.3	2.7	17.8	11.6	0.0	1.3	5.9	39.8	0.7	23.6	62.1
LnGrp Delay(d),s/veh	99.9	148.2	46.5	60.0	69.8	0.0	63.0	25.3	144.7	64.7	52.2	286.5
LnGrp LOS	F	F	D	E	E		E	C	F	E	D	F
Approach Vol, veh/h		1960			1840			1596			2889	
Approach Delay, s/veh		119.9			64.7			84.1			128.1	
Approach LOS		F			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	52.0	38.8	22.2	8.2	50.3	35.0	26.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	48.0	35.0	18.0	5.0	46.0	31.0	22.0
Max Q Clear Time (g_c+I1), s	3.4	50.0	34.6	20.2	4.6	48.3	33.0	23.1
Green Ext Time (p_c), s	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	103.6
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	534	1562	973	34	1124	18	833	788	46	89	810	359
Future Volume (veh/h)	534	1562	973	34	1124	18	833	788	46	89	810	359
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	534	1562	973	34	1124	18	833	788	46	89	810	359
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	598	1998	622	63	1207	376	791	1337	598	143	672	300
Arrive On Green	0.18	0.40	0.40	0.02	0.24	0.24	0.23	0.38	0.38	0.04	0.19	0.19
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	534	1562	973	34	1124	18	833	788	46	89	810	359
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	15.2	26.9	39.3	1.0	21.7	0.9	23.0	17.8	1.9	2.5	19.0	19.0
Cycle Q Clear(g_c), s	15.2	26.9	39.3	1.0	21.7	0.9	23.0	17.8	1.9	2.5	19.0	19.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	598	1998	622	63	1207	376	791	1337	598	143	672	300
V/C Ratio(X)	0.89	0.78	1.56	0.54	0.93	0.05	1.05	0.59	0.08	0.62	1.21	1.19
Avail Cap(c_a), veh/h	619	1998	622	103	1219	380	791	1337	598	172	672	300
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.0	26.2	29.9	48.3	36.9	29.0	38.1	24.5	19.5	46.7	40.1	40.1
Incr Delay (d2), s/veh	15.0	2.1	261.8	7.1	12.6	0.1	47.1	0.7	0.1	4.9	106.4	115.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	12.8	62.1	0.5	11.4	0.4	15.9	8.7	0.8	1.3	19.1	17.8
LnGrp Delay(d),s/veh	55.0	28.2	291.7	55.4	49.5	29.0	85.2	25.1	19.6	51.6	146.5	155.6
LnGrp LOS	E	C	F	E	D	C	F	C	B	D	F	F
Approach Vol, veh/h		3069			1176			1667			1258	
Approach Delay, s/veh		116.4			49.4			55.0			142.4	
Approach LOS		F			D			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	41.8	5.8	43.3	27.0	23.0	21.4	27.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	37.0	3.0	39.0	23.0	19.0	18.0	24.0
Max Q Clear Time (g_c+I1), s	4.5	19.8	3.0	41.3	25.0	21.0	17.2	23.7
Green Ext Time (p_c), s	0.0	11.6	0.0	0.0	0.0	0.0	0.2	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	95.7
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	2180	52	179	1810	6	21	1480	236	14	1598	97
Future Volume (veh/h)	76	2180	52	179	1810	6	21	1480	236	14	1598	97
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	76	2180	52	179	1810	6	21	1480	236	14	1598	97
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	116	2003	624	161	2070	644	53	1526	683	40	1512	677
Arrive On Green	0.03	0.40	0.40	0.05	0.41	0.41	0.02	0.44	0.44	0.01	0.43	0.43
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	76	2180	52	179	1810	6	21	1480	236	14	1598	97
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	3.3	59.0	3.1	7.0	49.0	0.3	0.9	61.2	14.8	0.6	64.0	5.6
Cycle Q Clear(g_c), s	3.3	59.0	3.1	7.0	49.0	0.3	0.9	61.2	14.8	0.6	64.0	5.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	116	2003	624	161	2070	644	53	1526	683	40	1512	677
V/C Ratio(X)	0.66	1.09	0.08	1.11	0.87	0.01	0.39	0.97	0.35	0.35	1.06	0.14
Avail Cap(c_a), veh/h	138	2003	624	161	2070	644	92	1526	683	92	1512	677
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.8	44.7	27.8	70.7	40.2	25.8	72.3	40.9	27.8	72.7	42.2	25.5
Incr Delay (d2), s/veh	8.3	48.7	0.1	104.4	4.5	0.0	4.7	16.4	0.3	5.1	39.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	36.3	1.3	5.6	23.5	0.1	0.5	33.1	6.5	0.3	39.2	2.4
LnGrp Delay(d),s/veh	79.1	93.4	27.9	175.1	44.7	25.8	77.0	57.4	28.1	77.8	81.9	25.6
LnGrp LOS	E	F	C	F	D	C	E	E	C	E	F	C
Approach Vol, veh/h		2308			1995			1737			1709	
Approach Delay, s/veh		91.4			56.3			53.6			78.7	
Approach LOS		F			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.8	68.6	11.0	63.0	6.3	68.0	9.0	65.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	64.0	7.0	59.0	4.0	64.0	6.0	60.0
Max Q Clear Time (g_c+I1), s	2.6	63.2	9.0	61.0	2.9	66.0	5.3	51.0
Green Ext Time (p_c), s	0.0	0.8	0.0	0.0	0.0	0.0	0.0	8.9

Intersection Summary	
HCM 2010 Ctrl Delay	71.1
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	298	666	0	1076	718	120	0	795	952	91	719	287
Future Volume (veh/h)	298	666	0	1076	718	120	0	795	952	91	719	287
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	298	666	0	1076	718	120	0	795	952	91	719	287
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	381	812	253	1045	1793	558	4	1075	481	149	1387	621
Arrive On Green	0.11	0.16	0.00	0.31	0.36	0.36	0.00	0.31	0.31	0.04	0.40	0.40
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	298	666	0	1076	718	120	0	795	952	91	719	287
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	7.5	11.3	0.0	27.0	9.4	4.7	0.0	17.9	27.0	2.3	13.7	11.9
Cycle Q Clear(g_c), s	7.5	11.3	0.0	27.0	9.4	4.7	0.0	17.9	27.0	2.3	13.7	11.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	381	812	253	1045	1793	558	4	1075	481	149	1387	621
V/C Ratio(X)	0.78	0.82	0.00	1.03	0.40	0.21	0.00	0.74	1.98	0.61	0.52	0.46
Avail Cap(c_a), veh/h	503	915	285	1045	1793	558	155	1075	481	155	1387	621
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.1	35.7	0.0	30.5	21.3	19.8	0.0	27.4	30.5	41.4	20.2	19.7
Incr Delay (d2), s/veh	5.8	5.4	0.0	35.6	0.1	0.2	0.0	2.7	448.3	6.5	0.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	5.7	0.0	17.8	4.3	2.1	0.0	9.0	71.5	1.2	6.7	5.2
LnGrp Delay(d),s/veh	43.8	41.1	0.0	66.1	21.4	20.0	0.0	30.1	478.8	47.8	20.6	20.2
LnGrp LOS	D	D		F	C	B		C	F	D	C	C
Approach Vol, veh/h		964			1914			1747			1097	
Approach Delay, s/veh		42.0			46.5			274.6			22.7	
Approach LOS		D			D			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	31.0	31.0	18.2	0.0	38.8	13.8	35.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	27.0	27.0	16.0	4.0	27.0	13.0	30.0
Max Q Clear Time (g_c+I1), s	4.3	29.0	29.0	13.3	0.0	15.7	9.5	11.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.9	0.0	9.7	0.4	9.8

Intersection Summary	
HCM 2010 Ctrl Delay	110.8
HCM 2010 LOS	F

Intersection	
Intersection Delay, s/veh	10.5
Intersection LOS	B

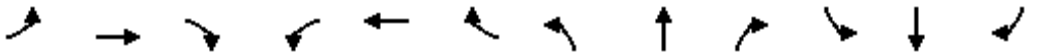
Approach	EB	NB	SB
Entry Lanes	1	2	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	118	995	1278
Demand Flow Rate, veh/h	121	1024	1316
Vehicles Circulating, veh/h	1171	78	46
Vehicles Exiting, veh/h	191	1214	1057
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	11.0	9.1	11.5
Approach LOS	B	A	B

Lane	Left	Left	Right	Left	Right
Designated Moves	LR	LT	TR	LT	TR
Assumed Moves	LR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Critical Headway, s	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	121	481	543	619	697
Cap Entry Lane, veh/h	498	1066	1070	1092	1094
Entry HV Adj Factor	0.975	0.972	0.971	0.970	0.972
Flow Entry, veh/h	118	467	527	601	677
Cap Entry, veh/h	485	1036	1039	1059	1063
V/C Ratio	0.243	0.451	0.508	0.567	0.637
Control Delay, s/veh	11.0	8.6	9.5	10.6	12.3
LOS	B	A	A	B	B
95th %tile Queue, veh	1	2	3	4	5

Cumulative Plus All Projects

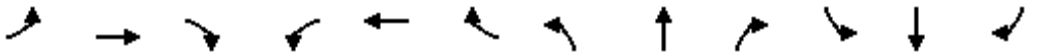
(Proposed Project)

Ultimate Mitigation AM



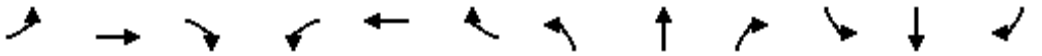
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	156	567	120	91	1052	907	674	1610	84	1209	1695	95
Future Volume (vph)	156	567	120	91	1052	907	674	1610	84	1209	1695	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		0.97	0.95	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	3380		3367	3471	2733	3367	4988	1553	3367	4988	1553
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	3380		3367	3471	2733	3367	4988	1553	3367	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	156	567	120	91	1052	907	674	1610	84	1209	1695	95
RTOR Reduction (vph)	0	13	0	0	0	589	0	0	58	0	0	56
Lane Group Flow (vph)	156	674	0	91	1052	318	674	1610	26	1209	1695	39
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	4.0	32.4		8.6	37.0	37.0	26.0	43.0	43.0	40.0	57.0	57.0
Effective Green, g (s)	4.0	32.4		8.6	37.0	37.0	26.0	43.0	43.0	40.0	57.0	57.0
Actuated g/C Ratio	0.03	0.23		0.06	0.26	0.26	0.19	0.31	0.31	0.29	0.41	0.41
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	96	782		206	917	722	625	1532	476	962	2030	632
v/s Ratio Prot	c0.05	0.20		0.03	c0.30		0.20	c0.32		c0.36	0.34	
v/s Ratio Perm						0.12			0.02			0.02
v/c Ratio	1.62	0.86		0.44	1.15	0.44	1.08	1.05	0.05	1.26	0.83	0.06
Uniform Delay, d1	68.0	51.7		63.4	51.5	42.9	57.0	48.5	34.2	50.0	37.3	25.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	323.6	9.6		1.5	79.1	0.4	59.0	37.7	0.0	124.1	3.1	0.0
Delay (s)	391.6	61.3		64.9	130.6	43.3	116.0	86.2	34.2	174.1	40.4	25.3
Level of Service	F	E		E	F	D	F	F	C	F	D	C
Approach Delay (s)		122.4			89.0			92.8			93.8	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	95.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	112.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



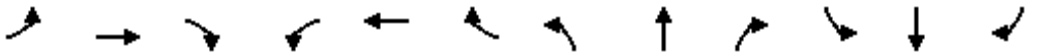
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	651	170	180	813	860	239	1794	159	468	811	72
Future Volume (vph)	53	651	170	180	813	860	239	1794	159	468	811	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.91	0.91	1.00	0.91		1.00	0.91	1.00
Frt	1.00	0.97		1.00	0.96	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	3396		1736	3177	1413	1736	4927		1736	4988	1553
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	3396		1736	3177	1413	1736	4927		1736	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	53	651	170	180	813	860	239	1794	159	468	811	72
RTOR Reduction (vph)	0	16	0	0	26	327	0	7	0	0	0	43
Lane Group Flow (vph)	53	805	0	180	1131	189	239	1946	0	468	811	29
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	8.7	39.0		16.0	46.3	46.3	24.1	48.0		31.0	54.9	54.9
Effective Green, g (s)	8.7	39.0		16.0	46.3	46.3	24.1	48.0		31.0	54.9	54.9
Actuated g/C Ratio	0.06	0.26		0.11	0.31	0.31	0.16	0.32		0.21	0.37	0.37
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	101	882		185	980	436	278	1576		358	1825	568
v/s Ratio Prot	0.03	0.24		c0.10	c0.36		0.14	c0.40		c0.27	0.16	
v/s Ratio Perm						0.13						0.02
v/c Ratio	0.52	0.91		0.97	1.15	0.43	0.86	1.23		1.31	0.44	0.05
Uniform Delay, d1	68.6	53.9		66.8	51.9	41.4	61.3	51.0		59.5	36.0	30.7
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.8	13.6		57.9	81.0	0.7	22.3	111.4		157.1	0.2	0.0
Delay (s)	73.5	67.5		124.7	132.8	42.1	83.6	162.4		216.6	36.2	30.8
Level of Service	E	E		F	F	D	F	F		F	D	C
Approach Delay (s)		67.8			106.8			153.8			98.4	
Approach LOS		E			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	116.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	112.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



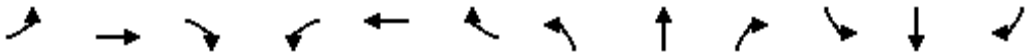
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	347	491	132	253	482	724	72	0	490	574	0	531
Future Volume (vph)	347	491	132	253	482	724	72	0	490	574	0	531
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	4.6	4.6	5.5	4.3	5.5		4.6	4.6	5.5	4.8	4.8
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00		0.95	0.95	0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.89	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99	1.00	0.95	0.95	1.00
Satd. Flow (prot)	3400	3505	1568	3400	3505	1568		1522	1475	1649	1649	1553
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.84	1.00	0.95	0.37	1.00
Satd. Flow (perm)	3400	3505	1568	3400	3505	1568		1295	1475	1649	648	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	347	491	132	253	482	724	72	0	490	574	0	531
RTOR Reduction (vph)	0	0	109	0	0	460	0	104	171	0	0	135
Lane Group Flow (vph)	347	491	23	253	482	264	0	179	108	287	287	396
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4	5	1	6		5	2	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	9.5	17.6	17.6	9.7	18.1	36.6		34.2	34.2	18.5	58.0	58.0
Effective Green, g (s)	9.5	17.6	17.6	9.7	18.1	36.6		34.2	34.2	18.5	58.0	58.0
Actuated g/C Ratio	0.09	0.18	0.18	0.10	0.18	0.37		0.34	0.34	0.18	0.58	0.58
Clearance Time (s)	5.5	4.6	4.6	5.5	4.3	5.5		4.6	4.6	5.5	4.8	4.8
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	2.0		1.0	1.0	2.0	1.0	1.0
Lane Grp Cap (vph)	322	615	275	329	633	572		442	503	304	559	898
v/s Ratio Prot	c0.10	c0.14		0.07	0.14	0.09				c0.17	0.09	
v/s Ratio Perm			0.01			0.08		0.14	0.07		c0.20	0.25
v/c Ratio	1.08	0.80	0.08	0.77	0.76	0.46		0.40	0.21	0.94	0.51	0.44
Uniform Delay, d1	45.4	39.6	34.6	44.2	39.0	24.3		25.2	23.5	40.3	12.6	11.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	72.4	6.7	0.0	9.4	4.9	0.2		0.2	0.1	36.4	0.3	0.1
Delay (s)	117.7	46.3	34.6	53.5	43.9	24.5		25.4	23.5	76.8	13.0	12.1
Level of Service	F	D	C	D	D	C		C	C	E	B	B
Approach Delay (s)		70.3			35.9			24.5			29.1	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	40.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	100.2	Sum of lost time (s)	20.4
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



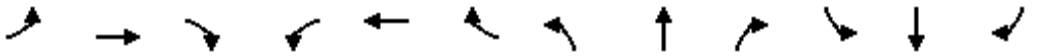
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	674	0	1756	0	0	0	0	1890	1447	0	1480	252
Future Volume (vph)	674	0	1756	0	0	0	0	1890	1447	0	1480	252
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4		6.4					5.1	4.0		4.6	4.0
Lane Util. Factor	0.97		0.88					0.91	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3367		2733					4988	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3367		2733					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	674	0	1756	0	0	0	0	1890	1447	0	1480	252
RTOR Reduction (vph)	0	0	8	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	674	0	1748	0	0	0	0	1890	1447	0	1480	252
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	71.6		71.6					46.9	130.0		47.4	130.0
Effective Green, g (s)	71.6		71.6					46.9	130.0		47.4	130.0
Actuated g/C Ratio	0.55		0.55					0.36	1.00		0.36	1.00
Clearance Time (s)	6.4		6.4					5.1			4.6	
Vehicle Extension (s)	1.0		1.0					1.0			1.0	
Lane Grp Cap (vph)	1854		1505					1799	1553		1818	1553
v/s Ratio Prot								c0.38			0.30	
v/s Ratio Perm	0.20		c0.64						0.93			0.16
v/c Ratio	0.36		1.16					1.05	0.93		0.81	0.16
Uniform Delay, d1	16.4		29.2					41.5	0.0		37.3	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0		80.4					35.9	11.5		2.8	0.2
Delay (s)	16.4		109.6					77.5	11.5		40.1	0.2
Level of Service	B		F					E	B		D	A
Approach Delay (s)		83.8			0.0			48.9			34.3	
Approach LOS		F			A			D			C	

Intersection Summary			
HCM 2000 Control Delay	56.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	99.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



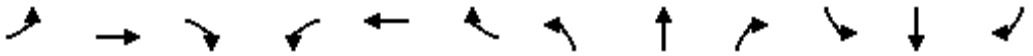
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	322	418	1	1	638	7	7	308	0	0	161	236
Future Volume (vph)	322	418	1	1	638	7	7	308	0	0	161	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00			0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1671	1759		1641	1724		1671	1759			1602	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00			1.00	
Satd. Flow (perm)	1671	1759		1641	1724		1671	1759			1602	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	322	418	1	1	638	7	7	308	0	0	161	236
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	0	0	58	0
Lane Group Flow (vph)	322	419	0	1	644	0	7	308	0	0	339	0
Heavy Vehicles (%)	8%	8%	8%	10%	10%	10%	8%	8%	8%	8%	8%	8%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	18.0	54.6		0.7	37.3		0.7	22.7			18.0	
Effective Green, g (s)	18.0	54.6		0.7	37.3		0.7	22.7			18.0	
Actuated g/C Ratio	0.20	0.61		0.01	0.41		0.01	0.25			0.20	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	334	1067		12	714		12	443			320	
v/s Ratio Prot	c0.19	0.24		0.00	c0.37		0.00	c0.18			c0.21	
v/s Ratio Perm												
v/c Ratio	0.96	0.39		0.08	0.90		0.58	0.70			1.06	
Uniform Delay, d1	35.7	9.1		44.3	24.6		44.5	30.5			36.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	39.4	0.2		3.0	14.7		56.2	4.7			66.5	
Delay (s)	75.1	9.4		47.3	39.3		100.7	35.2			102.5	
Level of Service	E	A		D	D		F	D			F	
Approach Delay (s)		37.9			39.4			36.7			102.5	
Approach LOS		D			D			D			F	

Intersection Summary			
HCM 2000 Control Delay	50.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	84.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1198	679	7	0	1154	15	8	30	5	7	6	547
Future Volume (vph)	1198	679	7	0	1154	15	8	30	5	7	6	547
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.9	6.9		6.0			6.1			6.2	5.5
Lane Util. Factor	0.97	0.95	1.00		0.95			1.00			1.00	0.88
Frt	1.00	1.00	0.85		1.00			0.98			1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00			0.99			0.97	1.00
Satd. Flow (prot)	3303	3406	1524		3431			1799			1779	2733
Flt Permitted	0.95	1.00	1.00		1.00			0.99			0.97	1.00
Satd. Flow (perm)	3303	3406	1524		3431			1799			1779	2733
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1198	679	7	0	1154	15	8	30	5	7	6	547
RTOR Reduction (vph)	0	0	1	0	1	0	0	3	0	0	0	72
Lane Group Flow (vph)	1198	679	6	0	1168	0	0	40	0	0	13	475
Heavy Vehicles (%)	6%	6%	6%	5%	5%	5%	3%	3%	3%	4%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	pm+ov
Protected Phases	1	6		5	2		8	8		4	4	1
Permitted Phases			6									4
Actuated Green, G (s)	53.0	104.8	104.8		47.2			3.4			2.1	55.1
Effective Green, g (s)	53.0	104.8	104.8		47.2			3.4			2.1	55.1
Actuated g/C Ratio	0.41	0.81	0.81		0.36			0.03			0.02	0.43
Clearance Time (s)	5.5	6.9	6.9		6.0			6.1			6.2	5.5
Vehicle Extension (s)	1.0	1.0	1.0		1.0			1.0			1.0	1.0
Lane Grp Cap (vph)	1351	2756	1233		1250			47			28	1162
v/s Ratio Prot	c0.36	0.20			c0.34			c0.02			c0.01	0.17
v/s Ratio Perm			0.00									0.01
v/c Ratio	0.89	0.25	0.00		0.93			0.85			0.46	0.41
Uniform Delay, d1	35.5	2.9	2.4		39.7			62.8			63.1	25.9
Progression Factor	1.00	1.00	1.00		1.00			1.00			1.00	1.00
Incremental Delay, d2	7.2	0.0	0.0		12.6			75.6			4.4	0.1
Delay (s)	42.6	3.0	2.4		52.3			138.4			67.5	26.0
Level of Service	D	A	A		D			F			E	C
Approach Delay (s)		28.2			52.3			138.4			26.9	
Approach LOS		C			D			F			C	

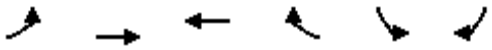
Intersection Summary			
HCM 2000 Control Delay	37.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	129.5	Sum of lost time (s)	24.7
Intersection Capacity Utilization	90.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	3	19	194	6	606	16	1816	105	226	1575	0
Future Volume (vph)	0	3	19	194	6	606	16	1816	105	226	1575	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		0.97	0.95	0.95	1.00	0.95	1.00	0.97	0.95	
Frt		0.87		1.00	0.85	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1606		3400	1495	1490	1752	3505	1568	3400	3505	
Flt Permitted		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1606		3400	1495	1490	1752	3505	1568	3400	3505	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	3	19	194	6	606	16	1816	105	226	1575	0
RTOR Reduction (vph)	0	18	0	0	137	137	0	0	43	0	0	0
Lane Group Flow (vph)	0	4	0	194	172	166	16	1816	62	226	1575	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)		3.0		8.8	15.8	15.8	0.8	49.5	49.5	6.0	54.7	
Effective Green, g (s)		3.0		8.8	15.8	15.8	0.8	49.5	49.5	6.0	54.7	
Actuated g/C Ratio		0.04		0.11	0.19	0.19	0.01	0.59	0.59	0.07	0.66	
Clearance Time (s)		4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		57		359	283	282	16	2082	931	244	2301	
v/s Ratio Prot		0.00		0.06	c0.12		0.01	c0.52		c0.07	0.45	
v/s Ratio Perm						0.11			0.04			
v/c Ratio		0.06		0.54	0.61	0.59	1.00	0.87	0.07	0.93	0.68	
Uniform Delay, d1		38.8		35.3	30.9	30.8	41.2	14.2	7.1	38.4	8.9	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.5		1.7	3.7	3.1	225.0	4.3	0.0	37.8	0.9	
Delay (s)		39.3		37.0	34.6	33.9	266.2	18.6	7.2	76.2	9.8	
Level of Service		D		D	C	C	F	B	A	E	A	
Approach Delay (s)		39.3			34.9			20.0			18.1	
Approach LOS		D			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	22.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	83.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	601	1365	2134	1713	0
Future Volume (vph)	0	601	1365	2134	1713	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95	0.95	1.00	0.97	
Frt		1.00	1.00	0.85	1.00	
Flt Protected		1.00	1.00	1.00	0.95	
Satd. Flow (prot)		3505	3505	1568	3400	
Flt Permitted		1.00	1.00	1.00	0.95	
Satd. Flow (perm)		3505	3505	1568	3400	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	601	1365	2134	1713	0
RTOR Reduction (vph)	0	0	0	700	0	0
Lane Group Flow (vph)	0	601	1365	1434	1713	0
Turn Type	Prot	NA	NA	Perm	Prot	
Protected Phases	4	5	5		6	
Permitted Phases				5		
Actuated Green, G (s)		46.0	46.0	46.0	74.4	
Effective Green, g (s)		46.0	46.0	46.0	74.4	
Actuated g/C Ratio		0.36	0.36	0.36	0.58	
Clearance Time (s)		4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1255	1255	561	1970	
v/s Ratio Prot		0.17	0.39		c0.50	
v/s Ratio Perm				c0.91		
v/c Ratio		0.48	1.09	2.56	0.87	
Uniform Delay, d1		31.9	41.2	41.2	22.9	
Progression Factor		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.3	52.8	705.4	4.4	
Delay (s)		32.2	94.0	746.6	27.3	
Level of Service		C	F	F	C	
Approach Delay (s)		32.2	492.0		27.3	
Approach LOS		C	F		C	

Intersection Summary			
HCM 2000 Control Delay	307.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.56		
Actuated Cycle Length (s)	128.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	135.5%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	308	23	151	409	890	34	2803	226	507	2340	0
Future Volume (veh/h)	0	308	23	151	409	890	34	2803	226	507	2340	0
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1845	1845	1845	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	0	308	23	151	409	890	34	2803	226	507	2340	0
Adj No. of Lanes	2	2	1	2	2	1	2	3	0	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	2	500	224	132	777	597	60	2371	186	536	3212	0
Arrive On Green	0.00	0.14	0.14	0.04	0.22	0.22	0.02	0.50	0.50	0.16	0.64	0.00
Sat Flow, veh/h	3375	3471	1553	3408	3505	1568	3375	4716	371	3375	5152	0
Grp Volume(v), veh/h	0	308	23	151	409	890	34	1955	1074	507	2340	0
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1704	1752	1568	1688	1663	1762	1688	1663	0
Q Serve(g_s), s	0.0	11.8	1.8	5.5	14.6	31.4	1.4	71.2	71.2	21.1	44.6	0.0
Cycle Q Clear(g_c), s	0.0	11.8	1.8	5.5	14.6	31.4	1.4	71.2	71.2	21.1	44.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		0.00
Lane Grp Cap(c), veh/h	2	500	224	132	777	597	60	1672	886	536	3212	0
V/C Ratio(X)	0.00	0.62	0.10	1.14	0.53	1.49	0.57	1.17	1.21	0.95	0.73	0.00
Avail Cap(c_a), veh/h	72	711	318	132	777	597	100	1672	886	536	3212	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	56.9	52.6	68.1	48.5	43.9	69.0	35.2	35.2	58.9	16.9	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.1	121.0	0.3	229.8	3.1	83.0	106.2	25.6	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.7	0.8	4.8	7.1	61.4	0.7	51.8	60.6	11.8	20.6	0.0
LnGrp Delay(d),s/veh	0.0	57.4	52.7	189.0	48.9	273.7	72.1	118.2	141.4	84.5	17.7	0.0
LnGrp LOS		E	D	F	D	F	E	F	F	F	B	
Approach Vol, veh/h		331			1450			3063			2847	
Approach Delay, s/veh		57.1			201.5			125.8			29.6	
Approach LOS		E			F			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	96.5	0.0	37.1	28.0	76.5	11.0	26.1
Change Period (Y+Rc), s	5.5	5.3	5.5	* 5.7	5.5	* 5.3	5.5	* 5.7
Max Green Setting (Gmax), s	4.2	89.4	3.0	* 31	22.5	* 71	5.5	* 29
Max Q Clear Time (g_c+I1), s	3.4	46.6	0.0	33.4	23.1	73.2	7.5	13.8
Green Ext Time (p_c), s	0.0	36.1	0.0	0.0	0.0	0.0	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	101.5
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	1543	601	101	1965	990	778	1964	67	1065	1570	189
Future Volume (veh/h)	89	1543	601	101	1965	990	778	1964	67	1065	1570	189
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	89	1543	601	101	1965	0	778	1964	67	1065	1570	189
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	3	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	4	4	4	4	4	4
Cap, veh/h	66	1364	425	77	1397	435	321	2960	922	333	2329	725
Arrive On Green	0.02	0.28	0.28	0.02	0.29	0.00	0.10	0.59	0.59	0.47	0.47	0.47
Sat Flow, veh/h	3312	4893	1524	3312	4893	1524	3375	4988	1553	575	4988	1553
Grp Volume(v), veh/h	89	1543	601	101	1965	0	778	1964	67	1065	1570	189
Grp Sat Flow(s),veh/h/ln	1656	1631	1524	1656	1631	1524	1688	1663	1553	192	1663	1553
Q Serve(g_s), s	3.0	41.9	41.9	3.5	42.9	0.0	14.3	39.7	2.8	49.5	36.8	11.1
Cycle Q Clear(g_c), s	3.0	41.9	41.9	3.5	42.9	0.0	14.3	39.7	2.8	70.2	36.8	11.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	66	1364	425	77	1397	435	321	2960	922	333	2329	725
V/C Ratio(X)	1.35	1.13	1.41	1.31	1.41	0.00	2.42	0.66	0.07	3.20	0.67	0.26
Avail Cap(c_a), veh/h	66	1364	425	77	1397	435	321	2960	922	333	2329	725
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.7	54.2	54.2	73.4	53.7	0.0	68.0	20.5	13.0	61.1	31.1	24.3
Incr Delay (d2), s/veh	228.2	68.8	200.2	206.1	187.4	0.0	649.5	0.5	0.0	996.1	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	27.5	41.2	3.8	43.5	0.0	35.6	18.3	1.2	35.3	17.0	4.7
LnGrp Delay(d),s/veh	301.8	123.0	254.4	279.5	241.1	0.0	717.5	20.9	13.0	1057.2	31.8	24.4
LnGrp LOS	F	F	F	F	F		F	C	B	F	C	C
Approach Vol, veh/h		2233			2066			2809			2824	
Approach Delay, s/veh		165.5			243.0			213.7			418.0	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	48.3	19.0	75.0	9.0	47.3		94.0
Change Period (Y+Rc), s	5.0	* 5.4	* 4.7	4.8	5.5	* 5.4		4.8
Max Green Setting (Gmax), s	3.0	* 43	* 14	70.2	3.5	* 42		89.2
Max Q Clear Time (g_c+I1), s	5.0	44.9	16.3	72.2	5.5	43.9		41.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0		47.3

Intersection Summary			
HCM 2010 Ctrl Delay		267.0	
HCM 2010 LOS		F	

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	1224	722	5	1316	264	607	466	20	127	191	54
Future Volume (veh/h)	82	1224	722	5	1316	264	607	466	20	127	191	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	82	1224	722	5	1316	264	607	466	20	127	191	54
Adj No. of Lanes	1	2	0	1	2	0	2	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	85	1288	691	7	1574	312	611	462	393	174	225	192
Arrive On Green	0.05	0.58	0.58	0.00	0.54	0.54	0.18	0.25	0.25	0.05	0.12	0.12
Sat Flow, veh/h	1757	2205	1183	1757	2917	578	3408	1845	1568	3408	1845	1568
Grp Volume(v), veh/h	82	948	998	5	784	796	607	466	20	127	191	54
Grp Sat Flow(s),veh/h/ln	1757	1752	1636	1757	1752	1743	1704	1845	1568	1704	1845	1568
Q Serve(g_s), s	6.8	71.0	84.7	0.4	54.0	56.1	25.8	36.3	1.4	5.3	14.7	4.5
Cycle Q Clear(g_c), s	6.8	71.0	84.7	0.4	54.0	56.1	25.8	36.3	1.4	5.3	14.7	4.5
Prop In Lane	1.00		0.72	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	85	1024	956	7	946	941	611	462	393	174	225	192
V/C Ratio(X)	0.97	0.93	1.04	0.75	0.83	0.85	0.99	1.01	0.05	0.73	0.85	0.28
Avail Cap(c_a), veh/h	85	1024	956	36	967	962	611	462	393	259	267	227
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.9	27.3	30.1	72.1	27.8	28.3	59.4	54.3	41.2	67.8	62.3	57.8
Incr Delay (d2), s/veh	86.2	13.8	41.3	96.2	6.0	7.0	34.5	43.8	0.1	5.8	19.1	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	38.1	48.9	0.4	27.7	28.8	15.1	24.1	0.6	2.6	8.7	2.0
LnGrp Delay(d),s/veh	155.1	41.1	71.5	168.3	33.8	35.3	93.9	98.2	41.3	73.6	81.4	58.6
LnGrp LOS	F	D	F	F	C	D	F	F	D	E	F	E
Approach Vol, veh/h		2028			1585			1093			372	
Approach Delay, s/veh		60.6			35.0			94.7			75.4	
Approach LOS		E			C			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	40.3	4.5	88.7	30.0	21.7	11.0	82.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	11.0	36.0	3.0	84.0	26.0	21.0	7.0	80.0
Max Q Clear Time (g_c+I1), s	7.3	38.3	2.4	86.7	27.8	16.7	8.8	58.1
Green Ext Time (p_c), s	0.1	0.0	0.0	0.0	0.0	1.0	0.0	20.1

Intersection Summary	
HCM 2010 Ctrl Delay	61.0
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	40	32	332	30	387	57	2903	403	682	1898	59
Future Volume (veh/h)	76	40	32	332	30	387	57	2903	403	682	1898	59
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	76	40	32	332	30	387	57	2903	403	682	1898	59
Adj No. of Lanes	1	1	0	2	1	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	64	35	28	545	295	251	72	2437	759	574	3080	96
Arrive On Green	0.04	0.04	0.04	0.16	0.16	0.16	0.04	0.49	0.49	0.17	0.62	0.62
Sat Flow, veh/h	1757	950	760	3408	1845	1568	1740	4988	1553	3375	4970	154
Grp Volume(v), veh/h	76	0	72	332	30	387	57	2903	403	682	1269	688
Grp Sat Flow(s),veh/h/ln	1757	0	1711	1704	1845	1568	1740	1663	1553	1688	1663	1800
Q Serve(g_s), s	5.5	0.0	5.5	13.6	2.1	24.0	4.9	73.3	26.9	25.5	35.2	35.3
Cycle Q Clear(g_c), s	5.5	0.0	5.5	13.6	2.1	24.0	4.9	73.3	26.9	25.5	35.2	35.3
Prop In Lane	1.00		0.44	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	64	0	63	545	295	251	72	2437	759	574	2061	1115
V/C Ratio(X)	1.18	0.00	1.15	0.61	0.10	1.54	0.79	1.19	0.53	1.19	0.62	0.62
Avail Cap(c_a), veh/h	64	0	63	545	295	251	123	2437	759	574	2061	1115
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.3	0.0	72.3	58.6	53.8	63.0	71.2	38.3	26.5	62.3	17.5	17.6
Incr Delay (d2), s/veh	168.8	0.0	159.5	1.4	0.1	263.1	6.9	90.4	0.4	101.4	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.0	5.4	6.5	1.1	28.7	2.5	54.0	11.6	20.0	16.2	17.6
LnGrp Delay(d),s/veh	241.1	0.0	231.9	60.1	53.9	326.1	78.1	128.7	26.9	163.6	17.9	18.3
LnGrp LOS	F		F	E	D	F	E	F	C	F	B	B
Approach Vol, veh/h		148			749			3363			2639	
Approach Delay, s/veh		236.6			197.3			115.7			55.7	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.3	98.2		11.0	31.0	78.5		29.5
Change Period (Y+Rc), s	* 5.1	* 5.2		5.5	5.5	* 5.2		5.5
Max Green Setting (Gmax), s	* 11	* 89		5.5	25.5	* 73		24.0
Max Q Clear Time (g_c+I1), s	6.9	37.3		7.5	27.5	75.3		26.0
Green Ext Time (p_c), s	0.0	39.1		0.0	0.0	0.0		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		104.2
HCM 2010 LOS		F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	225	1183	433	243	1482	844	374	2057	363	563	883	165
Future Volume (veh/h)	225	1183	433	243	1482	844	374	2057	363	563	883	165
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	225	1183	433	243	1482	844	374	2057	363	563	883	165
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	193	1426	444	286	1564	487	417	1771	551	438	1801	561
Arrive On Green	0.06	0.28	0.28	0.08	0.31	0.31	0.12	0.36	0.36	0.13	0.36	0.36
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	225	1183	433	243	1482	844	374	2057	363	563	883	165
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	8.5	33.1	41.1	10.6	43.2	46.7	16.4	53.4	29.6	19.5	20.7	11.4
Cycle Q Clear(g_c), s	8.5	33.1	41.1	10.6	43.2	46.7	16.4	53.4	29.6	19.5	20.7	11.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	193	1426	444	286	1564	487	417	1771	551	438	1801	561
V/C Ratio(X)	1.17	0.83	0.98	0.85	0.95	1.73	0.90	1.16	0.66	1.29	0.49	0.29
Avail Cap(c_a), veh/h	193	1426	444	315	1564	487	532	1771	551	438	1801	561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.0	50.5	53.4	68.0	50.7	51.9	65.0	48.5	40.8	65.5	37.3	34.3
Incr Delay (d2), s/veh	117.5	4.0	36.0	16.6	12.4	338.6	13.2	79.4	2.3	145.3	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	15.9	22.2	5.7	21.8	66.0	8.5	37.5	13.1	17.9	9.5	4.9
LnGrp Delay(d),s/veh	188.4	54.5	89.4	84.6	63.0	390.5	78.1	127.9	43.1	210.7	37.4	34.5
LnGrp LOS	F	D	F	F	E	F	E	F	D	F	D	C
Approach Vol, veh/h		1841			2569			2794			1611	
Approach Delay, s/veh		79.1			172.6			110.2			97.7	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.1	59.9	14.0	52.4	25.0	59.0	18.1	48.3
Change Period (Y+Rc), s	5.5	* 5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	23.7	* 49	8.5	* 47	19.5	* 53	13.9	* 41
Max Q Clear Time (g_c+I1), s	18.4	22.7	10.5	48.7	21.5	55.4	12.6	43.1
Green Ext Time (p_c), s	0.2	13.7	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	119.6
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	342	1413	670	185	2277	544	138	2334	224	507	694	90
Future Volume (veh/h)	342	1413	670	185	2277	544	138	2334	224	507	694	90
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1845	1845	1792	1792	1845	1845	1845	1827	1845	1827
Adj Flow Rate, veh/h	342	1413	670	185	2277	544	138	2334	224	507	694	0
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	3	3	6	6	3	3	3	4	3	4
Cap, veh/h	258	1657	531	228	1619	504	181	1805	562	337	2027	625
Arrive On Green	0.08	0.34	0.34	0.07	0.33	0.33	0.05	0.36	0.36	0.10	0.40	0.00
Sat Flow, veh/h	3312	4893	1568	3408	4893	1524	3408	5036	1568	3375	5036	1553
Grp Volume(v), veh/h	342	1413	670	185	2277	544	138	2334	224	507	694	0
Grp Sat Flow(s),veh/h/ln	1656	1631	1568	1704	1631	1524	1704	1679	1568	1688	1679	1553
Q Serve(g_s), s	11.7	40.4	50.9	8.1	49.8	49.8	6.0	53.9	16.1	15.0	14.4	0.0
Cycle Q Clear(g_c), s	11.7	40.4	50.9	8.1	49.8	49.8	6.0	53.9	16.1	15.0	14.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	1657	531	228	1619	504	181	1805	562	337	2027	625
V/C Ratio(X)	1.33	0.85	1.26	0.81	1.41	1.08	0.76	1.29	0.40	1.51	0.34	0.00
Avail Cap(c_a), veh/h	258	1657	531	231	1619	504	204	1805	562	337	2027	625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	69.3	46.2	49.7	69.2	50.3	50.3	70.2	48.2	36.1	67.7	31.1	0.0
Incr Delay (d2), s/veh	171.5	4.3	132.5	19.1	186.5	63.0	11.6	136.1	0.5	242.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.5	18.8	41.6	4.4	50.3	29.8	3.1	47.6	7.0	18.3	6.7	0.0
LnGrp Delay(d),s/veh	240.8	50.6	182.3	88.3	236.8	113.3	81.8	184.3	36.6	310.1	31.2	0.0
LnGrp LOS	F	D	F	F	F	F	F	F	D	F	C	
Approach Vol, veh/h		2425			3006			2696			1201	
Approach Delay, s/veh		113.8			205.3			166.8			148.9	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.4	65.6	16.0	55.4	20.0	59.0	14.9	56.5
Change Period (Y+Rc), s	* 5.4	5.1	* 4.3	5.6	5.0	5.1	* 4.8	* 5.6
Max Green Setting (Gmax), s	* 9	59.5	* 12	49.4	15.0	53.9	* 10	* 51
Max Q Clear Time (g_c+I1), s	8.0	16.4	13.7	51.8	17.0	55.9	10.1	52.9
Green Ext Time (p_c), s	0.0	35.2	0.0	0.0	0.0	0.0	0.0	0.0

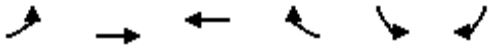
Intersection Summary	
HCM 2010 Ctrl Delay	163.1
HCM 2010 LOS	F

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	719	289	484	755	148	749
Future Volume (veh/h)	719	289	484	755	148	749
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1900	1845	1845	1845	1845
Adj Flow Rate, veh/h	719	289	484	755	148	749
Adj No. of Lanes	2	0	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	728	293	527	2278	433	857
Arrive On Green	0.30	0.30	0.30	0.65	0.25	0.25
Sat Flow, veh/h	2535	982	1757	3597	1757	1568
Grp Volume(v), veh/h	516	492	484	755	148	749
Grp Sat Flow(s),veh/h/ln	1752	1671	1757	1752	1757	1568
Q Serve(g_s), s	22.6	22.6	20.5	7.4	5.3	19.0
Cycle Q Clear(g_c), s	22.6	22.6	20.5	7.4	5.3	19.0
Prop In Lane		0.59	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	523	498	527	2278	433	857
V/C Ratio(X)	0.99	0.99	0.92	0.33	0.34	0.87
Avail Cap(c_a), veh/h	523	498	592	2408	433	857
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.9	26.9	26.1	6.0	23.9	15.2
Incr Delay (d2), s/veh	36.0	36.9	18.3	0.1	0.5	10.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.1	15.5	12.6	3.6	2.6	16.1
LnGrp Delay(d),s/veh	62.9	63.9	44.4	6.1	24.4	25.2
LnGrp LOS	E	E	D	A	C	C
Approach Vol, veh/h	1008			1239	897	
Approach Delay, s/veh	63.4			21.1	25.1	
Approach LOS	E			C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		23.0	27.1	27.0				54.1
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		19.0	26.0	23.0				53.0
Max Q Clear Time (g_c+I1), s		21.0	22.5	24.6				9.4
Green Ext Time (p_c), s		0.0	0.6	0.0				18.4

Intersection Summary	
HCM 2010 Ctrl Delay	35.8
HCM 2010 LOS	D



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	309	1348	2599	851	557	192
Future Volume (veh/h)	309	1348	2599	851	557	192
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	309	1348	2599	851	557	192
Adj No. of Lanes	2	3	3	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	353	3519	2737	852	674	310
Arrive On Green	0.10	0.70	0.54	0.54	0.20	0.20
Sat Flow, veh/h	3408	5202	5202	1568	3408	1568
Grp Volume(v), veh/h	309	1348	2599	851	557	192
Grp Sat Flow(s),veh/h/ln	1704	1679	1679	1568	1704	1568
Q Serve(g_s), s	6.9	8.5	37.6	41.9	12.1	8.7
Cycle Q Clear(g_c), s	6.9	8.5	37.6	41.9	12.1	8.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	353	3519	2737	852	674	310
V/C Ratio(X)	0.88	0.38	0.95	1.00	0.83	0.62
Avail Cap(c_a), veh/h	353	3519	2737	852	794	365
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.1	4.8	16.6	17.6	29.7	28.3
Incr Delay (d2), s/veh	21.0	0.1	8.3	30.5	6.3	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	3.9	19.2	33.8	6.3	7.6
LnGrp Delay(d),s/veh	55.2	4.9	25.0	48.1	36.0	30.7
LnGrp LOS	E	A	C	D	D	C
Approach Vol, veh/h		1657	3450		749	
Approach Delay, s/veh		14.2	30.7		34.6	
Approach LOS		B	C		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				58.0		19.3	12.0	46.0
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				54.0		18.0	8.0	42.0
Max Q Clear Time (g_c+I1), s				10.5		14.1	8.9	43.9
Green Ext Time (p_c), s				42.6		1.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	26.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	1002	87	889	2010	312	177	935	933	350	539	122
Future Volume (veh/h)	154	1002	87	889	2010	312	177	935	933	350	539	122
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1792	1845	1845	1792	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	154	1002	87	889	2010	312	177	935	933	350	539	122
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	6	3	3	6	3	3	3	3	3	3	3
Cap, veh/h	170	1044	334	824	1982	635	233	1469	457	341	1628	507
Arrive On Green	0.05	0.21	0.21	0.24	0.41	0.41	0.07	0.29	0.29	0.10	0.32	0.32
Sat Flow, veh/h	3408	4893	1568	3408	4893	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	154	1002	87	889	2010	312	177	935	933	350	539	122
Grp Sat Flow(s),veh/h/ln	1704	1631	1568	1704	1631	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	5.4	24.3	5.5	29.0	48.6	17.7	6.1	19.4	35.0	12.0	9.7	6.9
Cycle Q Clear(g_c), s	5.4	24.3	5.5	29.0	48.6	17.7	6.1	19.4	35.0	12.0	9.7	6.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	170	1044	334	824	1982	635	233	1469	457	341	1628	507
V/C Ratio(X)	0.90	0.96	0.26	1.08	1.01	0.49	0.76	0.64	2.04	1.03	0.33	0.24
Avail Cap(c_a), veh/h	170	1044	334	824	1982	635	284	1469	457	341	1628	507
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.7	46.7	39.3	45.5	35.7	26.5	54.9	37.0	42.5	54.0	30.8	29.8
Incr Delay (d2), s/veh	42.5	19.0	0.6	55.0	23.8	0.8	9.2	0.9	475.7	55.8	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	12.8	2.5	19.9	26.2	7.8	3.2	9.1	75.5	8.3	4.5	3.0
LnGrp Delay(d),s/veh	99.2	65.7	39.9	100.5	59.5	27.4	64.2	37.9	518.2	109.8	30.9	30.0
LnGrp LOS	F	E	D	F	F	C	E	D	F	F	C	C
Approach Vol, veh/h		1243			3211			2045			1011	
Approach Delay, s/veh		68.0			67.7			259.3			58.1	
Approach LOS		E			E			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	33.0	32.0	12.2	42.8	10.0	55.0	16.0	39.0
Change Period (Y+Rc), s	4.0	6.4	4.0	4.0	4.0	6.4	4.0	4.0
Max Green Setting (Gmax), s	29.0	25.6	10.0	37.0	6.0	48.6	12.0	35.0
Max Q Clear Time (g_c+I1), s	31.0	26.3	8.1	11.7	7.4	50.6	14.0	37.0
Green Ext Time (p_c), s	0.0	0.0	0.1	17.9	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		118.6
HCM 2010 LOS		F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	525	47	944	25	63	161	986	1181	13	105	1715	1101
Future Volume (veh/h)	525	47	944	25	63	161	986	1181	13	105	1715	1101
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1900	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	559	0	944	25	63	161	986	1181	13	105	1715	0
Adj No. of Lanes	2	0	1	0	1	1	1	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	712	0	318	19	48	57	549	2814	31	126	1536	478
Arrive On Green	0.20	0.00	0.20	0.04	0.04	0.04	0.32	0.55	0.55	0.07	0.31	0.00
Sat Flow, veh/h	3480	0	1553	517	1302	1568	1740	5086	56	1740	4988	1553
Grp Volume(v), veh/h	559	0	944	88	0	161	986	772	422	105	1715	0
Grp Sat Flow(s),veh/h/ln	1740	0	1553	1819	0	1568	1740	1663	1817	1740	1663	1553
Q Serve(g_s), s	22.8	0.0	30.7	5.5	0.0	5.5	47.3	20.3	20.3	8.9	46.2	0.0
Cycle Q Clear(g_c), s	22.8	0.0	30.7	5.5	0.0	5.5	47.3	20.3	20.3	8.9	46.2	0.0
Prop In Lane	1.00		1.00	0.28		1.00	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	712	0	318	67	0	57	549	1839	1005	126	1536	478
V/C Ratio(X)	0.78	0.00	2.97	1.32	0.00	2.80	1.80	0.42	0.42	0.84	1.12	0.00
Avail Cap(c_a), veh/h	712	0	318	67	0	57	549	1839	1005	194	1536	478
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.5	0.0	59.6	72.3	0.0	72.3	51.3	19.5	19.5	68.7	51.9	0.0
Incr Delay (d2), s/veh	5.3	0.0	895.0	217.5	0.0	856.3	366.0	0.1	0.1	10.2	61.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.5	0.0	92.2	6.8	0.0	16.1	78.5	9.3	10.2	4.7	30.0	0.0
LnGrp Delay(d),s/veh	61.8	0.0	954.7	289.7	0.0	928.5	417.3	19.6	19.6	78.9	113.8	0.0
LnGrp LOS	E		F	F		F	F	B	B	E	F	
Approach Vol, veh/h		1503			249			2180			1820	
Approach Delay, s/veh		622.6			702.8			199.5			111.8	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	52.0	51.0		11.0	15.2	87.8		36.0
Change Period (Y+Rc), s	* 4.7	4.8		5.5	* 4.4	* 4.8		5.3
Max Green Setting (Gmax), s	* 47	46.2		5.5	* 17	* 77		30.7
Max Q Clear Time (g_c+I1), s	49.3	48.2		7.5	10.9	22.3		32.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	14.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	304.1
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	616	797	163	96	1814	925	760	2133	202	149	970	733
Future Volume (veh/h)	616	797	163	96	1814	925	760	2133	202	149	970	733
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1759	1759	1759	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	616	797	163	96	1814	925	760	2133	202	149	970	733
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	8	8	8	4	4	4	4	4	4
Cap, veh/h	352	2005	624	136	1617	503	484	1879	585	124	1347	419
Arrive On Green	0.10	0.40	0.40	0.04	0.34	0.34	0.14	0.38	0.38	0.04	0.27	0.27
Sat Flow, veh/h	3408	5036	1568	3250	4803	1495	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	616	797	163	96	1814	925	760	2133	202	149	970	733
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1625	1601	1495	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	15.5	17.0	10.5	4.4	50.5	50.5	21.5	56.5	14.0	5.5	26.4	40.5
Cycle Q Clear(g_c), s	15.5	17.0	10.5	4.4	50.5	50.5	21.5	56.5	14.0	5.5	26.4	40.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	352	2005	624	136	1617	503	484	1879	585	124	1347	419
V/C Ratio(X)	1.75	0.40	0.26	0.71	1.12	1.84	1.57	1.14	0.35	1.20	0.72	1.75
Avail Cap(c_a), veh/h	352	2005	624	186	1617	503	484	1879	585	124	1347	419
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.3	32.3	30.3	71.0	49.8	49.7	64.3	46.7	33.5	72.3	49.6	54.8
Incr Delay (d2), s/veh	348.6	0.0	0.1	3.4	63.7	384.5	266.7	68.1	0.1	145.8	1.6	346.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.3	7.9	4.6	2.0	31.8	74.5	27.9	37.8	6.0	5.1	12.3	57.8
LnGrp Delay(d),s/veh	415.9	32.3	30.4	74.3	113.4	434.2	331.0	114.9	33.6	218.0	51.3	401.2
LnGrp LOS	F	C	C	E	F	F	F	F	C	F	D	F
Approach Vol, veh/h		1576			2835			3095			1852	
Approach Delay, s/veh		182.0			216.8			162.6			203.2	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.0	46.0	21.0	56.0	11.0	62.0	11.8	65.2
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	21.5	40.5	15.5	50.5	5.5	56.5	8.6	57.4
Max Q Clear Time (g_c+I1), s	23.5	42.5	17.5	52.5	7.5	58.5	6.4	19.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.4

Intersection Summary	
HCM 2010 Ctrl Delay	190.3
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	255	536	511	86	1274	4	270	1018	63	2	1420	320
Future Volume (veh/h)	255	536	511	86	1274	4	270	1018	63	2	1420	320
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	255	536	511	86	1274	4	270	1018	63	2	1420	320
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	262	1348	603	131	1213	543	236	1583	708	7	1348	603
Arrive On Green	0.08	0.38	0.38	0.04	0.35	0.35	0.07	0.45	0.45	0.00	0.38	0.38
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	255	536	511	86	1274	4	270	1018	63	2	1420	320
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	9.7	14.4	38.7	3.2	45.0	0.2	9.0	29.2	3.0	0.1	50.0	20.5
Cycle Q Clear(g_c), s	9.7	14.4	38.7	3.2	45.0	0.2	9.0	29.2	3.0	0.1	50.0	20.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	262	1348	603	131	1213	543	236	1583	708	7	1348	603
V/C Ratio(X)	0.97	0.40	0.85	0.66	1.05	0.01	1.14	0.64	0.09	0.27	1.05	0.53
Avail Cap(c_a), veh/h	262	1348	603	131	1213	543	236	1583	708	105	1348	603
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.9	29.1	36.5	61.7	42.5	27.9	60.5	27.5	20.4	64.8	40.0	30.9
Incr Delay (d2), s/veh	47.8	0.2	10.9	11.3	40.1	0.0	103.0	0.9	0.1	19.0	39.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	7.0	18.6	1.7	28.5	0.1	7.6	14.3	1.3	0.1	31.6	9.0
LnGrp Delay(d),s/veh	107.7	29.2	47.4	72.9	82.6	27.9	163.5	28.4	20.4	83.7	79.9	31.8
LnGrp LOS	F	C	D	E	F	C	F	C	C	F	F	C
Approach Vol, veh/h		1302			1364			1351			1742	
Approach Delay, s/veh		51.7			81.8			55.1			71.1	
Approach LOS		D			F			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.3	62.7	9.0	54.0	13.0	54.0	14.0	49.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	55.0	5.0	50.0	9.0	50.0	10.0	45.0
Max Q Clear Time (g_c+I1), s	2.1	31.2	5.2	40.7	11.0	52.0	11.7	47.0
Green Ext Time (p_c), s	0.0	20.0	0.0	7.8	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	65.5
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1111	1049	8	669	987	0	132	2018	955	38	645	879
Future Volume (veh/h)	1111	1049	8	669	987	0	132	2018	955	38	645	879
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	1111	1049	8	669	987	0	132	2018	955	38	645	879
Adj No. of Lanes	3	3	1	2	3	1	2	3	1	2	3	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	1101	1068	333	688	966	301	196	2035	633	69	1848	1013
Arrive On Green	0.22	0.21	0.21	0.20	0.19	0.00	0.06	0.40	0.40	0.02	0.37	0.37
Sat Flow, veh/h	4954	5036	1568	3408	5036	1568	3408	5036	1568	3408	5036	2760
Grp Volume(v), veh/h	1111	1049	8	669	987	0	132	2018	955	38	645	879
Grp Sat Flow(s),veh/h/ln	1651	1679	1568	1704	1679	1568	1704	1679	1568	1704	1679	1380
Q Serve(g_s), s	22.0	20.5	0.4	19.3	19.0	0.0	3.8	39.5	40.0	1.1	9.2	29.3
Cycle Q Clear(g_c), s	22.0	20.5	0.4	19.3	19.0	0.0	3.8	39.5	40.0	1.1	9.2	29.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1101	1068	333	688	966	301	196	2035	633	69	1848	1013
V/C Ratio(X)	1.01	0.98	0.02	0.97	1.02	0.00	0.68	0.99	1.51	0.55	0.35	0.87
Avail Cap(c_a), veh/h	1101	1068	333	688	966	301	275	2035	633	103	1848	1013
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.5	38.8	30.9	39.2	40.0	0.0	45.8	29.3	29.5	48.1	22.8	29.1
Incr Delay (d2), s/veh	29.4	23.2	0.0	27.3	34.4	0.0	4.0	18.0	236.5	6.7	0.1	8.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.0	11.8	0.2	11.7	11.9	0.0	1.9	21.5	58.9	0.6	4.3	12.2
LnGrp Delay(d),s/veh	67.9	62.0	30.9	66.5	74.4	0.0	49.8	47.3	266.0	54.7	22.9	37.3
LnGrp LOS	F	E	C	E	F		D	D	F	D	C	D
Approach Vol, veh/h		2168			1656			3105			1562	
Approach Delay, s/veh		64.9			71.2			114.7			31.8	
Approach LOS		E			E			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.0	44.0	24.0	25.0	9.7	40.3	26.0	23.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	40.0	20.0	21.0	8.0	35.0	22.0	19.0
Max Q Clear Time (g_c+I1), s	3.1	42.0	21.3	22.5	5.8	31.3	24.0	21.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	3.7	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	78.3
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	325	948	632	23	1695	36	1181	808	21	45	811	575
Future Volume (veh/h)	325	948	632	23	1695	36	1181	808	21	45	811	575
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	325	948	632	23	1695	36	1181	808	21	45	811	575
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	288	1716	534	44	1356	422	944	1753	784	78	863	386
Arrive On Green	0.08	0.34	0.34	0.01	0.27	0.27	0.28	0.50	0.50	0.02	0.25	0.25
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	325	948	632	23	1695	36	1181	808	21	45	811	575
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	11.0	19.9	44.3	0.9	35.0	2.2	36.0	19.5	0.9	1.7	29.5	32.0
Cycle Q Clear(g_c), s	11.0	19.9	44.3	0.9	35.0	2.2	36.0	19.5	0.9	1.7	29.5	32.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	288	1716	534	44	1356	422	944	1753	784	78	863	386
V/C Ratio(X)	1.13	0.55	1.18	0.52	1.25	0.09	1.25	0.46	0.03	0.58	0.94	1.49
Avail Cap(c_a), veh/h	288	1716	534	79	1356	422	944	1753	784	131	863	386
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.5	34.8	42.8	63.7	47.5	35.5	47.0	21.1	16.5	62.9	48.1	49.0
Incr Delay (d2), s/veh	91.7	0.4	100.1	9.1	118.9	0.1	121.9	0.2	0.0	6.6	17.8	233.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	9.3	34.0	0.5	31.1	1.0	32.9	9.5	0.4	0.9	16.4	38.9
LnGrp Delay(d),s/veh	151.2	35.2	142.9	72.8	166.4	35.6	168.9	21.3	16.5	69.4	65.9	282.8
LnGrp LOS	F	D	F	E	F	D	F	C	B	E	E	F
Approach Vol, veh/h		1905			1754			2010			1431	
Approach Delay, s/veh		90.7			162.4			108.0			153.2	
Approach LOS		F			F			F			F	

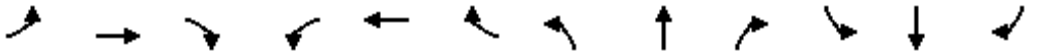
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	69.0	5.7	48.3	40.0	36.0	15.0	39.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	63.0	3.0	43.0	36.0	32.0	11.0	35.0
Max Q Clear Time (g_c+I1), s	3.7	21.5	2.9	46.3	38.0	34.0	13.0	37.0
Green Ext Time (p_c), s	0.0	21.7	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	125.9
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	1565	114	354	2409	9	8	1738	111	15	1399	70
Future Volume (veh/h)	95	1565	114	354	2409	9	8	1738	111	15	1399	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	95	1565	114	354	2409	9	8	1738	111	15	1399	70
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	107	1966	612	405	2407	749	26	1775	553	44	1801	561
Arrive On Green	0.03	0.39	0.39	0.12	0.48	0.48	0.01	0.35	0.35	0.01	0.36	0.36
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	95	1565	114	354	2409	9	8	1738	111	15	1399	70
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	3.5	35.1	6.1	13.0	61.0	0.4	0.3	43.6	6.3	0.6	31.5	3.8
Cycle Q Clear(g_c), s	3.5	35.1	6.1	13.0	61.0	0.4	0.3	43.6	6.3	0.6	31.5	3.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	107	1966	612	405	2407	749	26	1775	553	44	1801	561
V/C Ratio(X)	0.89	0.80	0.19	0.87	1.00	0.01	0.30	0.98	0.20	0.34	0.78	0.12
Avail Cap(c_a), veh/h	107	1966	612	427	2407	749	107	1775	553	107	1801	561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.6	34.4	25.6	55.3	33.3	17.5	63.0	40.9	28.8	62.5	36.5	27.6
Incr Delay (d2), s/veh	53.9	2.4	0.1	17.2	18.6	0.0	6.3	16.6	0.2	4.5	2.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	16.7	2.7	7.1	32.2	0.2	0.2	22.8	2.8	0.3	15.0	1.7
LnGrp Delay(d),s/veh	115.5	36.8	25.7	72.5	51.9	17.5	69.3	57.4	29.0	67.0	38.7	27.7
LnGrp LOS	F	D	C	E	F	B	E	E	C	E	D	C
Approach Vol, veh/h		1774			2772			1857			1484	
Approach Delay, s/veh		40.3			54.4			55.8			38.4	
Approach LOS		D			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.6	49.0	19.2	53.8	5.0	49.7	8.0	65.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	45.0	16.0	49.0	4.0	45.0	4.0	61.0
Max Q Clear Time (g_c+I1), s	2.6	45.6	15.0	37.1	2.3	33.5	5.5	63.0
Green Ext Time (p_c), s	0.0	0.0	0.1	11.7	0.0	10.9	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	48.6
HCM 2010 LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	235	668	0	1034	709	75	0	688	1213	120	772	240
Future Volume (veh/h)	235	668	0	1034	709	75	0	688	1213	120	772	240
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	235	668	0	1034	709	75	0	688	1213	120	772	240
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	312	829	258	1189	2125	662	4	963	978	144	1260	564
Arrive On Green	0.09	0.16	0.00	0.35	0.42	0.42	0.00	0.27	0.27	0.04	0.36	0.36
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	235	668	0	1034	709	75	0	688	1213	120	772	240
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	6.4	12.1	0.0	26.8	9.0	2.7	0.0	16.8	26.0	3.3	17.1	10.9
Cycle Q Clear(g_c), s	6.4	12.1	0.0	26.8	9.0	2.7	0.0	16.8	26.0	3.3	17.1	10.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	312	829	258	1189	2125	662	4	963	978	144	1260	564
V/C Ratio(X)	0.75	0.81	0.00	0.87	0.33	0.11	0.00	0.71	1.24	0.83	0.61	0.43
Avail Cap(c_a), veh/h	468	852	265	1730	2715	845	144	963	978	144	1260	564
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.9	38.0	0.0	28.8	18.4	16.6	0.0	30.9	17.8	45.0	24.9	22.9
Incr Delay (d2), s/veh	3.7	5.6	0.0	3.5	0.1	0.1	0.0	2.5	116.8	32.1	0.9	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	6.1	0.0	13.1	4.2	1.2	0.0	8.5	56.9	2.2	8.4	4.8
LnGrp Delay(d),s/veh	45.6	43.6	0.0	32.3	18.5	16.7	0.0	33.5	134.6	77.1	25.8	23.4
LnGrp LOS	D	D		C	B	B		C	F	E	C	C
Approach Vol, veh/h		903			1818			1901			1132	
Approach Delay, s/veh		44.2			26.3			98.0			30.7	
Approach LOS		D			C			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	30.0	37.0	19.6	0.0	38.0	12.7	43.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	26.0	48.0	16.0	4.0	26.0	13.0	51.0
Max Q Clear Time (g_c+I1), s	5.3	28.0	28.8	14.1	0.0	19.1	8.4	11.0
Green Ext Time (p_c), s	0.0	0.0	4.2	1.5	0.0	6.3	0.3	13.5

Intersection Summary	
HCM 2010 Ctrl Delay	53.6
HCM 2010 LOS	D

Intersection	
Intersection Delay, s/veh	297.2
Intersection LOS	F

Approach	EB	WB	NB	SB
Entry Lanes	0	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	0	570	2553	2237
Demand Flow Rate, veh/h	0	587	2629	2305
Vehicles Circulating, veh/h	2249	2629	0	669
Vehicles Exiting, veh/h	725	0	2249	2547
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	1077.0	103.1	320.0
Approach LOS	-	F	F	F

Lane	Left	Left	Right	Left	Right
Designated Moves	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Critical Headway, s	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	587	1236	1393	1083	1222
Cap Entry Lane, veh/h	179	1130	1130	684	707
Entry HV Adj Factor	0.971	0.971	0.971	0.971	0.970
Flow Entry, veh/h	570	1200	1353	1052	1186
Cap Entry, veh/h	174	1097	1097	664	686
V/C Ratio	3.272	1.094	1.233	1.583	1.727
Control Delay, s/veh	1077.0	74.8	128.2	286.7	349.6
LOS	F	F	F	F	F
95th %tile Queue, veh	53	29	44	56	69

Intersection	
Intersection Delay, s/veh	191.0
Intersection LOS	F

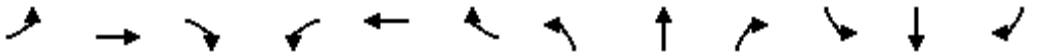
Approach	EB	WB	NB	SB
Entry Lanes	1	0	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	527	0	2468	2183
Demand Flow Rate, veh/h	542	0	2542	2248
Vehicles Circulating, veh/h	2248	2629	340	0
Vehicles Exiting, veh/h	0	253	2450	2629
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	638.7	0.0	221.6	48.4
Approach LOS	F	-	F	E

Lane	Left	Left	Right	Left	Right
Designated Moves	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Critical Headway, s	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	542	1195	1347	1057	1191
Cap Entry Lane, veh/h	234	876	891	1130	1130
Entry HV Adj Factor	0.972	0.971	0.971	0.970	0.971
Flow Entry, veh/h	527	1160	1308	1026	1157
Cap Entry, veh/h	228	850	865	1097	1097
V/C Ratio	2.314	1.365	1.512	0.935	1.054
Control Delay, s/veh	638.7	187.9	251.4	33.3	61.7
LOS	F	F	F	D	F
95th %tile Queue, veh	42	48	63	16	25

Cumulative Plus All Projects

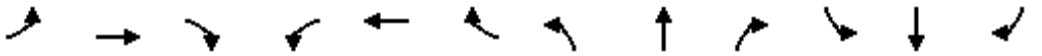
(Proposed Project)

Ultimate Mitigation PM



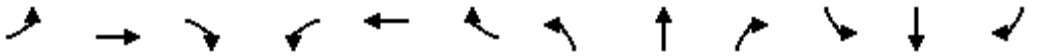
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	258	671	258	152	959	962	469	1242	38	1284	1880	150
Future Volume (vph)	258	671	258	152	959	962	469	1242	38	1284	1880	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		0.97	0.95	0.88	0.97	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	3327		3367	3471	2733	3367	4988	1553	3367	4988	1553
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	3327		3367	3471	2733	3367	4988	1553	3367	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	258	671	258	152	959	962	469	1242	38	1284	1880	150
RTOR Reduction (vph)	0	31	0	0	0	738	0	0	29	0	0	62
Lane Group Flow (vph)	258	898	0	152	959	224	469	1242	9	1284	1880	88
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	8.0	32.0		6.0	30.0	30.0	20.5	31.0	31.0	45.0	55.5	55.5
Effective Green, g (s)	8.0	32.0		6.0	30.0	30.0	20.5	31.0	31.0	45.0	55.5	55.5
Actuated g/C Ratio	0.06	0.25		0.05	0.23	0.23	0.16	0.24	0.24	0.35	0.43	0.43
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	207	818		155	801	630	530	1189	370	1165	2129	663
v/s Ratio Prot	0.08	c0.27		0.05	c0.28		0.14	c0.25		c0.38	0.38	
v/s Ratio Perm						0.08			0.01			0.06
v/c Ratio	1.25	1.10		0.98	1.20	0.35	0.88	1.04	0.02	1.10	0.88	0.13
Uniform Delay, d1	61.0	49.0		61.9	50.0	41.9	53.6	49.5	37.9	42.5	34.3	22.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	144.6	61.7		66.2	100.8	0.3	16.1	38.5	0.0	59.0	4.7	0.1
Delay (s)	205.6	110.7		128.2	150.8	42.2	69.7	88.0	37.9	101.5	39.0	22.7
Level of Service	F	F		F	F	D	E	F	D	F	D	C
Approach Delay (s)		131.3			98.7			82.0			62.5	
Approach LOS		F			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	85.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	107.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



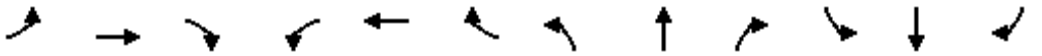
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	670	242	219	721	518	243	895	182	775	1677	99
Future Volume (vph)	81	670	242	219	721	518	243	895	182	775	1677	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.91	0.91	1.00	0.91		1.00	0.91	1.00
Frt	1.00	0.96		1.00	0.98	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	3365		1736	3244	1413	1736	4861		1736	4988	1553
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	3365		1736	3244	1413	1736	4861		1736	4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	81	670	242	219	721	518	243	895	182	775	1677	99
RTOR Reduction (vph)	0	25	0	0	10	285	0	21	0	0	0	38
Lane Group Flow (vph)	81	887	0	219	851	93	243	1056	0	775	1677	61
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	12.1	31.0		18.0	36.9	36.9	23.6	31.0		54.0	61.4	61.4
Effective Green, g (s)	12.1	31.0		18.0	36.9	36.9	23.6	31.0		54.0	61.4	61.4
Actuated g/C Ratio	0.08	0.21		0.12	0.25	0.25	0.16	0.21		0.36	0.41	0.41
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	141	695		208	798	347	273	1004		624	2041	635
v/s Ratio Prot	0.05	c0.26		c0.13	0.26		0.14	c0.22		c0.45	0.34	
v/s Ratio Perm						0.07						0.04
v/c Ratio	0.57	1.28		1.05	1.07	0.27	0.89	1.05		1.24	0.82	0.10
Uniform Delay, d1	66.5	59.5		66.0	56.6	45.6	61.9	59.5		48.0	39.4	27.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.6	135.6		77.0	51.2	0.4	28.1	43.1		122.1	2.8	0.1
Delay (s)	72.0	195.1		143.0	107.7	46.1	90.0	102.6		170.1	42.2	27.3
Level of Service	E	F		F	F	D	F	F		F	D	C
Approach Delay (s)		185.0			97.0			100.3			80.5	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	104.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	116.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



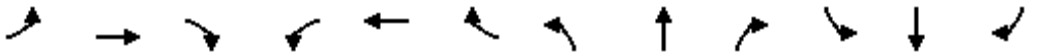
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	253	469	138	509	487	776	125	0	276	687	0	408
Future Volume (vph)	253	469	138	509	487	776	125	0	276	687	0	408
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	4.6	4.6	5.5	4.3	5.5		4.6	4.6	4.8	4.8	4.8
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00		0.95	0.95	0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.94	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.97	1.00	0.95	0.95	1.00
Satd. Flow (prot)	3400	3505	1568	3400	3505	1568		1584	1475	1649	1649	1553
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.97	1.00	0.95	0.95	1.00
Satd. Flow (perm)	3400	3505	1568	3400	3505	1568		1584	1475	1649	1649	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	253	469	138	509	487	776	125	0	276	687	0	408
RTOR Reduction (vph)	0	0	115	0	0	553	0	115	175	0	0	282
Lane Group Flow (vph)	253	469	23	509	487	223	0	93	18	343	344	126
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	4%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA	custom	Split	NA	Perm	Split	NA	Perm
Protected Phases	3	8		7	4	5	6	6		2	2	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	11.5	18.1	18.1	18.7	25.6	30.9		9.8	9.8	30.8	30.8	30.8
Effective Green, g (s)	11.5	18.1	18.1	18.7	25.6	30.9		9.8	9.8	30.8	30.8	30.8
Actuated g/C Ratio	0.11	0.17	0.17	0.17	0.24	0.29		0.09	0.09	0.29	0.29	0.29
Clearance Time (s)	5.5	4.6	4.6	5.5	4.3	5.5		4.6	4.6	4.8	4.8	4.8
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	2.0		1.0	1.0	1.0	1.0	1.0
Lane Grp Cap (vph)	363	589	263	590	833	449		144	134	471	471	444
v/s Ratio Prot	0.07	c0.13		c0.15	0.14	c0.02		c0.06		0.21	c0.21	
v/s Ratio Perm			0.01			0.12			0.01			0.08
v/c Ratio	0.70	0.80	0.09	0.86	0.58	0.50		0.64	0.13	0.73	0.73	0.28
Uniform Delay, d1	46.4	43.0	37.8	43.3	36.3	31.9		47.3	45.0	34.7	34.7	29.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.7	6.9	0.1	12.0	0.7	0.3		7.1	0.2	4.7	5.0	0.1
Delay (s)	51.1	49.9	37.9	55.3	37.0	32.2		54.4	45.2	39.4	39.7	30.0
Level of Service	D	D	D	E	D	C		D	D	D	D	C
Approach Delay (s)		48.3			40.2			50.0			36.0	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	41.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	107.7	Sum of lost time (s)	25.0
Intersection Capacity Utilization	80.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



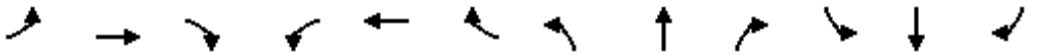
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	455	0	1458	0	0	0	0	1878	1036	0	1957	521
Future Volume (vph)	455	0	1458	0	0	0	0	1878	1036	0	1957	521
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4		6.4					5.1	4.0		4.6	4.0
Lane Util. Factor	0.97		0.88					0.91	1.00		0.91	1.00
Frt	1.00		0.85					1.00	0.85		1.00	0.85
Flt Protected	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)	3367		2733					4988	1553		4988	1553
Flt Permitted	0.95		1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)	3367		2733					4988	1553		4988	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	455	0	1458	0	0	0	0	1878	1036	0	1957	521
RTOR Reduction (vph)	0	0	9	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	455	0	1449	0	0	0	0	1878	1036	0	1957	521
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm					NA	Free		NA	Free
Protected Phases								2			6	
Permitted Phases	4		4						Free			Free
Actuated Green, G (s)	60.6		60.6					47.9	120.0		48.4	120.0
Effective Green, g (s)	60.6		60.6					47.9	120.0		48.4	120.0
Actuated g/C Ratio	0.51		0.51					0.40	1.00		0.40	1.00
Clearance Time (s)	6.4		6.4					5.1			4.6	
Vehicle Extension (s)	1.0		1.0					1.0			1.0	
Lane Grp Cap (vph)	1700		1380					1991	1553		2011	1553
v/s Ratio Prot								0.38			c0.39	
v/s Ratio Perm	0.14		c0.53						0.67			0.34
v/c Ratio	0.27		1.05					0.94	0.67		0.97	0.34
Uniform Delay, d1	17.0		29.7					34.7	0.0		35.2	0.0
Progression Factor	1.00		1.00					1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0		38.4					9.7	2.3		14.1	0.6
Delay (s)	17.0		68.1					44.5	2.3		49.3	0.6
Level of Service	B		E					D	A		D	A
Approach Delay (s)		56.0			0.0			29.5			39.1	
Approach LOS		E			A			C			D	

Intersection Summary			
HCM 2000 Control Delay	39.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	98.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



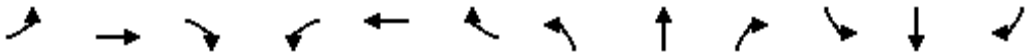
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	216	550	7	1	502	2	8	188	0	1	276	306
Future Volume (vph)	216	550	7	1	502	2	8	188	0	1	276	306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1671	1756		1641	1726		1671	1759		1671	1621	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1671	1756		1641	1726		1671	1759		1671	1621	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	216	550	7	1	502	2	8	188	0	1	276	306
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	0	45	0
Lane Group Flow (vph)	216	556	0	1	504	0	8	188	0	1	537	0
Heavy Vehicles (%)	8%	8%	8%	10%	10%	10%	8%	8%	8%	8%	8%	8%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	11.0	40.4		0.7	30.1		0.7	30.5		0.7	30.5	
Effective Green, g (s)	11.0	40.4		0.7	30.1		0.7	30.5		0.7	30.5	
Actuated g/C Ratio	0.12	0.46		0.01	0.34		0.01	0.35		0.01	0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	208	803		13	588		13	607		13	559	
v/s Ratio Prot	c0.13	0.32		0.00	c0.29		c0.00	0.11		0.00	c0.33	
v/s Ratio Perm												
v/c Ratio	1.04	0.69		0.08	0.86		0.62	0.31		0.08	0.96	
Uniform Delay, d1	38.6	19.0		43.5	27.1		43.7	21.2		43.5	28.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	72.8	2.6		2.5	11.8		64.0	0.3		2.5	28.3	
Delay (s)	111.5	21.6		46.0	38.9		107.7	21.5		46.0	56.6	
Level of Service	F	C		D	D		F	C		D	E	
Approach Delay (s)		46.7			38.9			25.0			56.5	
Approach LOS		D			D			C			E	

Intersection Summary			
HCM 2000 Control Delay	45.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	88.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	547	1011	9	2	722	6	7	15	2	5	21	1089
Future Volume (vph)	547	1011	9	2	722	6	7	15	2	5	21	1089
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.9	6.9	5.5	6.0			6.1			6.2	5.5
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95			1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00			0.99			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (prot)	3303	3406	1524	1719	3434			1798			1810	1553
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.99			0.99	1.00
Satd. Flow (perm)	3303	3406	1524	1719	3434			1798			1810	1553
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	547	1011	9	2	722	6	7	15	2	5	21	1089
RTOR Reduction (vph)	0	0	2	0	0	0	0	2	0	0	0	33
Lane Group Flow (vph)	547	1011	7	2	728	0	0	22	0	0	26	1056
Heavy Vehicles (%)	6%	6%	6%	5%	5%	5%	3%	3%	3%	4%	4%	4%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	pm+ov
Protected Phases	1	6		5	2		8	8		4	4	1
Permitted Phases			6									4
Actuated Green, G (s)	71.0	104.9	104.9	0.6	35.4			1.7			3.6	74.6
Effective Green, g (s)	71.0	104.9	104.9	0.6	35.4			1.7			3.6	74.6
Actuated g/C Ratio	0.52	0.77	0.77	0.00	0.26			0.01			0.03	0.55
Clearance Time (s)	5.5	6.9	6.9	5.5	6.0			6.1			6.2	5.5
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0			1.0			1.0	1.0
Lane Grp Cap (vph)	1730	2636	1179	7	897			22			48	855
v/s Ratio Prot	0.17	0.30		0.00	c0.21			c0.01			0.01	c0.65
v/s Ratio Perm			0.00									0.03
v/c Ratio	0.32	0.38	0.01	0.29	0.81			1.00			0.54	1.23
Uniform Delay, d1	18.4	4.9	3.5	67.2	46.9			66.9			65.1	30.5
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.0	0.0	0.0	8.0	5.4			192.2			6.5	115.8
Delay (s)	18.4	4.9	3.5	75.3	52.3			259.1			71.7	146.2
Level of Service	B	A	A	E	D			F			E	F
Approach Delay (s)		9.6			52.3			259.1			144.5	
Approach LOS		A			D			F			F	

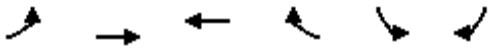
Intersection Summary			
HCM 2000 Control Delay	64.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	135.5	Sum of lost time (s)	24.7
Intersection Capacity Utilization	105.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	15	38	145	6	210	41	1466	172	715	1465	6
Future Volume (vph)	11	15	38	145	6	210	41	1466	172	715	1465	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00		0.97	0.95	0.95	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	0.89		1.00	0.86	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1752	1646		3400	1504	1490	1752	3505	1568	3400	3503	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1752	1646		3400	1504	1490	1752	3505	1568	3400	3503	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	11	15	38	145	6	210	41	1466	172	715	1465	6
RTOR Reduction (vph)	0	35	0	0	90	94	0	0	86	0	0	0
Lane Group Flow (vph)	11	18	0	145	19	13	41	1466	86	715	1471	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	0.7	6.1		4.7	10.1	10.1	2.3	37.9	37.9	18.1	53.7	
Effective Green, g (s)	0.7	6.1		4.7	10.1	10.1	2.3	37.9	37.9	18.1	53.7	
Actuated g/C Ratio	0.01	0.07		0.06	0.12	0.12	0.03	0.46	0.46	0.22	0.65	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	14	121		192	183	181	48	1604	717	743	2271	
v/s Ratio Prot	0.01	c0.01		c0.04	c0.01		0.02	c0.42		c0.21	0.42	
v/s Ratio Perm						0.01			0.06			
v/c Ratio	0.79	0.15		0.76	0.10	0.07	0.85	0.91	0.12	0.96	0.65	
Uniform Delay, d1	41.0	35.9		38.5	32.3	32.2	40.1	20.9	12.9	32.0	8.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	130.6	0.6		15.5	0.2	0.2	76.9	8.4	0.1	24.0	0.6	
Delay (s)	171.5	36.5		54.0	32.6	32.4	117.0	29.3	13.0	56.0	9.5	
Level of Service	F	D		D	C	C	F	C	B	E	A	
Approach Delay (s)		59.7			41.1			29.8			24.7	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	28.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	82.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	81.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	1200	801	1662	1901	0
Future Volume (vph)	2	1200	801	1662	1901	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	
Frt	1.00	1.00	1.00	0.85	1.00	
Flt Protected	0.95	1.00	1.00	1.00	0.95	
Satd. Flow (prot)	1752	3505	3505	1568	3400	
Flt Permitted	0.95	1.00	1.00	1.00	0.95	
Satd. Flow (perm)	1752	3505	3505	1568	3400	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2	1200	801	1662	1901	0
RTOR Reduction (vph)	0	0	0	717	0	0
Lane Group Flow (vph)	2	1200	801	945	1901	0
Turn Type	Prot	NA	NA	Perm	Prot	
Protected Phases	4	5	5		6	
Permitted Phases				5		
Actuated Green, G (s)	1.2	46.0	46.0	46.0	76.1	
Effective Green, g (s)	1.2	46.0	46.0	46.0	76.1	
Actuated g/C Ratio	0.01	0.34	0.34	0.34	0.56	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	15	1191	1191	533	1912	
v/s Ratio Prot	c0.00	0.34	0.23		c0.56	
v/s Ratio Perm				c0.60		
v/c Ratio	0.13	1.01	0.67	1.77	0.99	
Uniform Delay, d1	66.5	44.7	38.2	44.7	29.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.0	27.9	1.5	355.6	19.1	
Delay (s)	70.6	72.6	39.7	400.3	48.5	
Level of Service	E	E	D	F	D	
Approach Delay (s)		72.6	283.0		48.5	
Approach LOS		E	F		D	

Intersection Summary			
HCM 2000 Control Delay	157.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.28		
Actuated Cycle Length (s)	135.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	112.9%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	585	23	206	193	715	9	2261	139	749	2580	3
Future Volume (veh/h)	0	585	23	206	193	715	9	2261	139	749	2580	3
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1845	1845	1845	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	0	585	23	206	193	715	9	2261	139	749	2580	3
Adj No. of Lanes	2	2	1	2	2	1	2	3	0	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	2	631	282	173	945	714	21	2083	127	627	3153	4
Arrive On Green	0.00	0.18	0.18	0.05	0.27	0.27	0.01	0.43	0.43	0.19	0.61	0.61
Sat Flow, veh/h	3375	3471	1553	3408	3505	1568	3375	4807	293	3375	5145	6
Grp Volume(v), veh/h	0	585	23	206	193	715	9	1558	842	749	1667	916
Grp Sat Flow(s),veh/h/ln	1688	1736	1553	1704	1752	1568	1688	1663	1775	1688	1663	1826
Q Serve(g_s), s	0.0	24.6	1.8	7.5	6.3	39.9	0.4	64.2	64.2	27.5	57.7	57.7
Cycle Q Clear(g_c), s	0.0	24.6	1.8	7.5	6.3	39.9	0.4	64.2	64.2	27.5	57.7	57.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.17	1.00		0.00
Lane Grp Cap(c), veh/h	2	631	282	173	945	714	21	1441	769	627	2038	1119
V/C Ratio(X)	0.00	0.93	0.08	1.19	0.20	1.00	0.43	1.08	1.09	1.20	0.82	0.82
Avail Cap(c_a), veh/h	68	680	304	173	945	714	68	1441	769	627	2038	1119
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	59.6	50.3	70.3	41.8	40.3	73.3	42.0	42.0	60.3	22.3	22.3
Incr Delay (d2), s/veh	0.0	17.6	0.0	130.2	0.0	34.1	4.9	49.0	61.2	102.9	2.6	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	13.3	0.8	6.6	3.1	35.8	0.2	39.2	44.5	21.7	27.1	30.4
LnGrp Delay(d),s/veh	0.0	77.2	50.4	200.5	41.9	74.5	78.3	90.9	103.1	163.2	24.8	26.9
LnGrp LOS		E	D	F	D	F	E	F	F	F	C	C
Approach Vol, veh/h		608			1114			2409			3332	
Approach Delay, s/veh		76.2			92.1			95.2			56.5	
Approach LOS		E			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	96.1	0.0	45.6	33.0	69.5	13.0	32.6
Change Period (Y+Rc), s	5.5	5.3	5.5	* 5.7	5.5	* 5.3	5.5	* 5.7
Max Green Setting (Gmax), s	3.0	88.6	3.0	* 33	27.5	* 64	7.5	* 29
Max Q Clear Time (g_c+I1), s	2.4	59.7	0.0	41.9	29.5	66.2	9.5	26.6
Green Ext Time (p_c), s	0.0	23.4	0.0	0.0	0.0	0.0	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	75.9
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	158	1747	810	62	1515	893	624	1673	106	1002	1638	122
Future Volume (veh/h)	158	1747	810	62	1515	893	624	1673	106	1002	1638	122
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1792	1792	1792	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	158	1747	810	62	1515	0	624	1673	106	1002	1638	122
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	3	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	6	6	6	6	4	4	4	4	4	4
Cap, veh/h	91	1428	445	68	1411	439	263	2890	900	419	2341	729
Arrive On Green	0.03	0.29	0.29	0.02	0.29	0.00	0.08	0.58	0.58	0.47	0.47	0.47
Sat Flow, veh/h	3312	4893	1524	3312	4893	1524	3375	4988	1553	736	4988	1553
Grp Volume(v), veh/h	158	1747	810	62	1515	0	624	1673	106	1002	1638	122
Grp Sat Flow(s),veh/h/ln	1656	1631	1524	1656	1631	1524	1688	1663	1553	245	1663	1553
Q Serve(g_s), s	4.0	42.4	42.4	2.7	41.9	0.0	11.3	30.8	4.5	53.4	37.7	6.6
Cycle Q Clear(g_c), s	4.0	42.4	42.4	2.7	41.9	0.0	11.3	30.8	4.5	68.2	37.7	6.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	91	1428	445	68	1411	439	263	2890	900	419	2341	729
V/C Ratio(X)	1.73	1.22	1.82	0.91	1.07	0.00	2.38	0.58	0.12	2.39	0.70	0.17
Avail Cap(c_a), veh/h	91	1428	445	68	1411	439	263	2890	900	419	2341	729
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.7	51.5	51.5	71.0	51.7	0.0	67.0	19.3	13.8	55.4	30.5	22.2
Incr Delay (d2), s/veh	371.3	107.0	378.6	75.6	46.4	0.0	631.3	0.2	0.0	633.7	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	33.2	64.5	2.0	24.9	0.0	28.3	14.1	1.9	30.2	17.5	2.8
LnGrp Delay(d),s/veh	442.0	158.5	430.1	146.7	98.1	0.0	698.3	19.5	13.8	689.1	31.3	22.2
LnGrp LOS	F	F	F	F	F		F	B	B	F	C	C
Approach Vol, veh/h		2715			1577			2403			2762	
Approach Delay, s/veh		256.0			100.0			195.5			269.5	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	9.0	47.3	16.0	73.0	8.5	47.8		89.0
Change Period (Y+Rc), s	5.0	* 5.4	* 4.7	4.8	5.5	* 5.4		4.8
Max Green Setting (Gmax), s	4.0	* 42	* 11	68.2	3.0	* 42		84.2
Max Q Clear Time (g_c+I1), s	6.0	43.9	13.3	70.2	4.7	44.4		32.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0		50.1

Intersection Summary	
HCM 2010 Ctrl Delay	218.6
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	1210	512	29	1147	166	618	139	8	158	415	90
Future Volume (veh/h)	68	1210	512	29	1147	166	618	139	8	158	415	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	68	1210	512	29	1147	166	618	139	8	158	415	90
Adj No. of Lanes	1	2	0	1	2	0	2	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	86	1188	482	36	1413	204	550	574	488	214	392	333
Arrive On Green	0.05	0.49	0.49	0.02	0.46	0.46	0.16	0.31	0.31	0.06	0.21	0.21
Sat Flow, veh/h	1757	2434	988	1757	3075	444	3408	1845	1568	3408	1845	1568
Grp Volume(v), veh/h	68	857	865	29	652	661	618	139	8	158	415	90
Grp Sat Flow(s),veh/h/ln	1757	1752	1670	1757	1752	1766	1704	1845	1568	1704	1845	1568
Q Serve(g_s), s	5.2	66.5	66.5	2.2	43.7	44.0	22.0	7.7	0.5	6.2	29.0	6.5
Cycle Q Clear(g_c), s	5.2	66.5	66.5	2.2	43.7	44.0	22.0	7.7	0.5	6.2	29.0	6.5
Prop In Lane	1.00		0.59	1.00		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	86	855	815	36	806	812	550	574	488	214	392	333
V/C Ratio(X)	0.79	1.00	1.06	0.79	0.81	0.81	1.12	0.24	0.02	0.74	1.06	0.27
Avail Cap(c_a), veh/h	103	855	815	90	835	842	550	574	488	500	392	333
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.1	34.9	34.9	66.5	31.7	31.8	57.2	35.0	32.5	62.8	53.7	44.8
Incr Delay (d2), s/veh	28.3	31.3	49.2	30.9	5.8	6.0	77.2	0.2	0.0	5.0	61.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	39.5	41.7	1.4	22.3	22.8	16.2	3.9	0.2	3.1	21.4	2.9
LnGrp Delay(d),s/veh	92.4	66.2	84.1	97.4	37.5	37.8	134.4	35.2	32.5	67.8	115.2	45.3
LnGrp LOS	F	F	F	F	D	D	F	D	C	E	F	D
Approach Vol, veh/h		1790			1342			765			663	
Approach Delay, s/veh		75.9			39.0			115.3			94.4	
Approach LOS		E			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.6	46.4	6.8	70.5	26.0	33.0	10.7	66.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	20.0	31.0	7.0	66.0	22.0	29.0	8.0	65.0
Max Q Clear Time (g_c+I1), s	8.2	9.7	4.2	68.5	24.0	31.0	7.2	46.0
Green Ext Time (p_c), s	0.4	3.8	0.0	0.0	0.0	0.0	0.0	16.6

Intersection Summary	
HCM 2010 Ctrl Delay	74.3
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	31	17	531	44	548	48	2122	349	520	2580	59
Future Volume (veh/h)	73	31	17	531	44	548	48	2122	349	520	2580	59
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1827	1827	1827	1827	1827	1900
Adj Flow Rate, veh/h	73	31	17	531	44	548	48	2122	349	520	2580	59
Adj No. of Lanes	1	1	0	2	1	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	66	42	23	561	304	258	61	2406	749	561	3092	70
Arrive On Green	0.04	0.04	0.04	0.16	0.16	0.16	0.04	0.48	0.48	0.17	0.62	0.62
Sat Flow, veh/h	1757	1121	615	3408	1845	1568	1740	4988	1553	3375	5018	114
Grp Volume(v), veh/h	73	0	48	531	44	548	48	2122	349	520	1706	933
Grp Sat Flow(s),veh/h/ln	1757	0	1736	1704	1845	1568	1740	1663	1553	1688	1663	1807
Q Serve(g_s), s	5.5	0.0	4.0	22.5	3.0	24.0	4.0	55.9	21.9	22.1	58.9	59.8
Cycle Q Clear(g_c), s	5.5	0.0	4.0	22.5	3.0	24.0	4.0	55.9	21.9	22.1	58.9	59.8
Prop In Lane	1.00		0.35	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	66	0	66	561	304	258	61	2406	749	561	2049	1113
V/C Ratio(X)	1.10	0.00	0.73	0.95	0.14	2.12	0.78	0.88	0.47	0.93	0.83	0.84
Avail Cap(c_a), veh/h	66	0	66	561	304	258	127	2508	781	591	2049	1113
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.1	0.0	69.4	60.2	52.1	60.9	69.7	34.0	25.2	59.9	22.0	22.2
Incr Delay (d2), s/veh	140.9	0.0	30.5	25.0	0.1	517.9	7.8	3.7	0.2	19.8	2.9	5.5
Initial Q Delay(d3),s/veh	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.0	2.5	12.6	1.5	47.5	2.1	26.4	9.4	11.9	27.6	31.3
LnGrp Delay(d),s/veh	212.0	0.0	99.9	85.2	52.2	578.8	77.6	37.7	25.3	79.6	24.9	27.7
LnGrp LOS	F		F	F	D	F	E	D	C	E	C	C
Approach Vol, veh/h		121			1123			2519			3159	
Approach Delay, s/veh		167.5			324.8			36.8			34.8	
Approach LOS		F			F			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.2	95.0		11.0	29.7	75.5		29.5
Change Period (Y+Rc), s	* 5.1	* 5.2		5.5	5.5	* 5.2		5.5
Max Green Setting (Gmax), s	* 11	* 89		5.5	25.5	* 73		24.0
Max Q Clear Time (g_c+I1), s	6.0	61.8		7.5	24.1	57.9		26.0
Green Ext Time (p_c), s	0.0	22.2		0.0	0.1	12.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	84.9
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	199	1244	479	559	1047	725	513	1101	152	851	1873	184
Future Volume (veh/h)	199	1244	479	559	1047	725	513	1101	152	851	1873	184
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	199	1244	479	559	1047	725	513	1101	152	851	1873	184
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	4	4	4
Cap, veh/h	208	1160	361	509	1605	500	437	1166	363	805	1709	532
Arrive On Green	0.06	0.23	0.23	0.15	0.32	0.32	0.13	0.23	0.23	0.24	0.34	0.34
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	199	1244	479	559	1047	725	513	1101	152	851	1873	184
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	8.8	34.7	34.7	22.5	26.9	48.0	19.5	32.7	12.5	35.9	51.6	13.3
Cycle Q Clear(g_c), s	8.8	34.7	34.7	22.5	26.9	48.0	19.5	32.7	12.5	35.9	51.6	13.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	208	1160	361	509	1605	500	437	1166	363	805	1709	532
V/C Ratio(X)	0.96	1.07	1.33	1.10	0.65	1.45	1.17	0.94	0.42	1.06	1.10	0.35
Avail Cap(c_a), veh/h	208	1160	361	509	1605	500	437	1166	363	805	1709	532
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.5	58.0	58.0	64.1	44.1	51.3	65.6	56.7	49.0	57.4	49.5	36.9
Incr Delay (d2), s/veh	49.3	48.0	164.7	69.2	0.8	213.8	100.0	14.8	0.3	48.1	53.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	21.2	31.6	15.4	12.6	50.5	15.1	16.6	5.4	22.0	32.0	5.7
LnGrp Delay(d),s/veh	119.8	106.0	222.6	133.3	44.9	265.1	165.5	71.5	49.3	105.4	102.5	37.1
LnGrp LOS	F	F	F	F	D	F	F	E	D	F	F	D
Approach Vol, veh/h		1922			2331			1766			2908	
Approach Delay, s/veh		136.5			134.6			96.9			99.2	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	57.2	14.7	53.7	41.4	40.8	28.0	40.4
Change Period (Y+Rc), s	5.5	* 5.6	5.5	* 5.7	5.5	* 5.6	5.5	* 5.7
Max Green Setting (Gmax), s	19.5	* 52	9.2	* 48	35.9	* 35	22.5	* 34
Max Q Clear Time (g_c+I1), s	21.5	53.6	10.8	50.0	37.9	34.7	24.5	36.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	116.0
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	253	2158	132	441	1460	511	579	903	128	555	2277	161
Future Volume (veh/h)	253	2158	132	441	1460	511	579	903	128	555	2277	161
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1845	1845	1792	1792	1845	1845	1845	1827	1845	1827
Adj Flow Rate, veh/h	253	2158	132	441	1460	511	579	903	128	555	2277	0
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	6	6	3	3	6	6	3	3	3	4	3	4
Cap, veh/h	294	1655	530	231	1569	488	331	1418	442	595	1804	556
Arrive On Green	0.09	0.34	0.34	0.07	0.32	0.32	0.10	0.28	0.28	0.18	0.36	0.00
Sat Flow, veh/h	3312	4893	1568	3408	4893	1524	3408	5036	1568	3375	5036	1553
Grp Volume(v), veh/h	253	2158	132	441	1460	511	579	903	128	555	2277	0
Grp Sat Flow(s),veh/h/ln	1656	1631	1568	1704	1631	1524	1704	1679	1568	1688	1679	1553
Q Serve(g_s), s	11.3	50.9	9.2	10.2	43.5	48.3	14.6	23.6	9.6	24.4	53.9	0.0
Cycle Q Clear(g_c), s	11.3	50.9	9.2	10.2	43.5	48.3	14.6	23.6	9.6	24.4	53.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	294	1655	530	231	1569	488	331	1418	442	595	1804	556
V/C Ratio(X)	0.86	1.30	0.25	1.91	0.93	1.05	1.75	0.64	0.29	0.93	1.26	0.00
Avail Cap(c_a), veh/h	297	1655	530	231	1569	488	331	1418	442	628	1804	556
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	67.7	49.8	36.0	70.2	49.5	51.1	67.9	47.3	42.3	61.1	48.3	0.0
Incr Delay (d2), s/veh	20.8	141.3	0.1	424.9	10.1	53.3	350.3	1.0	0.4	19.9	122.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	44.5	4.0	18.4	21.1	27.5	22.9	11.1	4.2	13.1	45.4	0.0
LnGrp Delay(d),s/veh	88.4	191.1	36.1	495.0	59.6	104.4	418.2	48.3	42.7	81.1	171.0	0.0
LnGrp LOS	F	F	D	F	E	F	F	D	D	F	F	
Approach Vol, veh/h		2543			2412			1610			2832	
Approach Delay, s/veh		172.8			148.7			180.9			153.4	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	59.0	17.6	53.9	31.5	47.5	15.0	56.5
Change Period (Y+Rc), s	* 5.4	5.1	* 4.3	5.6	5.0	5.1	* 4.8	* 5.6
Max Green Setting (Gmax), s	* 15	53.9	* 14	47.6	28.0	40.9	* 10	* 51
Max Q Clear Time (g_c+I1), s	16.6	55.9	13.3	50.3	26.4	25.6	12.2	52.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	12.4	0.0	0.0

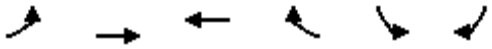
Intersection Summary	
HCM 2010 Ctrl Delay	162.2
HCM 2010 LOS	F

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	693	179	715	762	225	558
Future Volume (veh/h)	693	179	715	762	225	558
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1900	1845	1845	1845	1845
Adj Flow Rate, veh/h	693	179	715	762	225	558
Adj No. of Lanes	2	0	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	685	177	746	2516	337	967
Arrive On Green	0.25	0.25	0.42	0.72	0.19	0.19
Sat Flow, veh/h	2851	712	1757	3597	1757	1568
Grp Volume(v), veh/h	440	432	715	762	225	558
Grp Sat Flow(s),veh/h/ln	1752	1719	1757	1752	1757	1568
Q Serve(g_s), s	22.0	22.0	35.0	6.9	10.5	17.0
Cycle Q Clear(g_c), s	22.0	22.0	35.0	6.9	10.5	17.0
Prop In Lane		0.41	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	435	427	746	2516	337	967
V/C Ratio(X)	1.01	1.01	0.96	0.30	0.67	0.58
Avail Cap(c_a), veh/h	435	427	773	2570	337	967
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.3	33.3	24.7	4.5	33.2	10.1
Incr Delay (d2), s/veh	46.1	46.7	22.4	0.1	5.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.1	15.8	21.5	3.3	5.6	8.3
LnGrp Delay(d),s/veh	79.5	80.1	47.1	4.6	38.2	11.0
LnGrp LOS	F	F	D	A	D	B
Approach Vol, veh/h	872			1477	783	
Approach Delay, s/veh	79.8			25.2	18.8	
Approach LOS	E			C	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		21.0	41.6	26.0				67.6
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		17.0	39.0	22.0				65.0
Max Q Clear Time (g_c+I1), s		19.0	37.0	24.0				8.9
Green Ext Time (p_c), s		0.0	0.6	0.0				17.4

Intersection Summary	
HCM 2010 Ctrl Delay	38.8
HCM 2010 LOS	D



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	141	2268	1668	647	801	316
Future Volume (veh/h)	141	2268	1668	647	801	316
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	141	2268	1668	647	801	316
Adj No. of Lanes	2	3	3	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	233	2780	2049	638	1003	462
Arrive On Green	0.07	0.55	0.41	0.41	0.29	0.29
Sat Flow, veh/h	3408	5202	5202	1568	3408	1568
Grp Volume(v), veh/h	141	2268	1668	647	801	316
Grp Sat Flow(s),veh/h/ln	1704	1679	1679	1568	1704	1568
Q Serve(g_s), s	2.1	19.1	15.3	21.2	11.3	9.3
Cycle Q Clear(g_c), s	2.1	19.1	15.3	21.2	11.3	9.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	233	2780	2049	638	1003	462
V/C Ratio(X)	0.60	0.82	0.81	1.01	0.80	0.68
Avail Cap(c_a), veh/h	262	2804	2049	638	1178	542
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.6	9.5	13.7	15.4	17.0	16.2
Incr Delay (d2), s/veh	3.2	2.0	2.6	39.2	3.4	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	9.1	7.5	21.6	5.7	8.2
LnGrp Delay(d),s/veh	26.8	11.5	16.3	54.7	20.4	19.1
LnGrp LOS	C	B	B	F	C	B
Approach Vol, veh/h		2409	2315		1117	
Approach Delay, s/veh		12.4	27.1		20.0	
Approach LOS		B	C		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				32.8		19.3	7.6	25.2
Change Period (Y+Rc), s				4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s				29.0		18.0	4.0	21.0
Max Q Clear Time (g_c+I1), s				21.1		13.3	4.1	23.2
Green Ext Time (p_c), s				7.6		2.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	19.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	282	1789	102	1020	1188	350	76	642	784	395	811	90
Future Volume (veh/h)	282	1789	102	1020	1188	350	76	642	784	395	811	90
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1792	1845	1845	1792	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	282	1789	102	1020	1188	350	76	642	784	395	811	90
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	6	3	3	6	3	3	3	3	3	3	3
Cap, veh/h	336	1629	522	755	2230	715	118	1079	336	341	1408	439
Arrive On Green	0.10	0.33	0.33	0.22	0.46	0.46	0.03	0.21	0.21	0.10	0.28	0.28
Sat Flow, veh/h	3408	4893	1568	3408	4893	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	282	1789	102	1020	1188	350	76	642	784	395	811	90
Grp Sat Flow(s),veh/h/ln	1704	1631	1568	1704	1631	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	11.4	46.6	6.5	31.0	24.4	21.9	3.1	16.1	30.0	14.0	19.4	6.1
Cycle Q Clear(g_c), s	11.4	46.6	6.5	31.0	24.4	21.9	3.1	16.1	30.0	14.0	19.4	6.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	336	1629	522	755	2230	715	118	1079	336	341	1408	439
V/C Ratio(X)	0.84	1.10	0.20	1.35	0.53	0.49	0.64	0.59	2.33	1.16	0.58	0.21
Avail Cap(c_a), veh/h	438	1629	522	755	2230	715	170	1079	336	341	1408	439
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.0	46.7	33.3	54.5	27.4	26.7	66.7	49.5	55.0	63.0	43.3	38.5
Incr Delay (d2), s/veh	10.8	54.3	0.3	166.9	0.3	0.7	5.8	0.9	609.3	99.3	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	29.2	2.9	32.1	11.1	9.6	1.6	7.5	69.8	11.3	9.1	2.7
LnGrp Delay(d),s/veh	72.8	101.0	33.6	221.4	27.7	27.4	72.5	50.4	664.3	162.3	43.9	38.8
LnGrp LOS	E	F	C	F	C	C	E	D	F	F	D	D
Approach Vol, veh/h		2173			2558			1502			1296	
Approach Delay, s/veh		94.2			104.9			371.9			79.6	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.0	53.0	8.8	43.2	17.8	70.2	18.0	34.0
Change Period (Y+Rc), s	4.0	6.4	4.0	4.0	4.0	6.4	4.0	4.0
Max Green Setting (Gmax), s	31.0	46.6	7.0	37.0	18.0	59.6	14.0	30.0
Max Q Clear Time (g_c+I1), s	33.0	48.6	5.1	21.4	13.4	26.4	16.0	32.0
Green Ext Time (p_c), s	0.0	0.0	0.0	11.6	0.4	31.8	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	150.7
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1023	44	920	27	77	110	654	2127	17	146	1016	934
Future Volume (veh/h)	1023	44	920	27	77	110	654	2127	17	146	1016	934
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1900	1845	1845	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	1054	0	920	27	77	110	654	2127	17	146	1016	0
Adj No. of Lanes	2	0	1	0	1	1	1	3	0	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	4	4	4
Cap, veh/h	981	0	438	22	62	72	426	2253	18	111	1284	400
Arrive On Green	0.28	0.00	0.28	0.05	0.05	0.05	0.25	0.44	0.44	0.06	0.26	0.00
Sat Flow, veh/h	3480	0	1553	473	1348	1568	1740	5104	41	1740	4988	1553
Grp Volume(v), veh/h	1054	0	920	104	0	110	654	1385	759	146	1016	0
Grp Sat Flow(s),veh/h/ln	1740	0	1553	1821	0	1568	1740	1663	1820	1740	1663	1553
Q Serve(g_s), s	33.7	0.0	33.7	5.5	0.0	5.5	29.3	47.7	47.8	7.6	22.7	0.0
Cycle Q Clear(g_c), s	33.7	0.0	33.7	5.5	0.0	5.5	29.3	47.7	47.8	7.6	22.7	0.0
Prop In Lane	1.00		1.00	0.26		1.00	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	981	0	438	84	0	72	426	1468	803	111	1284	400
V/C Ratio(X)	1.07	0.00	2.10	1.24	0.00	1.53	1.53	0.94	0.94	1.32	0.79	0.00
Avail Cap(c_a), veh/h	981	0	438	84	0	72	426	1485	813	111	1301	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	42.9	0.0	42.9	57.0	0.0	57.0	45.1	32.0	32.0	56.0	41.4	0.0
Incr Delay (d2), s/veh	51.1	0.0	503.8	176.8	0.0	294.6	251.9	12.2	19.0	194.0	3.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	23.0	0.0	75.7	6.9	0.0	8.3	43.8	24.2	28.1	9.6	10.8	0.0
LnGrp Delay(d),s/veh	94.0	0.0	546.7	233.8	0.0	351.6	297.1	44.2	51.0	250.0	44.5	0.0
LnGrp LOS	F		F	F		F	F	D	D	F	D	
Approach Vol, veh/h		1974			214			2798			1162	
Approach Delay, s/veh		305.0			294.4			105.1			70.3	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	34.0	35.6		11.0	12.0	57.6		39.0
Change Period (Y+Rc), s	* 4.7	4.8		5.5	* 4.4	* 4.8		5.3
Max Green Setting (Gmax), s	* 29	31.2		5.5	* 7.6	* 53		33.7
Max Q Clear Time (g_c+I1), s	31.3	24.7		7.5	9.6	49.8		35.7
Green Ext Time (p_c), s	0.0	5.0		0.0	0.0	3.0		0.0

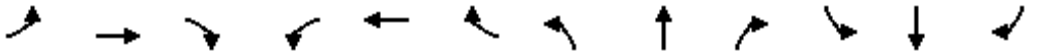
Intersection Summary			
HCM 2010 Ctrl Delay		169.3	
HCM 2010 LOS		F	

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	725	1572	357	116	867	372	253	1286	104	729	1852	841
Future Volume (veh/h)	725	1572	357	116	867	372	253	1286	104	729	1852	841
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1759	1759	1759	1827	1827	1827	1827	1827	1827
Adj Flow Rate, veh/h	725	1572	357	116	867	372	253	1286	104	729	1852	841
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	8	8	8	4	4	4	4	4	4
Cap, veh/h	669	1698	529	135	875	272	277	1293	403	692	1906	593
Arrive On Green	0.20	0.34	0.34	0.04	0.18	0.18	0.08	0.26	0.26	0.20	0.38	0.38
Sat Flow, veh/h	3408	5036	1568	3250	4803	1495	3375	4988	1553	3375	4988	1553
Grp Volume(v), veh/h	725	1572	357	116	867	372	253	1286	104	729	1852	841
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1625	1601	1495	1688	1663	1553	1688	1663	1553
Q Serve(g_s), s	27.5	42.1	27.4	5.0	25.2	25.5	10.4	36.0	7.4	28.7	51.1	53.5
Cycle Q Clear(g_c), s	27.5	42.1	27.4	5.0	25.2	25.5	10.4	36.0	7.4	28.7	51.1	53.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	669	1698	529	135	875	272	277	1293	403	692	1906	593
V/C Ratio(X)	1.08	0.93	0.68	0.86	0.99	1.37	0.91	0.99	0.26	1.05	0.97	1.42
Avail Cap(c_a), veh/h	669	1698	529	135	875	272	277	1293	403	692	1906	593
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.2	44.7	39.8	66.7	57.1	57.3	63.8	51.7	41.2	55.7	42.5	43.3
Incr Delay (d2), s/veh	59.4	9.0	2.8	38.3	28.1	186.4	31.5	23.6	0.1	49.2	14.4	197.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.4	20.9	12.3	3.0	13.4	24.7	6.1	19.4	3.2	18.1	26.0	55.4
LnGrp Delay(d),s/veh	115.6	53.7	42.6	105.0	85.2	243.6	95.3	75.4	41.3	104.8	56.9	240.8
LnGrp LOS	F	D	D	F	F	F	F	E	D	F	E	F
Approach Vol, veh/h		2654			1355			1643			3422	
Approach Delay, s/veh		69.1			130.4			76.3			112.3	
Approach LOS		E			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	59.0	33.0	31.0	34.2	41.8	11.3	52.7
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	11.5	53.5	27.5	25.5	28.7	36.3	5.8	47.2
Max Q Clear Time (g_c+I1), s	12.4	55.5	29.5	27.5	30.7	38.0	7.0	44.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	95.9
HCM 2010 LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	334	1107	309	76	721	3	566	1221	90	4	1036	328
Future Volume (veh/h)	334	1107	309	76	721	3	566	1221	90	4	1036	328
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	334	1107	309	76	721	3	566	1221	90	4	1036	328
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	381	1101	493	129	842	377	571	1630	729	14	1057	473
Arrive On Green	0.11	0.31	0.31	0.04	0.24	0.24	0.17	0.46	0.46	0.00	0.30	0.30
Sat Flow, veh/h	3408	3505	1568	3408	3505	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	334	1107	309	76	721	3	566	1221	90	4	1036	328
Grp Sat Flow(s),veh/h/ln	1704	1752	1568	1704	1752	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	8.6	28.1	15.1	2.0	17.6	0.1	14.8	25.6	2.9	0.1	26.2	16.5
Cycle Q Clear(g_c), s	8.6	28.1	15.1	2.0	17.6	0.1	14.8	25.6	2.9	0.1	26.2	16.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	381	1101	493	129	842	377	571	1630	729	14	1057	473
V/C Ratio(X)	0.88	1.01	0.63	0.59	0.86	0.01	0.99	0.75	0.12	0.28	0.98	0.69
Avail Cap(c_a), veh/h	381	1101	493	152	861	385	571	1630	729	152	1057	473
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	30.7	26.2	42.4	32.5	25.9	37.2	19.7	13.6	44.4	31.0	27.6
Incr Delay (d2), s/veh	20.0	28.5	2.5	4.2	8.4	0.0	35.3	2.0	0.1	10.0	22.8	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	17.8	6.8	1.0	9.5	0.1	9.7	12.7	1.3	0.1	16.0	7.7
LnGrp Delay(d),s/veh	59.2	59.2	28.7	46.6	40.9	25.9	72.5	21.6	13.7	54.5	53.8	31.9
LnGrp LOS	E	F	C	D	D	C	E	C	B	D	D	C
Approach Vol, veh/h		1750			800			1877			1368	
Approach Delay, s/veh		53.8			41.4			36.6			48.6	
Approach LOS		D			D			D			D	

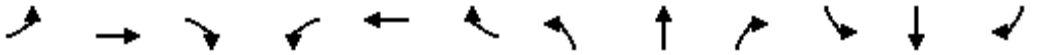
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.4	45.6	7.4	32.1	19.0	31.0	14.0	25.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	38.0	4.0	28.0	15.0	27.0	10.0	22.0
Max Q Clear Time (g_c+I1), s	2.1	27.6	4.0	30.1	16.8	28.2	10.6	19.6
Green Ext Time (p_c), s	0.0	9.3	0.0	0.0	0.0	0.0	0.0	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	45.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	958	912	90	946	894	0	75	759	762	41	1914	934
Future Volume (veh/h)	958	912	90	946	894	0	75	759	762	41	1914	934
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	958	912	90	946	894	0	75	759	762	41	1914	934
Adj No. of Lanes	3	3	1	2	3	1	2	3	1	2	3	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	1062	760	237	992	1147	357	120	2027	631	73	1956	1072
Arrive On Green	0.21	0.15	0.15	0.29	0.23	0.00	0.04	0.40	0.40	0.02	0.39	0.39
Sat Flow, veh/h	4954	5036	1568	3408	5036	1568	3408	5036	1568	3408	5036	2760
Grp Volume(v), veh/h	958	912	90	946	894	0	75	759	762	41	1914	934
Grp Sat Flow(s),veh/h/ln	1651	1679	1568	1704	1679	1568	1704	1679	1568	1704	1679	1380
Q Serve(g_s), s	22.5	18.0	6.2	32.5	19.9	0.0	2.6	12.6	48.0	1.4	44.7	37.3
Cycle Q Clear(g_c), s	22.5	18.0	6.2	32.5	19.9	0.0	2.6	12.6	48.0	1.4	44.7	37.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1062	760	237	992	1147	357	120	2027	631	73	1956	1072
V/C Ratio(X)	0.90	1.20	0.38	0.95	0.78	0.00	0.62	0.37	1.21	0.56	0.98	0.87
Avail Cap(c_a), veh/h	1121	760	237	1000	1147	357	143	2027	631	86	1956	1072
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.6	50.6	45.6	41.5	43.2	0.0	56.7	25.1	35.6	57.8	36.0	33.7
Incr Delay (d2), s/veh	9.8	102.5	1.0	18.2	3.5	0.0	6.1	0.1	107.8	6.7	15.5	8.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.3	15.5	2.7	17.7	9.6	0.0	1.3	5.9	39.6	0.7	23.5	15.3
LnGrp Delay(d),s/veh	55.5	153.1	46.6	59.6	46.8	0.0	62.8	25.2	143.4	64.5	51.5	41.7
LnGrp LOS	E	F	D	E	D		E	C	F	E	D	D
Approach Vol, veh/h		1960			1840			1596			2889	
Approach Delay, s/veh		100.5			53.4			83.4			48.5	
Approach LOS		F			D			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	52.0	38.7	22.0	8.2	50.3	29.6	31.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	3.0	48.0	35.0	18.0	5.0	46.0	27.0	26.0
Max Q Clear Time (g_c+I1), s	3.4	50.0	34.5	20.0	4.6	46.7	24.5	21.9
Green Ext Time (p_c), s	0.0	0.0	0.3	0.0	0.0	0.0	1.1	3.5

Intersection Summary	
HCM 2010 Ctrl Delay	68.6
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	534	1562	973	34	1124	18	833	788	46	89	810	359
Future Volume (veh/h)	534	1562	973	34	1124	18	833	788	46	89	810	359
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	534	1562	973	34	1124	18	833	788	46	89	810	359
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	598	1998	622	63	1207	376	791	1337	598	143	672	300
Arrive On Green	0.18	0.40	0.40	0.02	0.24	0.24	0.23	0.38	0.38	0.04	0.19	0.19
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	534	1562	973	34	1124	18	833	788	46	89	810	359
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	15.2	26.9	39.3	1.0	21.7	0.9	23.0	17.8	1.9	2.5	19.0	19.0
Cycle Q Clear(g_c), s	15.2	26.9	39.3	1.0	21.7	0.9	23.0	17.8	1.9	2.5	19.0	19.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	598	1998	622	63	1207	376	791	1337	598	143	672	300
V/C Ratio(X)	0.89	0.78	1.56	0.54	0.93	0.05	1.05	0.59	0.08	0.62	1.21	1.19
Avail Cap(c_a), veh/h	619	1998	622	103	1219	380	791	1337	598	172	672	300
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.0	26.2	29.9	48.3	36.9	29.0	38.1	24.5	19.5	46.7	40.1	40.1
Incr Delay (d2), s/veh	15.0	2.1	261.8	7.1	12.6	0.1	47.1	0.7	0.1	4.9	106.4	115.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	12.8	62.1	0.5	11.4	0.4	15.9	8.7	0.8	1.3	19.1	17.8
LnGrp Delay(d),s/veh	55.0	28.2	291.7	55.4	49.5	29.0	85.2	25.1	19.6	51.6	146.5	155.6
LnGrp LOS	E	C	F	E	D	C	F	C	B	D	F	F
Approach Vol, veh/h		3069			1176			1667			1258	
Approach Delay, s/veh		116.4			49.4			55.0			142.4	
Approach LOS		F			D			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	41.8	5.8	43.3	27.0	23.0	21.4	27.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	37.0	3.0	39.0	23.0	19.0	18.0	24.0
Max Q Clear Time (g_c+I1), s	4.5	19.8	3.0	41.3	25.0	21.0	17.2	23.7
Green Ext Time (p_c), s	0.0	11.6	0.0	0.0	0.0	0.0	0.2	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	95.7
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	2180	52	179	1810	6	21	1480	236	14	1598	97
Future Volume (veh/h)	76	2180	52	179	1810	6	21	1480	236	14	1598	97
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	76	2180	52	179	1810	6	21	1480	236	14	1598	97
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	133	1778	554	254	1957	609	63	1881	586	45	1855	578
Arrive On Green	0.04	0.35	0.35	0.07	0.39	0.39	0.02	0.37	0.37	0.01	0.37	0.37
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	5036	1568	3408	5036	1568
Grp Volume(v), veh/h	76	2180	52	179	1810	6	21	1480	236	14	1598	97
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1679	1568	1704	1679	1568
Q Serve(g_s), s	1.9	30.4	1.9	4.4	29.5	0.2	0.5	22.5	9.6	0.4	25.3	3.6
Cycle Q Clear(g_c), s	1.9	30.4	1.9	4.4	29.5	0.2	0.5	22.5	9.6	0.4	25.3	3.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	133	1778	554	254	1957	609	63	1881	586	45	1855	578
V/C Ratio(X)	0.57	1.23	0.09	0.71	0.92	0.01	0.34	0.79	0.40	0.31	0.86	0.17
Avail Cap(c_a), veh/h	158	1778	554	317	1988	619	158	1881	586	158	1871	583
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	27.9	18.6	38.9	25.1	16.2	41.8	23.9	19.9	42.1	25.2	18.3
Incr Delay (d2), s/veh	3.9	106.9	0.1	5.2	7.9	0.0	3.1	2.3	0.4	3.8	4.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	31.6	0.8	2.3	15.0	0.1	0.3	10.8	4.2	0.2	12.4	1.6
LnGrp Delay(d),s/veh	44.5	134.8	18.7	44.1	33.0	16.2	44.9	26.2	20.3	45.9	29.5	18.5
LnGrp LOS	D	F	B	D	C	B	D	C	C	D	C	B
Approach Vol, veh/h		2308			1995			1737			1709	
Approach Delay, s/veh		129.2			34.0			25.7			29.0	
Approach LOS		F			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.1	36.2	10.4	34.4	5.6	35.7	7.4	37.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	32.0	8.0	30.0	4.0	32.0	4.0	34.0
Max Q Clear Time (g_c+I1), s	2.4	24.5	6.4	32.4	2.5	27.3	3.9	31.5
Green Ext Time (p_c), s	0.0	7.3	0.1	0.0	0.0	4.4	0.0	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	59.4
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	298	666	0	1076	718	120	0	795	952	91	719	287
Future Volume (veh/h)	298	666	0	1076	718	120	0	795	952	91	719	287
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	298	666	0	1076	718	120	0	795	952	91	719	287
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	382	844	263	1162	1997	622	4	925	949	149	1239	554
Arrive On Green	0.11	0.17	0.00	0.34	0.40	0.40	0.00	0.26	0.26	0.04	0.35	0.35
Sat Flow, veh/h	3408	5036	1568	3408	5036	1568	3408	3505	1568	3408	3505	1568
Grp Volume(v), veh/h	298	666	0	1076	718	120	0	795	952	91	719	287
Grp Sat Flow(s),veh/h/ln	1704	1679	1568	1704	1679	1568	1704	1752	1568	1704	1752	1568
Q Serve(g_s), s	7.4	11.1	0.0	26.5	8.7	4.4	0.0	18.8	23.0	2.3	14.5	12.6
Cycle Q Clear(g_c), s	7.4	11.1	0.0	26.5	8.7	4.4	0.0	18.8	23.0	2.3	14.5	12.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	382	844	263	1162	1997	622	4	925	949	149	1239	554
V/C Ratio(X)	0.78	0.79	0.00	0.93	0.36	0.19	0.00	0.86	1.00	0.61	0.58	0.52
Avail Cap(c_a), veh/h	508	925	288	1212	1997	622	156	925	949	156	1239	554
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	34.8	0.0	27.6	18.5	17.2	0.0	30.5	17.2	40.9	22.9	22.3
Incr Delay (d2), s/veh	5.5	4.3	0.0	11.7	0.1	0.1	0.0	8.2	30.1	6.3	0.7	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	5.5	0.0	14.3	4.1	1.9	0.0	10.1	30.4	1.2	7.1	5.6
LnGrp Delay(d),s/veh	43.2	39.1	0.0	39.4	18.6	17.3	0.0	38.7	47.3	47.2	23.6	23.1
LnGrp LOS	D	D		D	B	B		D	F	D	C	C
Approach Vol, veh/h		964			1914			1747			1097	
Approach Delay, s/veh		40.3			30.2			43.4			25.4	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	27.0	33.7	18.6	0.0	34.8	13.8	38.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	23.0	31.0	16.0	4.0	23.0	13.0	34.0
Max Q Clear Time (g_c+I1), s	4.3	25.0	28.5	13.1	0.0	16.5	9.4	10.7
Green Ext Time (p_c), s	0.0	0.0	1.2	1.6	0.0	5.8	0.4	11.1

Intersection Summary	
HCM 2010 Ctrl Delay	35.0
HCM 2010 LOS	D

Intersection	
Intersection Delay, s/veh	210.1
Intersection LOS	F

Approach	EB	WB	NB	SB
Entry Lanes	0	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	0	470	2291	2190
Demand Flow Rate, veh/h	0	484	2360	2256
Vehicles Circulating, veh/h	2299	2360	0	621
Vehicles Exiting, veh/h	578	0	2299	2223
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	607.2	62.0	279.7
Approach LOS	-	F	F	F

Lane	Left	Left	Right	Left	Right
Designated Moves	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Critical Headway, s	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	484	1109	1251	1060	1196
Cap Entry Lane, veh/h	217	1130	1130	709	732
Entry HV Adj Factor	0.972	0.971	0.971	0.971	0.971
Flow Entry, veh/h	470	1077	1214	1030	1161
Cap Entry, veh/h	210	1097	1097	689	710
V/C Ratio	2.235	0.981	1.107	1.495	1.635
Control Delay, s/veh	607.2	42.3	79.5	247.6	308.2
LOS	F	E	F	F	F
95th %tile Queue, veh	37	19	30	50	63

Intersection	
Intersection Delay, s/veh	341.5
Intersection LOS	F

Approach	EB	WB	NB	SB
Entry Lanes	1	0	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	776	0	2213	2231
Demand Flow Rate, veh/h	798	0	2279	2298
Vehicles Circulating, veh/h	2298	2359	715	0
Vehicles Exiting, veh/h	0	635	2381	2359
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	1181.5	0.0	336.8	54.2
Approach LOS	F	-	F	F

Lane	Left	Left	Right	Left	Right
Designated Moves	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Critical Headway, s	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	798	1071	1208	1080	1218
Cap Entry Lane, veh/h	226	661	685	1130	1130
Entry HV Adj Factor	0.972	0.971	0.971	0.971	0.971
Flow Entry, veh/h	776	1040	1173	1049	1182
Cap Entry, veh/h	220	642	665	1097	1097
V/C Ratio	3.528	1.620	1.763	0.956	1.078
Control Delay, s/veh	1181.5	303.7	366.1	37.0	69.4
LOS	F	F	F	E	F
95th %tile Queue, veh	73	57	70	17	27