14 TRAFFIC AND CIRCULATION

INTRODUCTION

This chapter summarizes the traffic impact analysis (TIA) performed for the preferred project as well as the Commercial Project Alternative. The TIA for the preferred project was completed by Kimley-Horn in November 2015, and the TIA for the Commercial Project Alternative was completed in December 2014. The TIA and all supplemental memos and appendices are included in Appendix J of this EIR. Unit counts for the preferred project are based on the single-family and multi-family units on the site plan, and the counts for the commercial portion are based on an assumed 108,900 square feet of shopping center space.

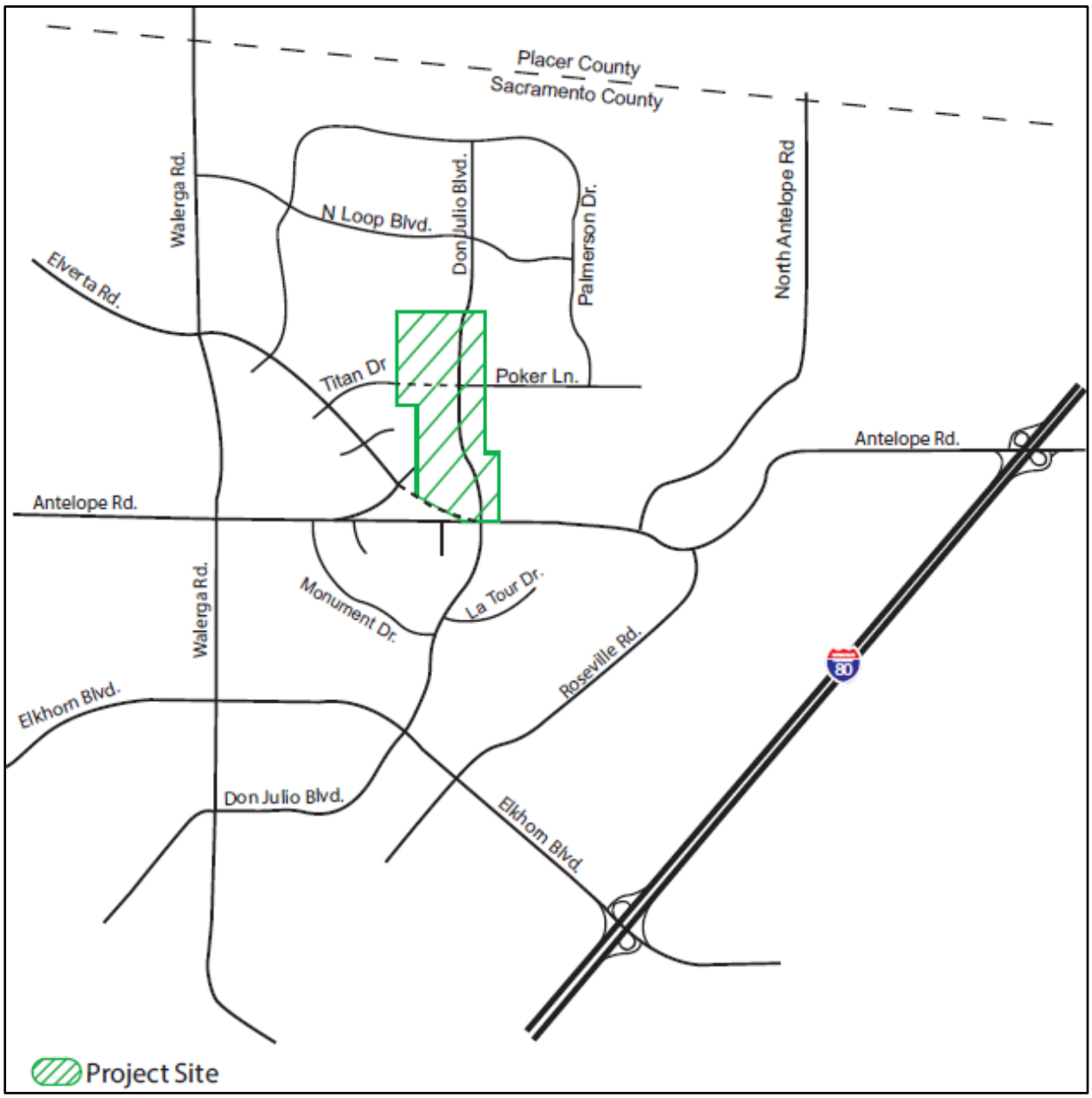
It is important to note that the TIA for the preferred project reflects an older iteration of the site plan, with 495 single family units, 196 apartment units, and 108,900 square feet for shopping center used for analysis. The current version of the project includes 498 single family units, up to 196 apartment units, and 108,900 square feet for shopping center space. The overall number of trips has been reduced below the values used for analysis, and Sacramento County Department of Transportation staff determined that the difference for analysis was negligible.

Note that the analysis refers to roadways, intersections, bicycle lanes, etc., as "facilities".

ENVIRONMENTAL SETTING

The Barrett Ranch East project is an approximately 128.2 acre project proposed to be developed with 498 single-family detached residential units, up to 196 multi-family apartment units, and a shopping center. The project site is located within the Antelope community of Sacramento County. Several roadways provide access to the site, including Don Julio Boulevard, Titan Drive, Poker Lane, Elverta Road, and Antelope Road. A general map of the existing roadway system can be seen in **Plate TC-1**.

Plate TC-1: Project Location and Existing Roadway System



Existing Roadway System

The following describes the existing transportation system in the vicinity of the project site, including the roadway, transit, as well as pedestrian and bicycle systems. The roadway facilities analyzed throughout this chapter include:

- 19 intersections:
  - Two within the City of Citrus Heights
  - 17 within Sacramento County
- 15 Roadway Segments (Sacramento County's jurisdiction)
- 18 Freeway Facilities (Caltrans' jurisdiction)
  - Three eastbound and three westbound I-80 mainline segments
  - Two eastbound and two westbound I-80 ramp diverges
  - Four eastbound and four westbound I-80 ramp merges
- Bicycle, transit and pedestrian facilities

Interstate I-80

Interstate 80 (I-80) is an east-west interstate facility located approximately two miles southeast of the proposed project. I-80 is a coast-to-coast route that regionally provides primary connectivity between the San Francisco Bay Area, Sacramento, and Reno/Tahoe. Primary access to the project site from I-80 is provided at the Antelope Road and Elkhorn Boulevard interchanges. In the vicinity of Antelope Road, I-80 carries approximately 180,000 vehicles per day (VPD) with five lanes in each direction.

Antelope Road

Antelope Road extends from Watt Avenue to the west, through the southern portion of the project site, to Old Auburn Road to the east. Along this route, Antelope Road includes a full access interchange with I-80 and provides and crosses over the Union Pacific Railroad (UPRR) facilities. West of I-80, Antelope Road is classified as a six lane thoroughfare west to its intersection with Esteem Drive/Elverta Road. Both west of Esteem Drive/Elverta Road and east of I-80, this facility is classified as a four lane arterial. Near Walerga Road, Antelope road accommodates approximately 28,400 VPD with two lanes in each direction. Farther to the east and closer to I-80, Antelope Road carries approximately 29,000 VPD with three lanes in each direction.

Elverta Road

Elverta Road extends west from its existing terminus near Esteem Drive/Antelope Road, spanning most of northern Sacramento County, connecting to State Route 70/99 (SR-70/99) and farther west to Garden Highway north of Sacramento International Airport. In the immediate vicinity of the project site, Elverta Road accommodates approximately 10,400 VPD as a six lane thoroughfare.

The proposed project would construct the roadway link connecting the existing Elverta Road to Antelope Road just west of Don Julio Boulevard. This construction, along with the anticipated abandonment of the existing segment of Antelope Road between

Esteem Drive and Don Julio Boulevard, could result in minor access and circulation changes for Component Way and Esteem Drive.

Elkhorn Boulevard

Similar to Antelope Road, Elkhorn Boulevard provides vital east-west connectivity in northern Sacramento County, including an overcrossing of the UPRR facilities near its interchange with I-80. This six lane thoroughfare has additional connectivity spanning from SR-70/99 on the west to I-80 on the east where it changes its name to Greenback Lane in the City of Citrus Heights. Near Walerga Road, Elkhorn Boulevard carries approximately 32,300 VPD with two lanes in each direction, increasing to 51,150 VPD closer to I-80 with three lanes in each direction.

Don Julio Boulevard

Don Julio Boulevard is the primary north-south arterial street that would serve as the proposed project's primary internal transportation facility. This roadway currently traverses the vacant project site. Don Julio Boulevard is two lanes north of North Loop Road, three lanes (two northbound, one southbound) between North Loop Road and the norther project boundary, two lanes through the project site, and four lanes south of Antelope Road. Currently, this roadway serves approximately 14,700 VPD north of Poker Lane and 18,700 VPD between Poker Lane and Antelope Road. The proposed project would be required to improve Don Julio to its full four lane width.

Titan Drive and Poker Lane

Titan Drive and Poker lane are local east-west streets adjacent to the project site that will be connected at their intersection with Don Julio Boulevard. Poker Lane does not extend east to Antelope North Road.

Existing Pedestrian and Bicycle Facilities

Bicycle and pedestrian infrastructure is fairly comprehensive in the vicinity of the project site. The Sacramento County Bicycle Master Plan shows Class II bike lanes along Elverta Road, Antelope Road, Don Julio Boulevard and North Loop Boulevard. The adjacent local streets have sidewalks. Additional information is available in the current Sacramento County Pedestrian Master Plan and Bicycle Master Plan for detailed inventories of existing facilities and plans for facility improvements and expansions.

Existing Transit System

Sacramento Regional Transit District (RT) provides transit service in the greater Sacramento metropolitan area, including the neighborhoods around the project site. Four routes provide bus service to the project area. Current information shows fixed routes 80, 84, 93, and 95 are within the vicinity of the project site, each traversing Elkhorn Boulevard or Antelope Road with minimum 60-minute headways.

REGULATORY FRAMEWORK

CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS)

The *Guide for the Preparation of Traffic Impact Studies* published by Caltrans (2002) identifies circumstances under which Caltrans believes that a traffic impact study would be required, information that Caltrans believes should be included in the study; as well as analysis, scenarios, and guidance on acceptable analysis methodologies. The Traffic Impact Study prepared for the Project complies with Caltrans guidelines.

Additionally, the Caltrans Transportation Corridor Concept Report (TCCR) is the long range planning document for each State Highway Route. The TCCR for Caltrans District 3 identifies the minimum "Concept Levels of Service" associate with each route, assessing the current and future operating conditions of Caltrans roadways over a 20 year period. This EIR uses Caltrans Level of Service targets and ratings for impact analysis of freeway facilities.

SACRAMENTO AREA COUNCIL OF GOVERNMENTS: 2016 METROPOLITAN TRANSPORTATION PLAN

The MTP is a long range planning document created by the Sacramento Area Council of Governments (SACOG) for identifying and programming roadway improvements throughout the Sacramento region. The MTP is a regional plan for transportation projects such as bikeway, road, sidewalk, and transit projects.

SACRAMENTO COUNTY DEPARTMENT OF TRANSPORTATION

The Sacramento County Department of Transportation's (SacDOT) Traffic Impact Guidelines (July 2004) defines the methodologies to use in determining significant impacts, while the Sacramento County General Plan defines acceptable operating conditions. Sacramento County defines the minimum acceptable operation level for its roadways and intersections to be Level of Service (LOS) D for rural areas and LOS E for urban areas. The urban areas are those areas within the Urban Services Boundary (USB) as shown in the Land Use Element of the County General Plan. The areas outside of the USB are considered rural.

SACRAMENTO COUNTY GENERAL PLAN

The Sacramento County General Plan Circulation Element sets goals and policies for meeting County requirements for all transportation modes – vehicle, transit, and non-motorized. The Element's primary goals seek a balanced transportation system that moves people and goods in a safe and efficient way that minimizes environmental impacts, supports urban land uses, and serves rural needs. Supporting General Plan policies include conducting planning for roads, parking, clean alternative fuel and low emission vehicles, and other methods consistent with achieving air quality goals; conducting land use and transportation planning with a regional perspective; and mitigating new traffic impacts.

Included in the Circulation Element is the Transportation Plan, which emphasizes four major themes: air quality, balance, transportation-land use coordination, and transportation funding. Air quality is an important aspect of this element because of the major air quality problems in the County are related to automobile traffic. A balance of opportunities offers an efficient transportation system to citizens of the County by increasing the emphasis on transit, walking, and bicycling.

Goals and policies of the Sacramento County General Plan relating to traffic, circulation, and transportation applicable to the Project are listed below:

CI-1. Provide complete streets to provide safe and efficient access to a diversity of travel modes for all urban, suburban and rural land uses within Sacramento County except within certain established neighborhoods where particular amenities (such as sidewalks) are not desired. Within rural areas of the County, a complete street may be accommodated through roadway shoulders of sufficient width or other means to accommodate all modes of travel.

CI-3 Travel modes shall be interconnected to form an integrated, coordinated and balanced multi-modal transportation system, planned and developed consistent with the land uses served.

CI-4. Provide multiple transportation choices to link housing, recreational, employment, commercial, educational, and social services.

CI-5. Land use and transportation planning and development should be cohesive, mutually supportive, and complement the objective of reducing per capital vehicle miles traveled (VMT).

CI-9. Plan and design the roadway system in a manner that meets Level of Service (LOS) D on rural roadways and LOS E on urban roadways, unless it is infeasible to implement project alternatives or mitigation measures that would achieve LOS D on rural roadways or LOS E on urban roadways. The urban areas are those areas within the Urban Service Boundary (USB) as shown in the Land Use Element of the Sacramento County General Plan. The areas outside the USB are considered rural.

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

CI-29. The County shall work with transit service providers to establish and implement development guidelines to maximize the ability of new development and redevelopment to support planned transit services. New development and redevelopment shall have an orientation to travel patterns that are conducive to transit service. This will include concentration of development in centers and along linear corridors such that trip origins and destinations are concentrated near transit services.

CI-35. The applicant/developer of land development projects shall be responsible to install bicycle and pedestrian facilities in accordance with Sacramento County Improvement Standards and may be responsible to participate in the fair share funding of regional multi-use trails identified in the Sacramento County Bicycle Master Plan.

LU-37. Provide and support development of pedestrian and bicycle connections between transit stations and nearby residential, commercial, employment or civic uses by eliminating physical barriers and providing linking facilities, such as pedestrian overcrossings, trails, wide sidewalks, and safe street crossings.

LU-39. Support implementation of the ADA Transitional Plan and the Pedestrian master Plan to create a network of safe, accessible, and appealing pedestrian facilities and environments.

LU-40. Employ appropriate traffic calming measures in areas where pedestrian travel is desirable but made unsafe by a high volume or excessive speed of automobile traffic. Preference shall be given to measures that slow traffic and improve pedestrian safety while creating the least amount of conflict with emergency responders.

CITY OF CITRUS HEIGHTS

According to Policy 29.2 of the City of Citrus Heights General Plan, the City will strive to achieve LOS E or better conditions for City roadways and intersections during peak hours. The intent of the policy is to effectively utilize the roadway network capacity while balancing the desire to minimize potential adverse effects of vehicle travel on the environment and other modes. Policy 29.2 also notes some exceptions to the LOS E standard for certain roadways, including Antelope Road from I-80 to Auburn Boulevard and Greenback Lane from west City limits to east City limits. However, no road widening to provide additional vehicle capacity of that street will be permitted. Development projects that impact that location may be subject to mitigation, including but not limited to actions that reduce vehicle trips or provide non-auto improvements to the transportation network or services; lengthening turn pockets; or modifying signal timing.

METHODOLOGY

TRAFFIC IMPACT ANALYSIS METHODOLOGY

This traffic impact analysis methodology was utilized in the traffic study provided by Kimley-Horn in November 2015. To develop Existing-Plus-Project traffic conditions, traffic volume generated by a proposed project is added to existing traffic volumes. Existing-Plus-Project conditions are then compared relative to existing conditions to determine a proposed project's impacts. New trips are estimated using the Institute of Transportation Engineers' *Trip Generation Manual, 9th ed.* (ITE Manual), a standard

transportation engineering reference volume that assembles and updates vehicle trip generation for a wide variety of land use categories and subtypes. Overall traffic volumes were estimated using the SACOG SACSIM traffic demand model.

The TIA prepared six scenarios for the proposed project:

- Existing (2014) Conditions
- Existing (2014) plus Project Network Only Conditions
- Existing (2014) plus Proposed Project Conditions
- Cumulative (2035) Conditions
- Cumulative (2035) plus Project Network Only Conditions
- Cumulative (2035) plus Proposed Project Conditions

Existing (2014) plus Project Network Only Conditions and Cumulative (2035) plus Project Network Only Conditions are informational scenarios only, as the analysis was necessary to quantify the shift in background traffic associated with the project's network connections. Existing Conditions, Existing-Plus-Project Conditions, Cumulative Conditions, and Cumulative-Plus-Project Conditions are evaluated in this EIR for both the Preferred Project and the Commercial Project Alternative.

Roadway operations are evaluated by comparing traffic volumes to roadway capacity. "Levels of service" describe roadway operating conditions. The TIA was prepared in accordance with County guidelines as well as the methodology specified by Caltrans' *Highway Capacity Manual, 2010* (HCM).

LEVEL OF SERVICE METHODOLOGY

Determination of roadway operating conditions is based upon comparison of traffic volumes to roadway capacity. "Levels of service" (LOS) describe roadway operating conditions. LOS is a qualitative measure of the effect of a number of factors, which include speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs. LOS are designated "A" through "F" from best to worst, which cover the entire range of traffic operations that might occur. LOS "A" through "E" generally represent traffic volumes at less than roadway capacity, while LOS "F" represents over capacity and/or forced conditions. **Table TC-1** presents the LOS definitions.

Table TC-1:Level of Service (LOS) Definitions

LOS A	LOS A describes primarily free-flow operations at average travel speeds, usually 90 percent of the free-flow speed for the given street class. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at signalized intersections is minimal.
LOS B	LOS B describes reasonably free-flow operations at average travel speeds, usually 70 percent of the free-flow speed for the given street class. The ability to maneuver within the traffic stream is only slightly restricted and control delay at signalized intersections are not significant.
LOS C	LOS C describes stable operations; however, ability to maneuver and change lanes in midblock locations may be more restricted than at LOS B and longer queues, adverse signal coordination, or both may contribute to lower average travel speeds of about 50 percent of the free-flow speed for the street class.
LOS D	LOS D borders on a range in which small increases in flow may cause substantial increases in delay and decreases in travel speed. LOS D may be due to adverse signal progression, inappropriate signal timing, high volumes, or a combination of these factors. Average travel speeds are about 40 percent of the free-flow speed.
LOS E	LOS E is characterized by significant delays and average travel speeds of 33 percent or less of the free-flow speed. Such operations are caused by a combination of adverse progression, high signal delay, high volumes, extensive delays at critical intersections and inappropriate signal timing.
LOS F	LOS F is characterized by urban street flow at extremely low speeds, typically one-third to one-fourth of the free-flow speed. Intersection congestion is likely at critical signalized locations, with high delays, high volumes and extensive queuing.
Source: *Highway Capacity Manual*, Transportation Research Board, Special Report No. 209, Washington, D.C., 2000.	

Sacramento County utilizes a LOS “E” standard for urban areas, and a LOS “D” standard for rural areas. The City of Citrus Heights utilizes a LOS “E”, with some exceptions such as Antelope Road from I-80 to Auburn Boulevard and Greenback Lane from west City limits to east City limits.

Capacity analyses were conducted for intersections and roadway segments in accordance with Sacramento County, City of Citrus Heights, and Caltrans practice. The following summarizes the analysis types:

- Intersection-based capacity analyses are conducted utilizing AM and PM peak commuter hour traffic volumes. These analyses evaluate the ability of intersections to accommodate traffic volumes during peak travel periods.
- Roadway segment-based capacity analyses are conducted utilizing daily traffic volumes for Sacramento County and the City of Citrus Heights. These analyses evaluate the adequacy of the number of roadway lanes between major intersections.
- Freeway segment-based capacity analyses are conducted utilizing AM and PM peak hour volumes for Caltrans facilities. These analyses evaluate the adequacy of the number of freeway lanes between interchanges.

Intersection Analysis Methodology

For intersection-based analyses, different analysis methodologies are utilized depending on whether an intersection has no movement controls, two-way stop sign controls, all-way stop sign controls, or is controlled by a traffic signal.

Unsignalized Intersections

For unsignalized intersections, LOS is based upon average control delay calculated, based upon *Highway Capacity Manual, 2010* (HCM 2010) methods. For two-way stop locations, delay is calculated for each lane group, and the worst delay/LOS service is reported. For all-way stop locations, average delay for all movements is reported. **Table TC-2** presents the LOS definitions for unsignalized intersections, both two-way and all-way stop control.

Table TC-2: Intersection Level of Service Criteria

Level of Service (LOS)	Un-Signalized Average Control Delay* (sec/veh)	Signalized Control Delay per Vehicle (sec/veh)
A	≤ 10	≤ 10
B	> 10 – 15	> 10 – 20
C	> 15 – 25	> 20 – 35
D	> 25 – 35	> 35 – 55
E	> 35 – 50	> 55 – 80
F	> 50	> 80

Source: Highway Capacity Manual, 2010
* Applied to the worst lane/lane group(s) for SSSC

Signalized Intersections

For signalized intersections, HCM 2010 methodology is used. The LOS definitions based on this methodology are shown in **Table TC-2**. For signalized intersections, LOS reflects average intersection conditions. Some movements may experience better or worse LOS.

Roadway Segment Analysis Methodology

Analyzing roadway segments involves comparing daily segment volumes to the LOS criteria provided in Sacramento County's TIA guidelines. **Table TC-3** shows maximum volumes for given service levels for various roadway types.

Table TC-3: Roadway Segment Level of Service Criteria

Facility Type	# Lanes	Maximum Volume for Given Service Level				
		A	B	C	D	E
Residential	2	600	1,200	2,000	3,000	4,500
Residential Collector w/ Frontage	2	1,600	3,200	4,800	6,400	8,000
Residential Collector w/o Frontage	2	6,000	7,000	8,000	9,000	10,000
Arterial, Low Access Control	2	9,000	10,500	12,000	13,500	15,000
	4	18,000	21,000	24,000	27,000	30,000
	6	27,000	31,500	36,000	40,500	45,000
Arterial, Moderate Access Control	2	10,800	12,600	14,400	16,200	18,000
	4	21,600	25,200	28,800	32,400	36,000
	6	32,400	37,800	43,200	48,600	54,000
Arterial, High Access Control	2	12,000	14,000	16,000	18,000	20,000
	4	24,000	28,000	32,000	36,000	40,000
	6	36,000	42,000	48,000	54,000	60,000
Rural, 2-lane highway	2	2,400	4,800	7,900	13,500	22,900
Rural, 2-lane road, 24'-36' of pavement, paved shoulders	2	2,200	4,300	7,100	12,200	20,000
Rural, 2-lane road, 24'-36' of pavement, no shoulders	2	1,800	3,600	5,900	10,100	17,000

Source: Traffic Impact Analysis Guidelines, Table 2, County of Sacramento Department of Transportation, July 2004.

FREEWAY FACILITY ANALYSIS METHODOLOGY

Caltrans' traffic study guidelines specify the use of vehicle density (passenger cars/mile/lane) as the appropriate measure of effectiveness for freeway facilities. The LOS criteria for freeway facilities are summarized in **Table TC-4**.

VEHICLE TRAFFIC (TRIP) DISTRIBUTION METHODOLOGY

Trip distribution simulates the circulation pattern of travel, by matching trips generated by one type of land se (e.g., residential) with trips generated by other types of land uses (e.g., employment, shopping, and education). The Traffic Impact Analysis prepared for the project used the Sacramento Area Council of Governments' (SACOG) SACSIM travel demand model to approximate vehicle trip distribution, or what percentage of vehicle trips would use which roadways to access the project site. The model-generated trips were compared with the trip generation data to confirm that the model reasonably assessed project trips.

PEAK HOUR SIGNAL WARRANTS

Traffic signal warrants are a series of standards for determining if a traffic signal is appropriate- or "warranted"- for an intersection. If one or more signal warrants are met, it may be appropriate to add a traffic signal control to that intersection. However, a signal likely should not be installed if none or few warrants are met since the installation of signals may actually increase delays on the previously uncontrolled major street and may contribute to an increase in accidents.

The TIA for this project assessed the unsignalized study intersections for signalization. This evaluation was performed according to the peak-hour warrant methodologies set in the California Manual on Uniform Traffic Control Devices (CMUTCD), 2012 Edition, Section 4C.

SIGNIFICANCE CRITERIA

CALTRANS FACILITIES

A project is considered to have a significant effect if it would cause a State freeway facility that operates at LOS E or better to operate at LOS F. If a State freeway facility is operating at LOS F *without* the addition of the proposed project, the existing measure of effectiveness should be maintained.

ROADWAYS AND INTERSECTIONS

The Traffic Impact Analysis for this project reviewed a combination of policies and guidelines based on whether the impacted facility is a State, County, or City facility. Each roadway facility was analyzed in accordance with the policies and guidelines of its jurisdiction. Sacramento County identifies LOS "E" as the minimum acceptable standard for intersection and roadway operations within the USB, and LOS "D" outside the USB.

The City of Citrus Heights identifies LOS "E" as its minimum standard for intersection and roadway operations, allowing exceptions for specific roadways. For state-controlled facilities, thresholds presented in the State's Corridor System Management Plan or Route Concept Report were applied.

According to Sacramento County Traffic Impact Analysis Guidelines, impacts to roadways intersections may be considered significant and requires mitigation:

For **roadways and signalized intersections,** a project is considered to have a significant impact if it would:

- Result in a roadway or a signalized intersection operating at an acceptable LOS to deteriorate to an unacceptable LOS; or
- Increase the V/C ratio by more than 0.05 at a roadway or at a signalized intersection that is operating at an unacceptable LOS. For intersections, an increase of 5 seconds in average delay is used as a threshold of significance.

For **unsignalized intersections**, a project is considered to have a significant effect if it would:

- Result in an unsignalized intersection movement/approach operating at an acceptable LOS to deteriorate to an unacceptable LOS, and also cause the intersection to meet a traffic signal warrant; or
- For an unsignalized intersection that meets a signal warrant, increase the delay by more than 5 seconds at a movement/approach that is operating at an unacceptable LOS without the project.

Bicycle and Pedestrian Facilities

Bicycle facilities include Class I (off-street facilities), Class II (on-street bicycle lanes identified with signage and markings), and Class III (on-street bicycle routes identified by signage). Pedestrian facilities are composed of paths, sidewalks, and pedestrian crossings. A bicycle or pedestrian impact is considered significant if the proposed project would:

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

Transit Facilities

Transit facilities include shuttle services, bus services, bus rapid transit (BRT), and light-rail facilities. A project is considered to have a significant impact on the public transit system if the project would generate ridership which, when added to existing or future

ridership, exceeds available or planned system capacity. An impact may also be significant if a project would conflict with or obstruct implementation of a transit plan.

EXISTING CONDITIONS – NO PROJECT

To establish existing conditions, all new traffic counts were collected for the study intersections and roadway segments. 19 new week day AM (7-9 AM) and PM (4-6 PM) peak period intersection turning movement traffic counts were collected in June and August 2014, 15 new roadway segment counts were conducted in February/May 2014, and September 2015. Traffic data for all other study facilities were obtained from Caltrans.

The roadway facilities analyzed include:

- 19 intersections:
    - Two within the City of Citrus Heights
    - 17 within Sacramento County
- 15 Roadway Segments (Sacramento County's jurisdiction)
- 18 Freeway Facilities (Caltrans' jurisdiction)
    - Three eastbound and three westbound I-80 mainline segments
    - Two eastbound and two westbound I-80 ramp diverges
    - Four eastbound and four westbound I-80 ramp merges

The same roadway facilities are analyzed for each potential project condition.

INTERSECTIONS

Table TC-5 indicates that at the intersections analyzed for this study, conditions currently show a range of LOS B to LOS F during both peak hour periods.

ROADWAY SEGMENTS

Table TC-6 indicates that the study roadway segments currently operate between LOS A and LOS F.

FREEWAY FACILITIES

Table TC-7 presents the peak-hour intersection operating conditions for this analysis scenario. As indicated in the Table, the study intersections operate from LOS B to LOS E during both peak hour periods.

Table TC-4: Roadway Segment Level of Service Criteria

INTERSTATE 80				Existing	
Direction	Segment	Type	Peak Hour	Density	LOS
Eastbound	West of Elkhorn Blvd Off Ramp	Basic	AM	22.7	C
			PM	39.9	E
	Elkhorn Blvd Off Ramp	Diverge	AM	13.0	B
			PM	23.7	C
	Elkhorn Blvd Off Ramp to Elkhorn Blvd SB On Ramp	Basic	AM	17.6	B
			PM	26.1	D
	Elkhorn Blvd SB On Ramp	Merge	AM	22.8	C
			PM	18.4	B
	Elkhorn Blvd NB On Ramp	Merge	AM	24.1	C
			PM	20.3	C
	Elkhorn Blvd NB On Ramp to Truck Weigh Station	Basic	AM	24.0	C
			PM	32.3	D
	Truck Weigh Station to Antelope Rd Off Ramp	Weave	AM	27.3	C
			PM	37.7	E
	Antelope Rd Off Ramp to Antelope Rd On Ramp	Basic	AM	21.7	C
			PM	24.7	C
	Antelope Rd On Ramp	Merge	AM	18.6	B
			PM	19.6	B
	East of Antelope Rd On Ramp	Basic	AM	28.0	D
			PM	28.6	D
Westbound	East of Antelope Rd Off Ramp	Basic	AM	22.9	C
			PM	22.9	C
	Antelope Rd Off Ramp	Diverge	AM	30.5	D
			PM	24.7	C
	Antelope Rd Off Ramp to Antelope Rd NB On Ramp	Basic	AM	20.7	C
			PM	18.0	B
	Antelope Rd NB On Ramp	Merge	AM	25.3	C
			PM	21.7	C
	Antelope Rd SB On Ramp to Truck Weigh Station	Weave	AM	26.8	C
			PM	24.9	C
	Truck Weigh Station to Elkhorn Blvd Off Ramp	Basic	AM	25.8	C
			PM	20.4	C
	Elkhorn Blvd Off Ramp	Diverge	AM	32.1	D
			PM	19.0	B
	Elkhorn Blvd Off Ramp to Elkhorn Blvd NB On Ramp	Basic	AM	21.1	C
			PM	15.3	B
	Elkhorn Blvd NB On Ramp	Merge	AM	28.5	D
			PM	22.8	C
	Elkhorn Blvd SB On Ramp	Merge	AM	38.4	E
			PM	28.4	D
	West of Elkhorn Blvd SB On Ramp	Basic	AM	29.5	D
			PM	19.9	C

Notes: Density measured in passenger cars/lane/mile (pc/ln/mi)

Table TC-5: Existing (2014) Intersection Levels of Service

Jurisdiction	ID	Intersection	Control	Peak Hour	Existing	
					Delay	LOS
Sacramento County	1	Walerga Rd & Antelope Rd	Signal	AM	32.3	C
				PM	46.1	D
	2	Esteem Dr & Antelope Rd	SSSC	AM	ECL	F
					Signal Warranted: Yes	
				PM	ECL	F
					Signal Warranted: Yes	
	3	Don Julio Blvd & Antelope Rd	Signal	AM	48.1	D
				PM	66.7	E
	6	Palmerson Dr & Elverta Rd	Signal	AM	20.7	C
				PM	16.5	B
	7	Winje Dr/Titan Dr & Elverta Rd	Signal	AM	29.3	C
				PM	16.1	B
	8	Pismo Beach Dr & Elverta Rd	Signal	AM	15.1	B
				PM	13.5	B
	9	Antelope Rd/Sand City Dr & Elverta Rd	Signal	AM	17.6	B
				PM	13.3	B
	10	Don Julio Blvd & Elkhorn Blvd	Signal	AM	82.1	F
				PM	73.0	E
	11	I-80 WB Ramp & Elkhorn Blvd	Signal	AM	17.0	B
				PM	24.5	C
	12	I-80 EB Ramp & Elkhorn Blvd	Signal	AM	17.9	B
				PM	26.4	C
	13	Walerga Rd & Elverta Rd	Signal	AM	50.5	D
				PM	40.2	D
	14	Walerga Rd & Elkhorn Blvd	Signal	AM	34.0	C
				PM	59.0	E
	15	Don Julio Blvd & N Loop Rd/Heartland Dr	Signal	AM	66.9	E
				PM	53.0	D
	16	Don Julio Blvd & Poker Ln	Signal	AM	51.2	D
				PM	77.3	E
	17	Don Julio Blvd & La Tour Dr	AWSC	AM	22.5	C
					Signal Warranted: No	
				PM	32.0	D
					Signal Warranted: No	
	18	Monument Dr & Antelope Rd	SSSC	AM	26.0 (NBL)	D
					Signal Warranted: No	
				PM	25.9 (NBL)	D
					Signal Warranted: No	
	19	Component Wy & Antelope Rd	SSSC	AM	26.4 (NBL)	D
					Signal Warranted: No	
				PM	30.8 (NBL)	D
					Signal Warranted: No	
City of Citrus Heights	4	I-80 WB Ramp & Antelope Rd	Signal	AM	12.5	B
				PM	104.2	F
	5	I-80 EB Ramp & Antelope Rd	Signal	AM	17.3	B
				PM	16.6	B

Notes:

Bold represents unacceptable operations**.**
ECL = Exceeds Calculable Limit

Table TC-6: Existing (2014) Roadway Segment Levels of Service

Roadway Segment		Roadway Classification	LOS Thresh.	Capacity	ADT	V/C Ratio	Calc. LOS
Sacramento County							
Titan Dr >	Elverta Rd - Antelope HS Dwy	Residential collector without frontage	E	10,000	2,809	0.281	A
Palmerson Dr >	N Loop Blvd - Everta Rd	Residential collector with frontage	E	8,000	4,789	0.599	C
Elverta Rd >	Palmerson Dr - Walerga Rd	4-Lane Arterial (Moderate Access Control)	E	36,000	10,397	0.289	A
Antelope Rd >	Watt Ave - Walerga Rd	4-Lane Arterial (Moderate Access Control)	E	36,000	19,135	0.532	A
	Walerga Rd - Esteem Dr	4-Lane Arterial (Moderate Access Control)	E	36,000	28,407	0.789	C
	Don Julio Blvd - Roseville Rd	4-Lane Arterial (Moderate Access Control)	E	36,000	36,230	1.006	**F**
Elkhorn Blvd >	Walerga Rd - Don Julio Blvd	4-Lane Arterial (Moderate Access Control)	E	36,000	32,287	0.897	D
	Don Julio Blvd - Roseville Rd	6-Lane Arterial (Moderate Access Control)	E	54,000	51,136	0.947	E
	Roseville Rd - I-80 WB Ramps	6-Lane Arterial (Moderate Access Control)	E	54,000	49,202	0.911	E
Don Julio Blvd >	N Loop Blvd - Poker Ln	2-Lane Arterial (Moderate Access Control)	E	18,000	14,470	0.804	D
	Poker Ln - Antelope Rd	2-Lane Arterial (Moderate Access Control)	E	18,000	19,219	1.068	**F**
	Antelope Rd - Elkhorn Blvd	4-Lane Arterial (Moderate Access Control)	E	36,000	20,981	0.583	A
Watt Ave >	Antelope Rd - Elkhorn Blvd	4-Lane Arterial (Moderate Access Control)	E	36,000	29,382	0.816	D
Walerga Rd >	Elverta Rd - Antelope Rd	4-Lane Arterial (Moderate Access Control)	E	36,000	35,537	0.987	E
	Antelope Rd - Elkhorn Blvd	4-Lane Arterial (Moderate Access Control)	E	36,000	29,702	0.825	D

Notes:

Bold represents unacceptable operations.

Table TC-7:Existing (2014) Freeway Facility Levels of Service

INTERSTATE 80				Existing	
Direction	Segment	Type	Peak Hour	Density	LOS
Eastbound	West of Elkhorn Blvd Off Ramp	Basic	AM	22.7	C
			PM	39.9	E
	Elkhorn Blvd Off Ramp	Diverge	AM	13.0	B
			PM	23.7	C
	Elkhorn Blvd Off Ramp to Elkhorn Blvd SB On Ramp	Basic	AM	17.6	B
			PM	26.1	D
	Elkhorn Blvd SB On Ramp	Merge	AM	22.8	C
			PM	18.4	B
	Elkhorn Blvd NB On Ramp	Merge	AM	24.1	C
			PM	20.3	C
	Elkhorn Blvd NB On Ramp to Truck Weigh Station	Basic	AM	24.0	C
			PM	32.3	D
	Truck Weigh Station to Antelope Rd Off Ramp	Weave	AM	27.3	C
			PM	37.7	E
	Antelope Rd Off Ramp to Antelope Rd On Ramp	Basic	AM	21.7	C
			PM	24.7	C
	Antelope Rd On Ramp	Merge	AM	18.6	B
			PM	19.6	B
	East of Antelope Rd On Ramp	Basic	AM	28.0	D
			PM	28.6	D
Westbound	East of Antelope Rd Off Ramp	Basic	AM	22.9	C
			PM	22.9	C
	Antelope Rd Off Ramp	Diverge	AM	30.5	D
			PM	24.7	C
	Antelope Rd Off Ramp to Antelope Rd NB On Ramp	Basic	AM	20.7	C
			PM	18.0	B
	Antelope Rd NB On Ramp	Merge	AM	25.3	C
			PM	21.7	C
	Antelope Rd SB On Ramp to Truck Weigh Station	Weave	AM	26.8	C
			PM	24.9	C
	Truck Weigh Station to Elkhorn Blvd Off Ramp	Basic	AM	25.8	C
			PM	20.4	C
	Elkhorn Blvd Off Ramp	Diverge	AM	32.1	D
			PM	19.0	B
	Elkhorn Blvd Off Ramp to Elkhorn Blvd NB On Ramp	Basic	AM	21.1	C
			PM	15.3	B
	Elkhorn Blvd NB On Ramp	Merge	AM	28.5	D
			PM	22.8	C
	Elkhorn Blvd SB On Ramp	Merge	AM	38.4	E
			PM	28.4	D
	West of Elkhorn Blvd SB On Ramp	Basic	AM	29.5	D
			PM	19.9	C

Notes:

Density measured in passenger cars/lane/mile (pc/ln/mi)

IMPACTS AND ANALYSIS – PREFERRED PROJECT

EXISTING-PLUS-PROJECT ANALYSIS

To analyze the impact of the proposed project, overall traffic volumes were estimated using the SACOG SACSIM traffic demand model. **Table TC-8** shows the proposed project trip generation, including 10,678 new daily trips, with 558 new trips occurring during the AM peak hour, and 994 new trips occurring during the PM peak hour. Trip distribution is shown for Near Term (**Plate TC-2**) and Long Term Project Conditions (**Plate TC-3**)

In the tables for the analysis of each impact, the existing condition is shown compared to the modeled condition for the proposed project. The transportation facilities analyzed include intersections, roadway segments, freeway segments, and freeway ramp connectors

An analysis of the changes to roadway LOS due to construction of the preferred project results in significant impacts at three intersections and one roadway segment, according to Sacramento County and the City of Citrus Heights thresholds of significance. The following is a discussion of each impact and its associated mitigation. No significant impacts were found for the freeway facilities, the bicycle and pedestrian facilities, or the transit facilities. The detailed analysis occurs in the following section.

Table TC-8: Proposed Project Trip Generation

Land Use (ITE Land Use Code)	Size	Total Daily Trips	AM Peak-Hour					PM Peak-Hour				
			Total Trips	IN		OUT		Total Trips	IN		OUT	
				%	Trips	%	Trips		%	Trips	%	Trips
Single-Family Detached Housing (210)	495-units	4,530	356	25%	89	75%	267	443	63%	279	37%	164
Apartment (220)	196-units	1,312	100	20%	20	80%	80	125	65%	82	35%	43
Shopping Center (820)	108.9-ksf	7,180	164	62%	102	38%	62	634	48%	304	52%	330
Subtotal Trips:		13,022	620		211		409	1,203		665		538
Internal Trip Reduction (Daily, AM, PM)	18% 10% 19%	-2,344	-62		-21		-41	-229		-126		-102
Net New External Trips:		10,678	558		190		368	994		623		436

Source: Trip Generation Manual, 9 th Edition , ITE

Plate TC-2: Near Term Project Distribution Conditions

Plate TC-3: Long Term Project Distribution Conditions

Plate TC-4: Study Facilities, Traffic Control and Lane Geometries for Existing Conditions, No. 1 through No. 9

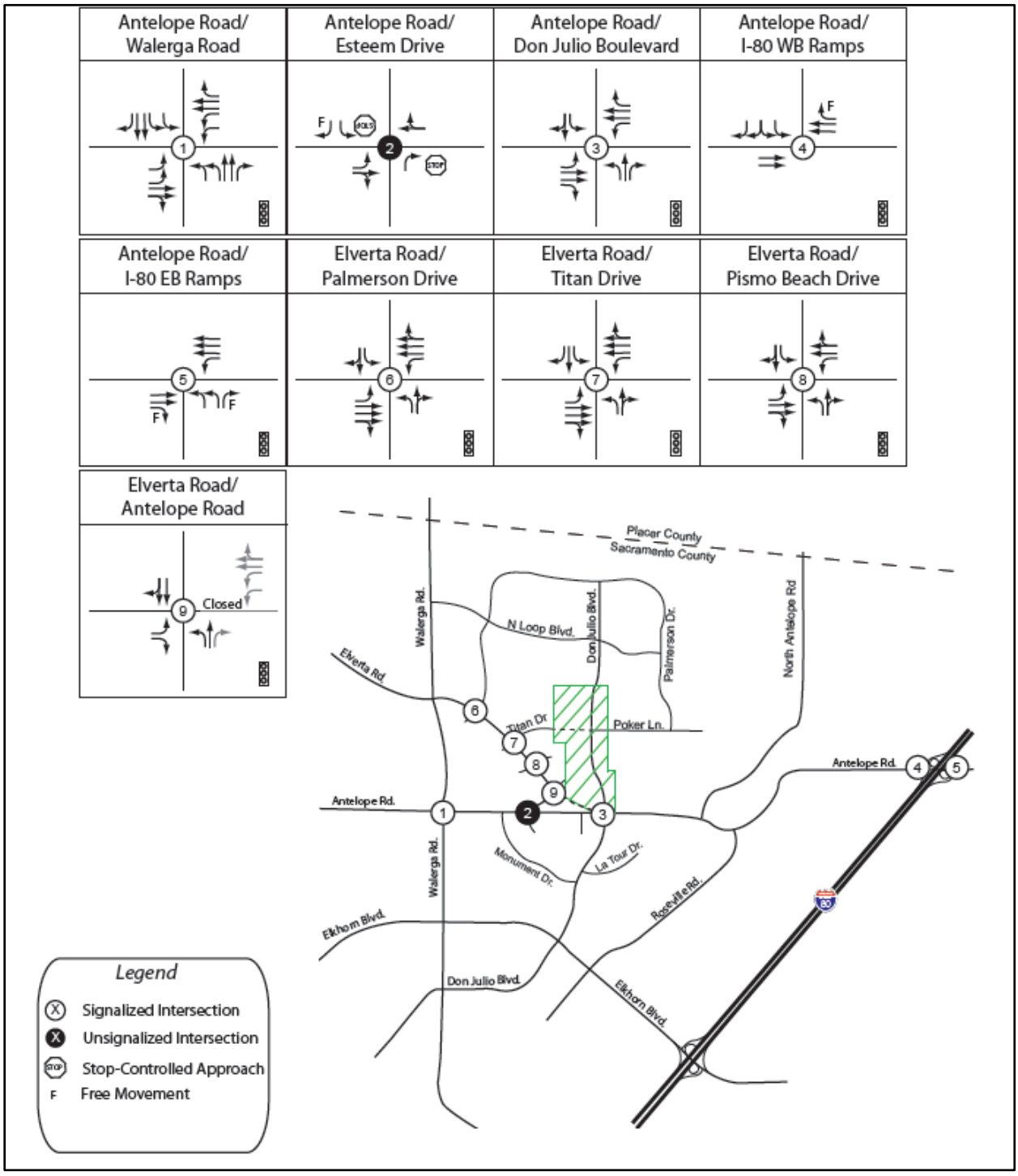
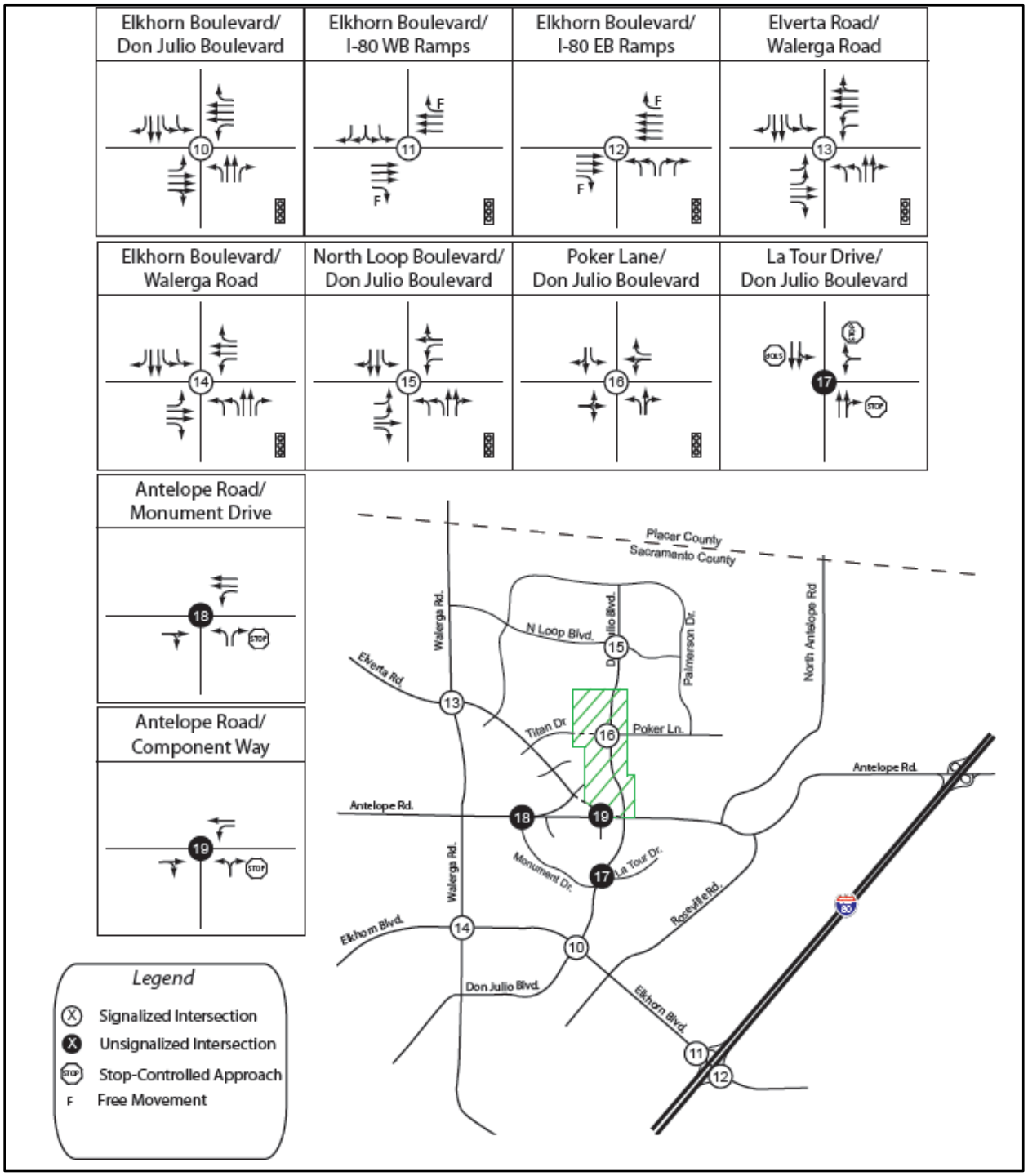


Plate TC-5: Study Facilities, Traffic Control and Lane Geometries for Existing Conditions, No. 10 through No. 19



IMPACT: EXISTING-PLUS-PROJECT INTERSECTIONS

LEVEL OF IMPACT: LESS THAN SIGNIFICANT WITH MITIGATION

To evaluate impacts to intersections as a result of the project, levels of service of the existing condition were compared to conditions modeled for the project.

The TIA indicates that the intersections of Antelope Road/Sand City Drive and Elverta Road, Don Julio Boulevard and Elkhorn Boulevard, and Walerga Road and Elverta Road are expected to perform below their acceptable LOS as a result of the project, as shown in **Table TC-9**. The remaining intersections, No. 1-8, No. 11, No. 12, No. 14-19, experienced less than significant impacts.

EXISTING-PLUS-PROJECT INTERSECTION ANALYSIS

ANTELOPE ROAD/SAND CITY DRIVE AND ELVERTA ROAD (SACRAMENTO COUNTY)

This intersection, identified as Intersection No. 9, operates at an acceptable LOS B without the project and at an unacceptable LOS F with the project during the PM peak hour. Since this is a signalized intersection, the first criterion above is met. Accordingly, this deterioration constitutes a significant impact**.**

Changing the access to Sand City Drive to right-in, right-out, as well as adjusting the traffic signal controller timing (i.e. adjusting signal "phases") would mitigate this significant impact (**Plate TC-6**). The access change would eliminate the eastbound left-turn and northbound through movements onto Sand City Drive, and would allow for two northbound right-turn lanes with an overlap phase (traffic signal timing that would allow simultaneous turning or through movements), which would run concurrently with the westbound left-turn phase. It should be noted that adding a northbound right-turn overlap phase would restrict the westbound U-turn movement. Additionally, pedestrian crossing would be restricted to the west side of the intersection. Mitigation would result in improving the intersection's function to LOS C during peak hours. The project's proportionate share toward these improvements is 100-percent, ensuring that the mitigation measure would be accomplished with project construction. Therefore, when mitigation is applied the impacts will be reduced to *less than significant.*

DON JULIO BOULEVARD AND ELKHORN BOULEVARD (SACRAMENTO COUNTY)

This intersection, identified as Intersection No. 10, currently operates at LOS F at AM peak hours and LOS E at PM peak hours. With the project as proposed, the intersection deteriorates to LOS F at both AM and PM peak hours. Since this is a signalized intersection, the first of the significance criteria is met. Therefore, this deterioration would constitute a significant impact.

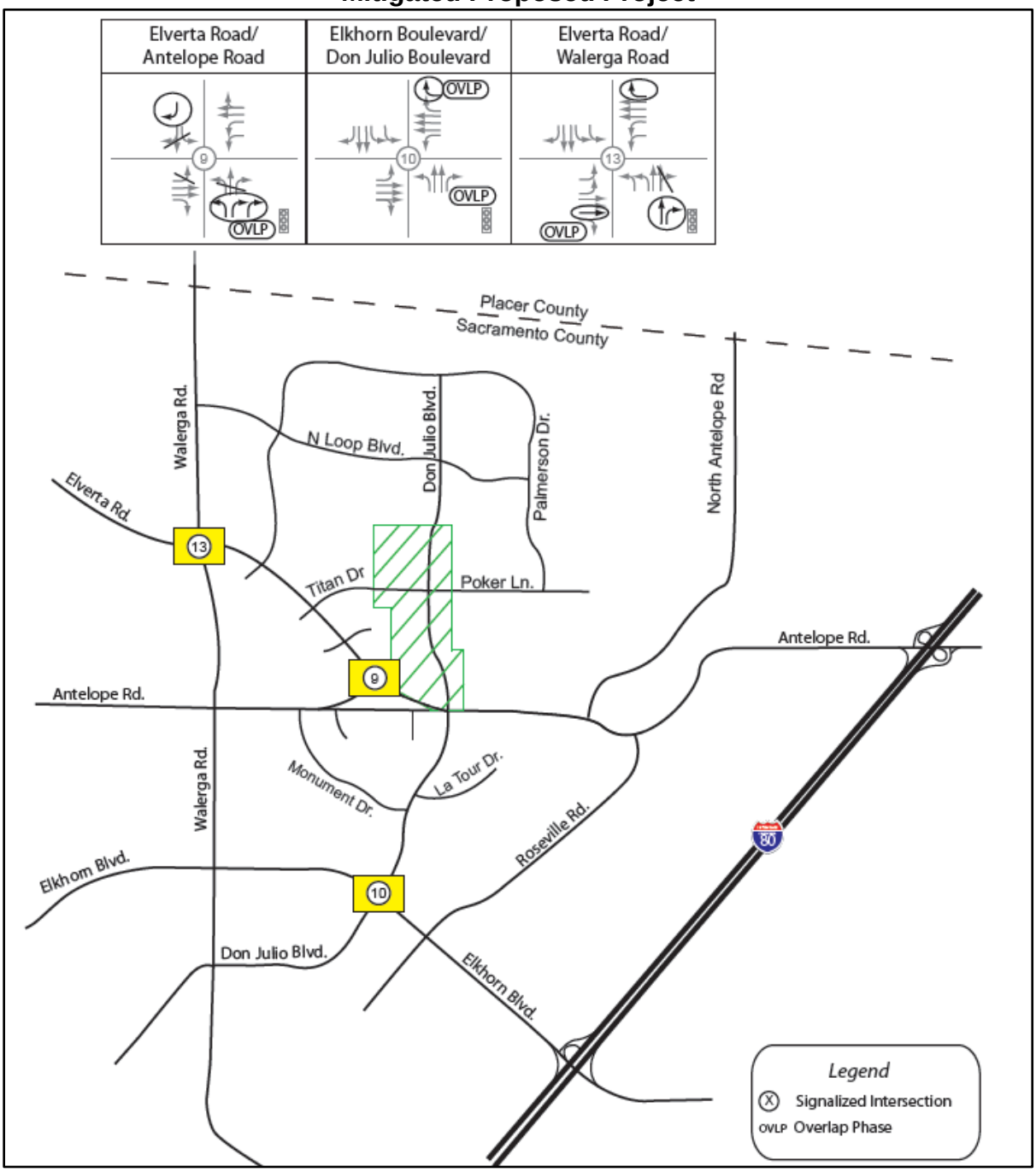
The significant impact at this intersection during both peak hours can be mitigated by adding a second westbound right-turn lane and implementing an overlap traffic signal phase that would prohibit southbound U-turns. In addition, a northbound right-turn overlap phase that would run concurrently with the westbound left-turn phase would be required. This overlap would prohibit westbound U-turn movements (**Plate TC-6**).

Table TC-9: Existing (2014) and Existing-Plus-Project Intersection LOS

Jurisdiction	ID	Intersection	Control	Peak Hour	Existing		Existing Plus Project	
					Delay	LOS	Delay	LOS
Sacramento County	1	Walerga Rd & Antelope Rd	Signal	AM	32.3	C	32.8	C
				PM	46.1	D	41.9	D
	2	Esteem Dr & Antelope Rd	SSSC	AM	ECL	F	16.1 (NBL)	C
					Signal Warranted: Yes		Signal Warranted: No	
				PM	ECL	F	19.2 (NBL)	C
					Signal Warranted: Yes		Signal Warranted: No	
	3	Don Julio Blvd & Antelope Rd	Signal	AM	48.1	D	34.3	C
				PM	66.7	E	40.9	D
	6	Palmerson Dr & Elverta Rd	Signal	AM	20.7	C	20.1	C
				PM	16.5	B	15.1	B
	7	Winje Dr/Titan Dr & Elverta Rd	Signal	AM	29.3	C	38.5	D
				PM	16.1	B	11.5	B
	8	Pismo Beach Dr & Elverta Rd	Signal	AM	15.1	B	11.5	B
				PM	13.5	B	8.9	A
	9	Antelope Rd/Sand City Dr & Elverta Rd	Signal	AM	17.6	B	78.6	E
				PM	13.3	B	91.5	**F**
	10	Don Julio Blvd & Elkhorn Blvd	Signal	AM	82.1	F	93.1	**F**
				PM	73.0	E	105.6	**F**
	11	I-80 WB Ramp & Elkhorn Blvd	Signal	AM	17.0	B	17.5	B
				PM	24.5	C	25.8	C
	12	I-80 EB Ramp & Elkhorn Blvd	Signal	AM	17.9	B	18.8	B
				PM	26.4	C	28.3	C
	13	Walerga Rd & Elverta Rd	Signal	AM	50.5	D	95.4	**F**
				PM	40.2	D	92.9	**F**
	14	Walerga Rd & Elkhorn Blvd	Signal	AM	34.0	C	34.3	C
				PM	59.0	E	59.6	E
	15	Don Julio Blvd & N Loop Rd/Heartland	Signal	AM	66.9	E	61.7	E
				PM	53.0	D	50.7	D
	16	Don Julio Blvd & Poker Ln	Signal	AM	51.2	D	40.9	D
				PM	77.3	E	20.6	C
	17	Don Julio Blvd & La Tour Dr	AWSC	AM	22.5	C	32.8	D
					Signal Warranted: No		Signal Warranted: No	
				PM	32.0	D	34.9	D
					Signal Warranted: No		Signal Warranted: No	
	18	Monument Dr & Antelope Rd	SSSC	AM	26.0 (NBL)	D	24.1 (NBL)	C
					Signal Warranted: No		Signal Warranted: No	
				PM	25.9 (NBL)	D	23.8 (NBL)	C
					Signal Warranted: No		Signal Warranted: No	
	19	Component Wy & Antelope Rd	SSSC	AM	26.4 (NBL)	D	15.2 (NBR)	C
					Signal Warranted: No		Signal Warranted: No	
				PM	30.8 (NBL)	D	16.0 (NBR)	C
					Signal Warranted: No		Signal Warranted: No	
City of Citrus Heights	4	I-80 WB Ramp & Antelope Rd	Signal	AM	12.5	B	13.0	B
				PM	104.2	F	110.6	F
	5	I-80 EB Ramp & Antelope Rd	Signal	AM	17.3	B	17.4	B
				PM	16.6	B	16.7	B

Notes: Shaded represents significant impact. ECL = Exceeds Calculable Limit

Plate TC-6: Traffic Control and Lane Geometries for Existing (2014) plus Mitigated Proposed Project



Mitigation would result in the intersection operating at acceptable LOS E during the AM peak hours and LOS D during the PM peak hours. The project's proportionate share toward these improvements is 100-percent, ensuring that the mitigation measure would be accomplished with project construction. Therefore, if the mitigation is applied the impacts will be reduced to *less than significant.*

WALERGA ROAD AND ELVERTA ROAD (SACRAMENTO COUNTY)

This intersection, identified as Intersection No. 13, currently operates at LOS D and would deteriorate to LOS F with the project during peak hours. Since this is a signalized intersection, the first significance criterion is met. Therefore, this deterioration constitutes a significant impact.

The significant impact at this intersection during both peak hours can be mitigated by striping a northbound right-turn movement, a westbound right-turn movement, and a third eastbound through lane (**Plate TC-6**). The pavement width exists to add these lanes simply by restriping. Additionally, an eastbound right-turn overlap phase would be required to prohibit northbound U-turn movements. This overlap would run concurrently with the northbound left-turn phase. Mitigation would result in the intersection operating at an acceptable LOS E during both peak hours. The project's proportionate share towards these improvements is 100-percent, insuring that the mitigation measure would be accomplished with project construction. Therefore, with the implementation of the mitigation measure the impact would be reduced to *less than significant.*

MITIGATION MEASURES

TC-1: (Intersection No.9) Prior to final approval of site development plans, the project proponent shall incorporate design changes to the intersection of Antelope Road/Sand City Drive and Elverta Road to accomplish the following to the satisfaction of the Sacramento County Department of Transportation:

- Access design to Antelope Road/Elverta Road from Sand City Drive shall conform to the traffic control and lane geometries specified in **Plate TC-6: Traffic Control and Lane Geometries for Existing (2014) plus Mitigated Proposed Project**.
- This access control shall eliminate eastbound left-turn and northbound through-movements from Elverta Road and Antelope Road onto Sand City Drive, and include two northbound right turn lanes from Antelope Road northbound to Antelope Road eastbound, conforming to **Plate TC-6: Traffic Control and Lane Geometries for Existing (2014) plus Mitigated Proposed Project**, Intersection No. 9.
- Pedestrian access shall be restricted to the west side of the intersection.

TC-2: (Intersection No.9) Prior to issuance of building permits the subdivider shall either: (a) be under contract with proper sureties in place, or (b) have submitted to the County a bid-ready package with adequate funding for the following: Traffic signal timing for the intersection of Antelope Road/Sand City Drive and Elverta Road shall include an overlap phase to run concurrently with the

westbound left-turn phase, and a northbound right-turn overlap phase, to the satisfaction of the Sacramento County Department of Transportation.

TC-3: (Intersection No. 10) Prior to issuance of building permits the subdivider shall either: (a) be under contract with proper sureties in place, or (b) have submitted to the County a bid-ready package with adequate funding for the following improvements for the intersection of Don Julio Boulevard and Elkhorn Boulevard, to the satisfaction of the Sacramento County Department of Transportation:

- Add a second westbound right-turn lane;
- Adjust the traffic signal timing to provide westbound and northbound right-turn overlap signal phases.

TC-4: (Intersection No. 13) Prior to issuance of building permits the subdivider shall either: (a) be under contract with proper sureties in place, or (b) have submitted to the County a bid-ready package with adequate funding for the following improvements for the intersection of Walerga Road and Elverta Road, to the satisfaction of the Sacramento County Department of Transportation:

- Stripe eastbound through and northbound right-turn movements;
- Add an eastbound right-turn overlap signal phase.

IMPACT: EXISTING-PLUS-PROJECT ROAD SEGMENTS

LEVEL OF IMPACT: SIGNIFICANT AND UNAVOIDABLE

In a comparison between existing levels of service and existing plus project levels of service, the TIA indicates that the roadway segments at Antelope Road between Don Julio Boulevard and Roseville Road (Sacramento County) and Elkhorn Boulevard between Don Julio Boulevard and Roseville Road (Sacramento County) are expected to perform below their acceptable LOS as a result of the project. Per **Table TC-10**, the remaining intersections will experience less than significant changes in level of service.

EXISTING-PLUS-PROJECT ROADWAY SEGMENT ANALYSIS

ANTELOPE ROAD BETWEEN DON JULIO BOULEVARD AND ROSEVILLE ROAD (SACRAMENTO COUNTY)

This roadway operates at LOS F without the project. The project as proposed would increase the volume-to-capacity ratio by more than five percent, therefore exceeding one of the significance criteria (**Table TC-10**). Therefore, the deterioration of this roadway segment as a result of the project constitutes a significant impact.

The significant impact at this roadway could be mitigated by widening Antelope Road from four to six lanes; however, this widening would necessitate the removal of several homes. While this expansion would be consistent with the County General Plan, SacDOT has indicated that widening the roadway is infeasible, so it is assumed to be built out to its ultimate capacity. However, although the roadway cannot be widened,

the County's Traffic Impact Analysis Guidelines indicates that if a project causes a significant impact on a facility already operating at an unacceptable level of service, then the project should pay a "fair share" for mitigation. In this case, SacDOT would collect impact fees, but the impact would remain ***significant and unavoidable***.

Table TC-10: Existing (2014) and Existing-Plus-Project Roadway Segment LOS

Roadway Segment		Roadway Classification	LOS Thresh.	Capacity	Existing			Existing plus Project		
					ADT	V/C Ratio	Calc. LOS	ADT	V/C Ratio	Calc. LOS
Sacramento County										
Titan Dr >	*Elverta Rd - Antelope HS Dwy*	Residential collector without frontage	E	10,000	2,809	0.281	A	4,232	0.423	A
Palmerson Dr >	*N Loop Blvd - Elverta Rd*	Residential collector with frontage	E	8,000	4,789	0.599	C	4,789	0.599	C
Elverta Rd >	*Palmerson Dr - Walerga Rd*	4-Lane Arterial (Moderate Access Control)	E	36,000	10,397	0.289	A	15,314	0.425	A
Antelope Rd >	*Watt Ave - Walerga Rd*	4-Lane Arterial (Moderate Access Control)	E	36,000	19,135	0.532	A	19,446	0.54	A
	Walerga Rd - Esteem Dr	4-Lane Arterial (Moderate Access Control)	E	36,000	28,407	0.789	C	32,007	0.889	D
	Don Julio Blvd - Roseville Rd	4-Lane Arterial (Moderate Access Control)	E	36,000	36,230	1.006	**F**	38,964	1.082	**F**
Elkhorn Blvd >	*Walerga Rd - Don Julio Blvd*	4-Lane Arterial (Moderate Access Control)	E	36,000	32,287	0.897	D	31,913	0.886	D
	Don Julio Blvd - Roseville Rd	6-Lane Arterial (Moderate Access Control)	E	54,000	51,136	0.947	E	54,648	1.012	**F**
	Roseville Rd - I-80 WB Ramps	6-Lane Arterial (Moderate Access Control)	E	54,000	49,202	0.911	E	52,729	0.976	E
Don Julio Blvd >	*N Loop Blvd - Poker Ln*	2-Lane Arterial (Moderate Access Control)	E	18,000	14,470	0.804	D			
		4-Lane Arterial (Moderate Access Control)	E	36,000				15,388	0.427	A
	Poker Ln - Antelope Rd	2-Lane Arterial (Moderate Access Control)	E	18,000	19,219	1.068	**F**			
		4-Lane Arterial (Moderate Access Control)	E	36,000				23,743	0.660	B
	Antelope Rd - Elkhorn Blvd	4-Lane Arterial (Moderate Access Control)	E	36,000	20,981	0.583	A	25,053	0.696	B
Watt Ave >	*Antelope Rd - Elkhorn Blvd*	4-Lane Arterial (Moderate Access Control)	E	36,000	29,382	0.816	D	29,076	0.808	D
Walerga Rd >	*Elverta Rd - Antelope Rd*	4-Lane Arterial (Moderate Access Control)	E	36,000	35,537	0.987	E	33,757	0.938	E
	Antelope Rd - Elkhorn Blvd	4-Lane Arterial (Moderate Access Control)	E	36,000	29,702	0.825	D	30,352	0.843	D

ELKHORN BOULEVARD BETWEEN DON JULIO BOULEVARD AND ROSEVILLE ROAD (SACRAMENTO COUNTY)

This roadway operates at LOS E without the project and LOS F with the project. This scenario meets the first of the significance criterion; accordingly, the associated deterioration in roadway segment function constitutes a significant impact.

The significant impact at this roadway cannot be mitigated. The roadway is built to its ultimate capacity and no further mitigation measures were identified. Therefore, the impact to this roadway is ***significant and unavoidable.***

MITIGATION MEASURES

TC-5: Prior to issuance of building permits, the project proponent shall pay a fair share toward the cost of the following improvements for impacts to the road segment of Antelope Road between Don Julio Boulevard and Roseville Road:

- Widen Antelope Road from four to six lanes consistent with the General Plan designation for this roadway segment. The project's fair share for mitigation is calculated to be 7.02%.

IMPACT: EXISTING-PLUS-PROJECT FREEWAY FACILITIES

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

EXISTING-PLUS-PROJECT FREEWAY FACILITIES ANALYSIS

To determine whether or not the project would create an impact on freeway facilities, the level of service for the existing condition was compared to possible existing plus project conditions, as shown in **Table TC-11**.

Table TC-11: Existing (2014) and Existing-Plus-Project Freeway Facilities LOS

INTERSTATE 80				Existing		Existing Plus Proposed Project	
Direction	Segment	Type	Peak Hour	Density[a]	LOS	Density[a]	LOS
Eastbound	West of Elkhorn Blvd Off Ramp	Basic	AM	22.7	C	23.3	C
			PM	39.9	E	39.9	E
	Elkhorn Blvd Off Ramp	Diverge	AM	13.0	B	14.0	B
			PM	23.7	C	24.4	C
	Elkhorn Blvd Off Ramp to Elkhorn Blvd SB On Ramp	Basic	AM	17.6	B	17.6	B
			PM	26.1	D	25.5	C
	Elkhorn Blvd SB On Ramp	Merge	AM	22.8	C	22.8	C
			PM	18.4	B	17.5	B
	Elkhorn Blvd NB On Ramp	Merge	AM	24.1	C	24.1	C
			PM	20.3	C	19.4	B
	Elkhorn Blvd NB On Ramp to Truck Weigh Station	Basic	AM	24.0	C	24.0	C
			PM	32.3	D	31.6	D
	Truck Weigh Station to Antelope Rd Off Ramp	Weave	AM	27.3	C	27.3	C
			PM	37.7	E	37.7	E
	Antelope Rd Off Ramp to Antelope Rd On Ramp	Basic	AM	21.7	C	21.7	C
			PM	24.7	C	24.2	C
	Antelope Rd On Ramp	Merge	AM	18.6	B	19.5	B
			PM	19.6	B	19.5	B
	East of Antelope Rd On Ramp	Basic	AM	28.0	D	28.7	D
			PM	28.6	D	28.5	D
Westbound	East of Antelope Rd Off Ramp	Basic	AM	22.9	C	23.1	C
			PM	22.9	C	22.9	C
	Antelope Rd Off Ramp	Diverge	AM	30.5	D	30.5	D
			PM	24.7	C	23.3	C
	Antelope Rd Off Ramp to Antelope Rd NB On Ramp	Basic	AM	20.7	C	20.7	C
			PM	18.0	B	17.4	B
	Antelope Rd NB On Ramp	Merge	AM	25.3	C	25.3	C
			PM	21.7	C	21.2	C
	Antelope Rd SB On Ramp to Truck Weigh Station	Weave	AM	26.8	C	26.8	C
			PM	24.9	C	24.9	C
	Truck Weigh Station to Elkhorn Blvd Off Ramp	Basic	AM	25.8	C	25.8	C
			PM	20.4	C	19.8	C
	Elkhorn Blvd Off Ramp	Diverge	AM	32.1	D	32.1	D
			PM	19.0	B	17.7	B
	Elkhorn Blvd Off Ramp to Elkhorn Blvd NB On Ramp	Basic	AM	21.1	C	21.1	C
			PM	15.3	B	14.7	B
	Elkhorn Blvd NB On Ramp	Merge	AM	28.5	D	28.5	D
			PM	22.8	C	22.3	C
	Elkhorn Blvd SB On Ramp	Merge	AM	38.4	E	38.8	E
			PM	28.4	D	29.2	D
	West of Elkhorn Blvd SB On Ramp	Basic	AM	29.5	D	29.5	D
			PM	19.9	C	20.2	C

Notes:

Density measured in passenger cars/lane/mile (pc/ln/mi)

The existing plus project conditions do not result in the reduction of LOS such that an unacceptable LOS F is reached. Therefore, impacts to freeway facilities are *less than significant.*

MITIGATION MEASURES

None recommended.

IMPACT: EXISTING-PLUS-PROJECT BICYCLE AND PEDESTRIAN FACILITIES

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

EXISTING PLUS PROJECT BICYCLE AND PEDESTRIAN FACILITIES ANALYSIS

As discussed in the Environmental Setting of this chapter, the general project area is primarily built out, and bicycle and pedestrian infrastructure is fairly comprehensive.

The project proposes bicycle lanes and sidewalks along the primary roadways. Because these primary roadways ultimately interface with the offsite network, the proposed project is not anticipated to remove or obstruct bicycle or pedestrian facilities, or to preclude future ones. Other than intermittent temporary obstruction during project construction, no impacts are anticipated. Impacts to bicycle and pedestrian facilities are *less than significant.*

MITIGATION MEASURES

None recommended.

IMPACT: EXISTING-PLUS-PROJECT TRANSIT FACILITIES

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

The current transit routes are identified and further discussed in the Existing Roadway System section of this chapter.

The RT Master Plan indicates that Antelope Road from Watt Avenue to Sunrise Marketplace is slated for future Hi-Bus service, with the intent to connect the proposed light rail extension to Citrus Heights and Roseville and the street tram between Citrus Heights and Rancho Cordova. According to the RT Master Plan, Hi-Bus service is intended to serve the community with higher quality and higher capacity buses and frequencies of 5-30 minutes. The segment of Antelope Road that interfaces with the proposed project is included in this planned future Hi-Bus service area.

While this project condition may increase ridership, an expanded, higher capacity service is planned in the project vicinity. Regional Transit did not indicate that the project as proposed would exceed current service capacity. No conflicts with the RT Master Plan have been identified. Therefore, any impacts are anticipated to be *less than significant.*

MITIGATION MEASURES

None recommended.

CUMULATIVE IMPACTS (2035) – BASELINE CONDITIONS

Year 2035 traffic conditions were obtained from SACOG's SACSIM travel demand model. Through consultation with the County, it was determined that nine reasonably foreseeable projects warranted incorporation into the Cumulative (2035) Conditions. These projects included the following, identified by their Planning and Environmental Review Control Numbers:

- Elverta Park (PLNP2014-00118)
- Northborough (PLNP2013-00056)
- Elverta Specific Plan (19990351)
- Stop and Lock (PLNP2010-00138)
- Downtown Rio Linda Specific Plan (PLNP2013-00145)
- Blue Oak Commercial (PLNP2013-00139)
- Gaston Harrison Senior Living (PLNP2009-00028)
- Placer Vineyards
- Sutter Point Specific Plan

The network geometry for this scenario reflects the baseline configuration inherent to SACOG's SACSIM travel demand model which is understood to reflect the funded improvements specified in the Metropolitan Transportation Plan/ Sustainable Communities Strategy (MTP/SCS) 2035. Notable changes include:

- Widening Elverta Road to six lanes from Watt Avenue to Don Julio Boulevard
- Widening Elkhorn Boulevard to six lanes from Watt Avenue to Don Julio Boulevard
- Widening Watt Avenue to six lanes from Antelope Road to Don Julio Boulevard
- Widening Walerga Road to four lanes from Sacramento County/Placer County line to Baseline Road

The extension of Elverta Road to Don Julio Boulevard is assumed only to occur with the addition of the proposed project. Therefore, the baseline Cumulative condition does not assume that connection.

CUMULATIVE IMPACTS – PREFERRED PROJECT

CUMULATIVE (2035)-PLUS-PROJECT ANALYSIS

Total traffic on the network with the additional of the proposed project was estimated using a revised version of the Cumulative (2035) SACSIM model, and levels of service

were determined at the stud facilities. At some locations, volumes would decrease as trip patterns change with the proposed project. Analysis worksheets for this scenario are provided with Appendix E of the TIA prepared for this project (Appendix J to this EIR). This appendix also includes peak-hour and daily traffic volumes for the Cumulative (2035) plus Project Network-Only Conditions.

IMPACT: CUMULATIVE-PLUS-PROJECT INTERSECTIONS

LEVEL OF IMPACT: LESS THAN SIGNIFICANT WITH MITIGATION

To evaluate impacts to intersections as a result of the project, levels of service of the existing Cumulative (2035) condition were compared to conditions modeled for the cumulative state including the project.

The TIA indicates that the intersections of Don Julio Boulevard and Elkhorn Boulevard, as well as Walerga Road and Elverta Road are expected to perform below their acceptable LOS as a result of the project, as shown in **Table TC-12**.

CUMULATIVE-PLUS-PROJECT INTERSECTION ANALYSIS

DON JULIO BOULEVARD AND ELKHORN BOULEVARD (SACRAMENTO COUNTY)

This intersection, identified as Intersection No.10, operates at LOS F during both peak hours without the project and the project adds more than five seconds of delay during both peak hours. This would be a significant cumulative impact.

The delay under the cumulative scenario for the intersection of Don Julio Boulevard and Elkhorn Boulevard is 133.4 seconds for the AM peak hour and 123.6 seconds for the PM peak hour. Modeling for Cumulative-plus-Project scenario shows an increase in delay greater than five seconds for both the AM and PM peak hours, with the delay increasing to 163.8 seconds (AM) and 192.7 seconds (PM).

The significant impact at this intersection can be partially mitigated by adding a second westbound right-turn lane and adding an overlap phase that would run concurrently with the southbound left-turn movement, and adding a northbound right-turn overlap phase that would run concurrently with the westbound left-turn phase. This mitigation was previously identified under Existing-Plus-Project conditions as the project's responsibility. With mitigation, the AM peak hour delay will decrease to 127.2 seconds, and the PM peak hour delay will decrease to 96.9 seconds.

This mitigation measure would result in the intersection still operating at LOS F during both peak hours, but with less delay than Cumulative (2035) baseline conditions. Therefore, the project's contribution is *less than cumulatively considerable* and therefore the impact is less than significant with mitigation. .

WALERGA ROAD AND ELVERTA ROAD (SACRAMENTO COUNTY)

This intersection, identified as Intersection No. 13, operates at LOS E during both peak hours without the project, and at LOS F during both peak hours with the project. This would be a significant cumulative impact. .

The significant impact at this intersection can be partially mitigated by adding a second westbound right-turn lane and adding an overlap phase that would run concurrently with the southbound left-turn movement, and adding dual northbound right-turn movements with an overlap phase that would run concurrently with the westbound left-turn movement (**Plate TC-7**). These mitigation measures would result in the intersection still operating at LOS F, but with less delay than Cumulative (2035) baseline conditions. With the implementation of these mitigation measures, the project's contribution to the cumulative impact would be *less than cumulatively considerable and therefore **less than significant with mitigation*.**

MITIGATION MEASURES

Mitigation for Don Julio Boulevard and Elkhorn Boulevard (Intersection No. 10) is addressed by TC-3 in the Existing-Plus-Project discussion.

Mitigation for Walerga Road and Elverta Road (Intersection No. 13) is addressed by TC-4 in the Existing-Plus-Project discussion.

TC-6: Prior to issuance of building permits, the project proponent shall pay a fair share toward the cost of the following improvements for impacts to the intersection of Walerga Road and Elverta Road:

- Add a second westbound right-turn lane and associated overlap signal phase;
- Add dual northbound right-turn lanes and associated overlap signal phase.

The project's mitigation share is calculated to be 3.58%.

IMPACT: CUMULATIVE-PLUS-PROJECT ROADWAY SEGMENTS

In a comparison between baseline Cumulative (2035) conditions and Cumulative-Plus-Project levels of service, the TIA indicates that the roadway segments at Antelope Road, between Don Julio Boulevard and Roseville Road; Elkhorn Boulevard between Don Julio Boulevard and Roseville Road; Elkhorn Boulevard between Roseville Road and I-80 Westbound Ramps; and Don Julio Boulevard between Antelope Road and Elkhorn Boulevard are expected to perform below their acceptable LOS as a result of the project.

LEVEL OF IMPACT: LESS THAN SIGNIFICANT WITH MITIGATION

CUMULATIVE (2035)-PLUS-PROJECT ROADWAY SEGMENT ANALYSIS

ANTELOPE ROAD BETWEEN DON JULIO BOULEVARD AND ELKHORN BOULEVARD

This roadway currently operates at LOS F without the project. In the cumulative scenario, the project increases the volume-to-capacity ratio by more than 0.05. This would be a significant cumulative impact.

As stated above under the Existing plus Project analysis, the significant impact at this roadway cannot be mitigated because it would require the widening of this segment of Antelope Road from four to six lanes, which would require the demolition of several homes. Based on this, SacDOT has determined that this roadway is built out to its ultimate capacity and no further mitigation measures were identified.

Because the segment is already operating at an unacceptable level of service, the SacDOT indicates that in these cases, payment of a fair share contribution provides for mitigation of an impact. In addition, according to Section 15130 of the California Environmental Quality Act Guidelines, an EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus not significant. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure designed to alleviate the cumulative impact. Therefore, with payment of a fair share contribution, as required by the prescribed mitigation, the project's contribution to the significant impact is less than cumulatively considerable and therefore considered ***less than significant with mitigation***.

LEVEL OF IMPACT: SIGNIFICANT AND UNAVOIDABLE

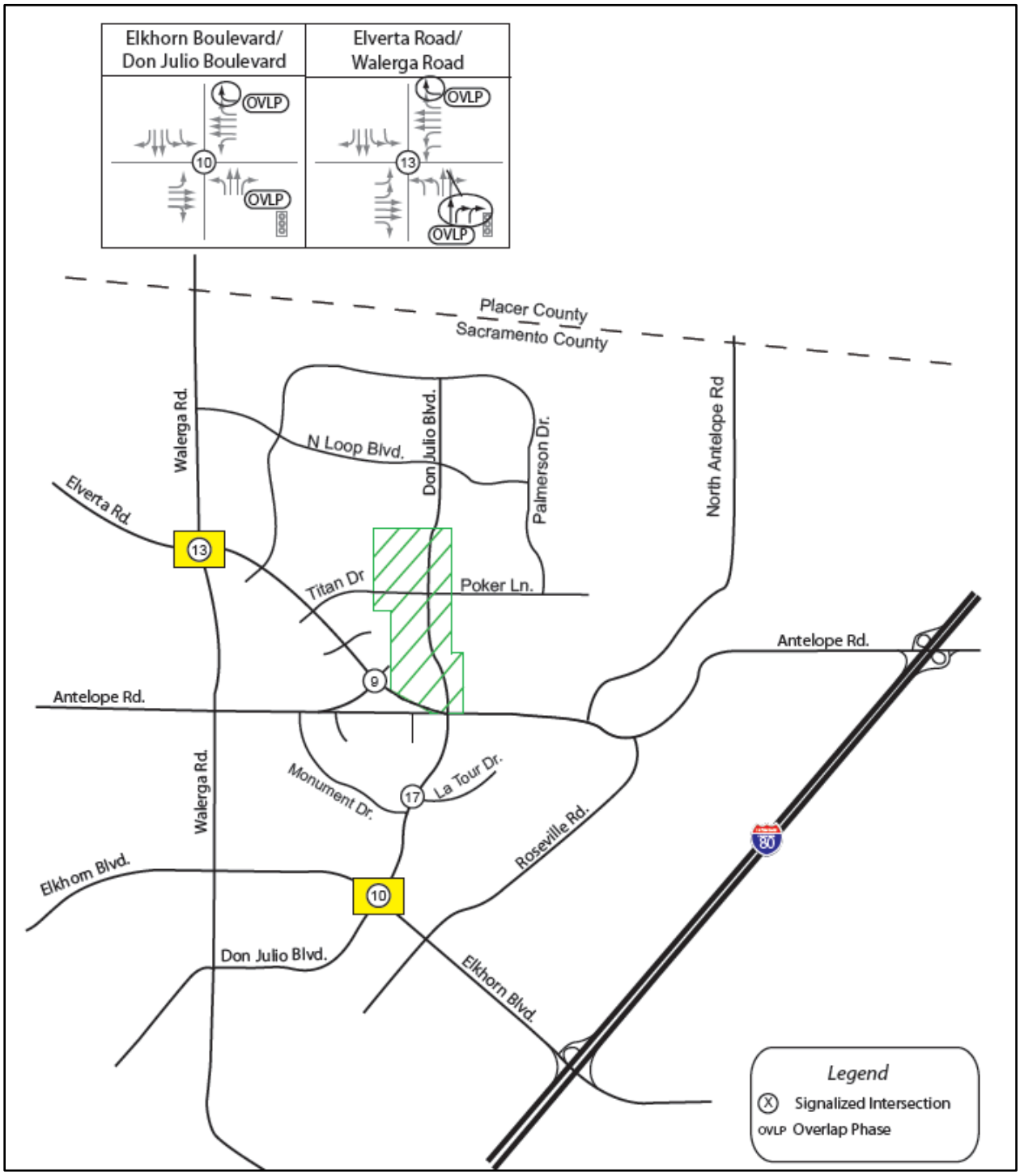
CUMULATIVE (2035)-PLUS-PROJECT ROADWAY SEGMENT ANALYSIS

ELKHORN BOULEVARD BETWEEN DON JULIO BOULEVARD AND ROSEVILLE ROAD

This roadway operates at LOS F without the project and the project increases the volume-to-capacity ratio by more than 0.05. This is a *significant impact.*

The significant impact at this roadway cannot be mitigated. This roadway is built out to its ultimate capacity and no further mitigation measures were identified. This cumulative impact is ***significant and unavoidable.*** Although the facility is currently operating below standard, the project in the cumulative context further degrades the operation of the facility from LOS E to LOS F, and no funding or mitigation is available. Therefore, the project's contribution to this impact is ***cumulatively considerable***.

Plate TC-7: Traffic Control and Lane Geometries for Cumulative (2035)-Plus-Project Mitigated



ELKHORN BOULEVARD BETWEEN ROSEVILLE ROAD AND I-80 WESTBOUND RAMPS

This roadway operates at LOS F without the project and the project increases the volume-to-capacity ratio by more than 0.05. This is a *significant impact.*

The significant impact at this roadway cannot be mitigated. This roadway is built out to its ultimate capacity and no further mitigation measures were identified. This cumulative impact is ***significant and unavoidable.*** No funding or mitigation is available, so the project's contribution to the impact is ***cumulatively considerable***.

DON JULIO BOULEVARD BETWEEN ANTELOPE ROAD AND ELKHORN BOULEVARD

This roadway operates at LOS D without the project and at LOS F with the addition of the project. This is a *significant impact.*

The significant impact at this roadway cannot be mitigated. This roadway is built out to its ultimate capacity and no further mitigation measures were identified. This impact is ***significant and unavoidable.*** No funding or mitigation is available, so the project's contribution to the impact is ***cumulatively considerable***.

MITIGATION MEASURES

No mitigation was determined to be feasible for this impact.

IMPACT: CUMULATIVE-PLUS-PROJECT FREEWAY FACILITIES

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

To determine whether or not the project would create an impact on freeway facilities, the level of service for the baseline Cumulative (2035) condition was compared to cumulative-plus-project conditions, as shown in **Table TC-13**.

CUMULATIVE-PLUS-PROJECT FREEWAY FACILITIES ANALYSIS

The Cumulative-Plus-Project conditions do not result in a reduction of level of service such that an unacceptable LOS is reached. No other significance criteria are met; therefore, impacts to freeway facilities are *less than significant.*

MITIGATION MEASURES

None recommended.

Table TC-12: Cumulative (2035) and Cumulative-Plus-Project Intersection LOS

Jurisdiction	ID	Intersection	Control	Peak Hour	Cumulative (2035)		Cumulative (2035)-plus-Proposed Project	
					Delay	LOS	Delay	LOS
Sacramento County	1	Walerga Rd & Antelope Rd	Signal	AM	64.4	E	46.1	D
				PM	102.0	F	72.7	E
	2	Esteem Dr & Antelope Rd	SSSC	AM	ECL	F	15.6	C
					Signal Warranted: Yes		Signal Warranted: No	
				PM	ECL	F	17.0	C
					Signal Warranted: Yes		Signal Warranted: No	
	3	Don Julio Blvd & Antelope Rd	Signal	AM	167.7	F	61.4	E
				PM	298.0	F	69.7	E
	6	Palmerson Dr & Elverta Rd	Signal	AM	21.4	C	44.9	D
				PM	15.4	B	27.5	C
	7	Winje Dr/Titan Dr & Elverta Rd	Signal	AM	33.6	C	54.1	D
				PM	10.4	B	28.1	C
	8	Pismo Beach Dr & Elverta Rd	Signal	AM	10.1	B	19.0	B
				PM	6.8	A	30.0	C
	9	Antelope Rd/Sand City Dr & Elverta Rd	Signal	AM	253.8	F	204.3	F
				PM	419.4	F	189.5	F
	10	Don Julio Blvd & Elkhorn Blvd	Signal	AM	133.4	F	**163.8**	**F**
				PM	123.6	F	**192.7**	**F**
	11	I-80 WB Ramp & Elkhorn Blvd	Signal	AM	26.4	C	27.4	C
				PM	66.7	E	72.9	E
	12	I-80 EB Ramp & Elkhorn Blvd	Signal	AM	25.3	C	25.8	C
				PM	59.1	E	62.2	E
	13	Walerga Rd & Elverta Rd	Signal	AM	75.6	E	**613.2**	**F**
				PM	75.8	E	**345.9**	**F**
	14	Walerga Rd & Elkhorn Blvd	Signal	AM	47.7	D	61.6	E
				PM	67.8	E	66.0	E
	15	Don Julio Blvd & N Loop Rd/Heartland	Signal	AM	88.7	F	86.0	F
				PM	86.7	F	89.2	F
	16	Don Julio Blvd & Poker Ln	Signal	AM	56.0	E	39.5	D
				PM	122.9	F	47.9	D
	17	Don Julio Blvd & La Tour Dr	AWSC	AM	39.4	E	50.0	E
					Signal Warranted: Yes		Signal Warranted: Yes	
				PM	47.7	E	55.1	F
					Signal Warranted: No		Signal Warranted: No	
	18	Monument Dr & Antelope Rd	SSSC	AM	34.2 (NBL)	D	38.8 (NBL)	E
					Signal Warranted: No		Signal Warranted: No	
				PM	46.0 (NBL)	E	51.7 (NBL)	F
					Signal Warranted: No		Signal Warranted: No	
	19	Component Wy & Antelope Rd	SSSC	AM	47.2 (NBL)	E	46.7 (NBR)	E
					Signal Warranted: No		Signal Warranted: No	
				PM	65.2	F	59.1	F
					Signal Warranted: No		Signal Warranted: No	
City of Citrus Heights	4	I-80 WB Ramp & Antelope Rd	Signal	AM	32.1	C	38.4	D
				PM	60.8	E	69.8	E
	5	I-80 EB Ramp & Antelope Rd	Signal	AM	32.5	C	33.2	C
				PM	58.7	E	57.1	E

Notes: Shaded represents significant impact. ECL = Exceeds Calculable Limit

Impact: Cumulative-Plus-Project Bicycle and Pedestrian Facilities

Level of Impact: Less than Significant

Cumulative-Plus-Project Bicycle and Pedestrian Facilities Analysis

As discussed in the Environmental Setting of this chapter, the general project area is primarily built out, and bicycle and pedestrian infrastructure is fairly comprehensive.

The project proposed bicycle lanes and sidewalks along the primary roadways. Because these primary roadways ultimately interface with the offsite network, the proposed project is not anticipated to remove or obstruct bicycle or pedestrian facilities, or to preclude future ones. Other than intermittent temporary obstruction during project construction, no impacts are anticipated. Impacts to bicycle and pedestrian facilities are *less than significant.*

Mitigation Measures

None recommended.

Table TC-13: Cumulative (2035) and Cumulative-Plus-Project Freeway Facility LOS

INTERSTATE 80				Cumulative (2035)		Cumulative (2035) Plus Project	
Direction	**Segment**	**Type**	**Peak Hour**	**Density**	**LOS**	**Density**	**LOS**
Eastbound	West of Elkhorn Blvd Off Ramp	Basic	AM	24.0	C	24.4	C
			PM	43.7	E	44.9	E
	Elkhorn Blvd Off Ramp	Diverge	AM	16.0	B	16.8	B
			PM	32.7	D	33.7	D
	Elkhorn Blvd Off Ramp to Elkhorn Blvd SB On Ramp	Basic	AM	17.2	B	17.2	B
			PM	21.7	C	21.7	C
	Elkhorn Blvd SB On Ramp	Merge	AM	22.8	C	22.8	C
			PM	24.5	C	24.5	C
	Elkhorn Blvd NB On Ramp	Merge	AM	25.9	C	25.9	C
			PM	14.7	B	14.7	B
	Elkhorn Blvd NB On Ramp to Truck Weigh Station	Basic	AM	25.0	C	25.0	C
			PM	27.9	D	27.9	D
	Truck Weigh Station to Antelope Rd Off Ramp	Weave	AM	26.4	C	26.4	C
			PM	31.0	D	31.0	D
	Antelope Rd Off Ramp to Antelope Rd On Ramp	Basic	AM	21.5	C	21.5	C
			PM	20.9	C	20.9	C
	Antelope Rd On Ramp	Merge	AM	20.7	C	21.2	C
			PM	28.0	C	28.4	D
	East of Antelope Rd On Ramp	Basic	AM	29.7	D	30.1	D
			PM	24.8	C	25.0	C
Westbound	East of Antelope Rd Off Ramp	Basic	AM	29.5	D	29.8	D
			PM	29.7	D	30.3	D
	Antelope Rd Off Ramp	Diverge	AM	39.4	E	39.4	E
			PM	31.6	D	31.6	D
	Antelope Rd Off Ramp to Antelope Rd NB On Ramp	Basic	AM	25.5	C	25.5	C
			PM	21.2	C	21.2	C
	Antelope Rd NB On Ramp	Merge	AM	20.9	C	20.9	C
			PM	25.2	C	25.2	C
	Antelope Rd SB On Ramp to Truck Weigh Station	Weave	AM	31.4	D	31.4	D
			PM	23.9	C	23.9	C
	Truck Weigh Station to Elkhorn Blvd Off Ramp	Basic	AM	35.2	E	35.2	E
			PM	25.4	C	25.4	C
	Elkhorn Blvd Off Ramp	Diverge	AM	42.3	E	42.3	E
			PM	24.9	C	24.9	C
	Elkhorn Blvd Off Ramp to Elkhorn Blvd NB On Ramp	Basic	AM	26.9	D	26.9	D
			PM	17.8	B	17.8	B
	Elkhorn Blvd NB On Ramp	Merge	AM	26.0	C	26.0	C
			PM	26.8	C	26.8	C
	Elkhorn Blvd SB On Ramp	Merge	AM	51.8	E	52.5	E
			PM	34.2	D	35.5	E
	West of Elkhorn Blvd SB On Ramp	Basic	AM	43.4	E	44.4	E
			PM	25.1	C	26.0	C

Notes:

Density: measured in passenger cars/lane/mile (pc/ln/mi), **Bold** represents unacceptable operations. Shaded represents a significant impact.

IMPACT: CUMULATIVE-PLUS-PROJECT TRANSIT FACILITIES

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

The current transit routes are identified and further discussed in the Existing Roadway System section of this chapter.

The RT Master Plan indicates that Antelope Road from Watt Avenue to Sunrise Marketplace is slated for future Hi-Bus service, with the intent to connect the proposed light rail extension to Citrus Heights and Roseville and the street tram between Citrus Heights and Rancho Cordova. According to the RT Master Plan, Hi-Bus service is intended to serve the community with higher quality and higher capacity buses and frequencies of 5-30 minutes. The segment of Antelope Road that interfaces with the proposed project is included in this planned future Hi-Bus service area.

While this project condition may increase ridership, an expanded, higher capacity service is planned in the project vicinity. Regional Transit did not indicate that the project as proposed would exceed current service capacity. No conflicts with the RT Master Plan have been identified. Therefore, any impacts are anticipated to be *less than significant.*

MITIGATION MEASURES

None recommended.

IMPACTS AND ANALYSIS- COMMERCIAL PROJECT ALTERNATIVE

EXISTING-PLUS-COMMERCIAL PROJECT ALTERNATIVE ANALYSIS

Additional retail and service uses available in a larger commercial center with a health/fitness club could reduce vehicle trips that would otherwise impact Antelope Road an Don Julio Boulevard, but would not reduce all transportation impacts to less than significant levels. The Supplemental Traffic Analysis estimated that there would be 7,397 new daily trips, with 438 occurring during the AM peak hour, and 718 during the PM peak hour. These trip levels represent trip reductions of 31-percent for daily trips, 21-percent for AM peak trips, and 26-percent for PM peak trips, as compared to the proposed project. **Table TC-14** shows the anticipated traffic generation of the Commercial Project Alternative and shows a comparison of the alternative to the preferred project. This alternative would result in fewer intersection and roadway segment impacts and reduce the number of improvements required to mitigate some impacts, as compared to the preferred project.

Table TC-14: Preferred Project and Commercial Project Alternative Trip Generation

Land Use (ITE Land Use Code)	Size	Total Daily Trips	AM Peak-Hour					PM Peak-Hour				
			Total Trips	IN		OUT		Total Trips	IN		OUT	
				%	Trips	%	Trips		%	Trips	%	Trips
Preferred Project												
Single Family Detached(210)	495-units	4,530	356	25%	89	75%	267	443	63%	279	37%	164
Apartment (220)	196-units	1,312	100	20%	20	80%	80	125	65%	82	35%	43
Shopping Center (820)	108.9-ks f	7,180	164	62%	102	38%	62	634	48%	304	52%	330
Subtotal Trips:		13,022	620		211		409	1,203		665		538
Internal Trip Reduction (Daily, AM, PM)	18% 10% 19%	-2,344	-62		-21		-41	-229		-126		-102
Preferred Project Net New External Trips:		**10,678**	**558**		**190**		**368**	**974**		**539**		**436**
Commercial Project Alternative												
Single Family Detached (210)	496-units	4,538	357	25%	89	75%	268	444	63%	280	37%	164
Apartment (220)	26-units	282	16	20%	3	80%	13	32	65%	21	35%	11
Health/Fitness Club (492)	45-ks f	1,482	63	50%	32	50%	31	159	57%	91	43%	68
Shopping Center (820)	33-ks f	3,304	79	62%	49	38%	30	285	48%	137	52%	148
Subtotal Trips:		9,606	516		173		343	920		529		391
Internal Tri p Reduction (Daily, AM, PM)	23% 15% 22%	-2,209	-77		-26		-51	-202		-116		-86
Commercial Project Alternative Net New External Trips:		**7,397**	**438**		**147**		**291**	**718**		**413**		**305**
Comparison (Alternate-Original):		***(3,281)***	***(120)***					***(257)***				

Source : Trip Generation Manual, 9 th Edition , ITE

Consistent with the analysis for the preferred project, the trips associated with the Commercial Project Alternative were distributed to the surrounding roadway network. The following is a discussion of each impact and its associated mitigation. The Commercial Project Alternative Results in significant impacts at one intersection and one roadway segment. No impacts were found to the freeway facilities.

IMPACT: EXISTING-PLUS-COMMERCIAL PROJECT ALTERNATIVE INTERSECTIONS

LEVEL OF IMPACT: LESS THAN SIGNIFICANT WITH MITIGATION

Significant impacts to intersections occur when one of the significance criteria, as discussed earlier in this chapter, are met. The Supplemental TIA indicates that the intersection of Walerga Road and Elverta Road is expected to perform below acceptable LOS as a result of the Commercial Project Alternative (**Table TC-15**). Table TC-15 also indicates that the other study intersections will experience less than significant impacts.

EXISTING-PLUS-COMMERCIAL PROJECT ALTERNATIVE INTERSECTION ANALYSIS

WALERGA ROAD AND ELVERTA ROAD (SACRAMENTO COUNTY)

This intersection, identified as Intersection No. 13, operates at LOS D without the project and LOS F with the Commercial Project Alternative during both peak hours. Since this is a signalized intersection, the first criterion is met; accordingly, this deterioration constitutes a significant impact.

Table TC-15: Existing (2014) and Existing-Plus-Project Alternative Intersection LOS

Jurisdiction	ID	Intersection	Control	Peak Hour	Existing		Existing Plus Project	
					Delay	LOS	Delay	LOS
Sacramento County	1	Walerga Rd & Antelope Rd	Signal	AM	32.3	C	31.7	C
				PM	46.1	D	39.0	D
	2	Esteem Dr & Antelope Rd	SSSC	AM	ECL	F	17.4 (NBL)	C
					Signal Warranted: Yes		Signal Warranted: No	
				PM	ECL	F	10.9 (NBL)	B
					Signal Warranted: Yes		Signal Warranted: No	
	3	Don Julio Blvd & Antelope Rd	Signal	AM	48.1	D	26.5	C
				PM	66.7	E	35.7	D
	6	Palmerson Dr & Elverta Rd	Signal	AM	20.7	C	21.1	C
				PM	16.5	B	15.5	B
	7	Winje Dr/Titan Dr & Elverta Rd	Signal	AM	29.3	C	48.0	D
				PM	16.1	B	10.6	B
	8	Pismo Beach Dr & Elverta Rd	Signal	AM	15.1	B	19.4	B
				PM	13.5	B	10.2	B
	9	Antelope Rd/Sand City Dr & Elverta Rd	Signal	AM	17.6	B	66.8	E
				PM	13.3	B	61.6	E
	10	Don Julio Blvd & Elkhorn Blvd	Signal	AM	82.1	F	78.1	E
				PM	73.0	E	65.8	E
	11	I-80 WB Ramp & Elkhorn Blvd	Signal	AM	17.0	B	18.7	B
				PM	24.5	C	25.3	C
	12	I-80 EB Ramp & Elkhorn Blvd	Signal	AM	17.9	B	16.1	B
				PM	26.4	C	22.7	C
	13	Walerga Rd & Elverta Rd	Signal	AM	50.5	D	**86.5**	**F**
				PM	40.2	D	**118.1**	**F**
	14	Walerga Rd & Elkhorn Blvd	Signal	AM	34.0	C	32.0	C
				PM	59.0	E	54.2	D
	15	Don Julio Blvd & N Loop Rd/Heartland	Signal	AM	66.9	E	56.4	E
				PM	53.0	D	47.3	D
	16	Don Julio Blvd & Poker Ln	Signal	AM	51.2	D	51.3	D
				PM	77.3	E	25.7	C
	17	Don Julio Blvd & La Tour Dr	AWSC	AM	22.5	C	23.5	C
					Signal Warranted: No		Signal Warranted: No	
				PM	32.0	D	32.0	D
					Signal Warranted: No		Signal Warranted: No	
	18	Monument Dr & Antelope Rd	SSSC	AM	26.0 (NBL)	D	21.6 (NBL)	C
					Signal Warranted: No		Signal Warranted: No	
				PM	25.9 (NBL)	D	21.7 (NBL)	C
					Signal Warranted: No		Signal Warranted: No	
	19	Component Wy & Antelope Rd	SSSC	AM	26.4 (NBL)	D	14.6 (NBR)	B
					Signal Warranted: No		Signal Warranted: No	
				PM	30.8 (NBL)	D	14.5 (NBR)	C
					Signal Warranted: No		Signal Warranted: No	
City of Citrus Heights	4	I-80 WB Ramp & Antelope Rd	Signal	AM	12.5	B	12.6	B
				PM	104.2	F	100.8	F
	5	I-80 EB Ramp & Antelope Rd	Signal	AM	17.3	B	17.8	B
				PM	16.6	B	17.9	B

Notes:

Bold represents unacceptable operations. Shaded represents significant impact. ECL = Exceeds Calculable Limit

The significant impact at this intersection during both peak hours can be mitigated by adding an additional eastbound through lane. The pavement width exists to add this lane simply by restriping. The project's proportionate share toward these improvements is 100-percent, ensuring that the mitigation measure would be accomplished with project construction. Therefore, with the implementation of this mitigation measure the impact would be reduced to *less than significant.*

MITIGATION MEASURES:

CTC-1:(Intersection No. 13) Prior to issuance of building permits, the project proponent shall accomplish the following improvements for the intersection of Walerga Road and Elverta Road, to the satisfaction of the Sacramento County Department of Transportation:

- Stripe eastbound through lane

IMPACT: EXISTING-PLUS-COMMERCIAL PROJECT ALTERNATIVE ROADWAY SEGMENTS

LEVEL OF IMPACT: SIGNIFICANT AND UNAVOIDABLE

COMMERCIAL PROJECT ALTERNATIVE ROADWAY SEGMENT ANALYSIS

Significant impacts to roadway segments occur when one of the significance criteria, as discussed earlier in this chapter, are met. One roadway segment is expected to deteriorate to unacceptable levels as a result of the Commercial Project Alternative (**Table TC-16**).

ANTELOPE ROAD BETWEEN DON JULIO BOULEVARD AND ROSEVILLE ROAD (SACRAMENTO COUNTY)

This roadway operates at LOS F without the project; additionally, the project increases the volume-to-capacity ratio by more than 5-percent. This scenario meets two significance criteria. The associated deterioration in roadway segment function constitutes a significant impact.

The significant impact at this roadway could be mitigated by widening Antelope Road from four to six lanes; however, this widening would necessitate the removal of several homes. As indicated for the Preferred Project, this is not a currently scheduled County project. If expanded to six lanes, this segment would operate at an acceptable LOS C.

The significant impact at this roadway could be mitigated by widening Antelope Road from four to six lanes; however, this widening would necessitate the removal of several homes. While this expansion would be consistent with the County General Plan, SacDOT has indicated that widening the roadway is infeasible, so it is assumed to be built out to its ultimate capacity. However, although the roadway cannot be widened, the County's Traffic Impact Analysis Guidelines indicates that if a project causes a significant impact on a facility already operating at an unacceptable level of service,

then the project should pay a "fair share" for mitigation. In this case, SacDOT would collect impact fees, but the impact would remain ***significant and unavoidable***.

MITIGATION MEASURES:

CTC-2: Prior to issuance of building permits, the project proponent shall pay a fair share toward the cost of the following improvements for impacts to the road segment of Antelope Road between Don Julio Boulevard and Roseville Road:

- Widen Antelope Road from four to six lanes consistent with the General Plan designation for this roadway segment.

This project's mitigation share is calculated to be 4.96%

IMPACT: EXISTING-PLUS-COMMERCIAL PROJECT ALTERNATIVE FREEWAY FACILITIES

LEVEL OF IMPACT: LESS THAN SIGNIFICANT

COMMERCIAL PROJECT ALTERNATIVE FREEWAY FACILITY ANALYSIS

To determine whether or not the Commercial Project Alternative would create an impact on freeway facilities, the level of service for the existing condition was compared to possible existing plus project conditions, as shown in **Table TC-17**.

The existing plus project conditions for the Commercial Alternative do not result in the reduction of LOS such that an unacceptable LOS F is reached. No other significance criteria are met, therefore impacts to freeway facilities are *less than significant.*

MITIGATION MEASURES

None recommended.

Table TC-16: Existing (2014) and Existing-Plus-Project Alternative Road Segment LOS

Roadway Segment		Roadway Classification	LOS Thresh.	Capacity	Existing			Existing plus Project		
					ADT	V/C Ratio	Calc. LOS	ADT	V/C Ratio	Calc. LOS
Sacramento County										
Titan Dr >	Elverta Rd - Antelope HS Dwy	Residential collector without frontage	E	10,000	2,809	0.281	A	4,140	0.414	A
Palmerson Dr >	N Loop Blvd - Everta Rd	Residential collector with frontage	E	8,000	4,789	0.599	C	4,789	0.599	C
Elverta Rd >	Palmerson Dr - Walerga Rd	4-Lane Arterial (Moderate Access Control)	E	36,000	10,397	0.289	A	17,259	0.479	A
Antelope Rd >	Watt Ave - Walerga Rd	4-Lane Arterial (Moderate Access Control)	E	36,000	19,135	0.532	A	19,224	0.534	A
	Walerga Rd - Esteem Dr	4-Lane Arterial (Moderate Access Control)	E	36,000	28,407	0.789	C	22,309	0.620	B
	Don Julio Blvd - Roseville Rd	4-Lane Arterial (Moderate Access Control)	E	36,000	36,230	1.006	F	**38,120**	**1.059**	**F**
Elkhorn Blvd >	Walerga Rd - Don Julio Blvd	4-Lane Arterial (Moderate Access Control)	E	36,000	32,287	0.897	D	31,197	0.867	D
	Don Julio Blvd - Roseville Rd	6-Lane Arterial (Moderate Access Control)	E	54,000	51,136	0.947	E	53,611	0.993	E
	Roseville Rd - I-80 WB Ramps	6-Lane Arterial (Moderate Access Control)	E	54,000	49,202	0.911	E	51,751	0.958	E
Don Julio Blvd >	N Loop Blvd - Poker Ln	2-Lane Arterial (Moderate Access Control)	E	18,000	14,470	0.804	D			
		4-Lane Arterial (Moderate Access Control)	E	36,000				21,537	0.598	A
	Poker Ln - Antelope Rd	2-Lane Arterial (Moderate Access Control)	E	18,000	19,219	1.068	F			
		4-Lane Arterial (Moderate Access Control)	E	36,000				24,062	0.668	B
	Antelope Rd - Elkhorn Blvd	4-Lane Arterial (Moderate Access Control)	E	36,000	20,981	0.583	A	23,655	0.657	B
Watt Ave >	Antelope Rd - Elkhorn Blvd	4-Lane Arterial (Moderate Access Control)	E	36,000	29,382	0.816	D	28,553	0.793	C
Walerga Rd >	Elverta Rd - Antelope Rd	4-Lane Arterial (Moderate Access Control)	E	36,000	35,537	0.987	E	32,527	0.904	E
	Antelope Rd - Elkhorn Blvd	4-Lane Arterial (Moderate Access Control)	E	36,000	29,702	0.825	D	29,851	0.829	D

Notes:

Bold represents unacceptable operations. Shaded represents significant impact.

Impact: Existing-Plus-Commercial Project Alternative Bicycle and Pedestrian Facilities

Level of Impact: Less than Significant

As discussed in the Environmental Setting of this chapter, the general project area is primarily built out, and bicycle and pedestrian infrastructure is fairly comprehensive.

The Commercial Project Alternative, similar to the preferred project, would include bicycle lanes and sidewalks along the primary roadways. Because these primary roadways ultimately interface with the offsite network, it would not be anticipated that the project would remove or obstruct bicycle or pedestrian facilities, or preclude future ones. Other than intermittent temporary obstruction during project construction, no impacts are anticipated. Impacts to bicycle and pedestrian facilities are *less than significant.*

Mitigation Measures

None recommended.

Table TC-17: Existing (2014) and Existing-Plus-Project Alternative Freeway Facility LOS

INTERSTATE 80				Existing		Existing plus Project	
Direction	Segment	Type	Peak Hour	Density	LOS	Density	LOS
Eastbound	West of Elkhorn Blvd Off Ramp	Basic	AM	22.7	C	23.3	C
			PM	39.9	E	39.9	E
	Elkhorn Blvd Off Ramp	Diverge	AM	13.0	B	14.0	B
			PM	23.7	C	24.4	C
	Elkhorn Blvd Off Ramp to Elkhorn Blvd SB On Ramp	Basic	AM	17.6	B	17.6	B
			PM	26.1	D	25.5	C
	Elkhorn Blvd SB On Ramp	Merge	AM	22.8	C	22.8	C
			PM	18.4	B	17.5	B
	Elkhorn Blvd NB On Ramp	Merge	AM	24.1	C	24.1	C
			PM	20.3	C	19.4	B
	Elkhorn Blvd NB On Ramp to Truck Weigh Station	Basic	AM	24.0	C	24.0	C
			PM	32.3	D	31.6	D
	Truck Weigh Station to Antelope Rd Off Ramp	Weave	AM	27.3	C	27.3	C
			PM	37.7	E	37.7	E
	Antelope Rd Off Ramp to Antelope Rd On Ramp	Basic	AM	21.7	C	21.7	C
			PM	24.7	C	24.2	C
	Antelope Rd On Ramp	Merge	AM	18.6	B	19.5	B
			PM	19.6	B	19.5	B
	East of Antelope Rd On Ramp	Basic	AM	28.0	D	28.7	D
			PM	28.6	D	28.5	D
Westbound	East of Antelope Rd Off Ramp	Basic	AM	22.9	C	23.1	C
			PM	22.9	C	22.9	C
	Antelope Rd Off Ramp	Diverge	AM	30.5	D	30.5	D
			PM	24.7	C	23.3	C
	Antelope Rd Off Ramp to Antelope Rd NB On Ramp	Basic	AM	20.7	C	20.7	C
			PM	18.0	B	17.4	B
	Antelope Rd NB On Ramp	Merge	AM	25.3	C	25.3	C
			PM	21.7	C	21.2	C
	Antelope Rd SB On Ramp to Truck Weigh Station	Weave	AM	26.8	C	26.8	C
			PM	24.9	C	24.9	C
	Truck Weigh Station to Elkhorn Blvd Off Ramp	Basic	AM	25.8	C	25.8	C
			PM	20.4	C	19.8	C
	Elkhorn Blvd Off Ramp	Diverge	AM	32.1	D	32.1	D
			PM	19.0	B	17.7	B
	Elkhorn Blvd Off Ramp to Elkhorn Blvd NB On Ramp	Basic	AM	21.1	C	21.1	C
			PM	15.3	B	14.7	B
	Elkhorn Blvd NB On Ramp	Merge	AM	28.5	D	28.5	D
			PM	22.8	C	22.3	C
	Elkhorn Blvd SB On Ramp	Merge	AM	38.4	E	38.8	E
			PM	28.4	D	29.2	D
	West of Elkhorn Blvd SB On Ramp	Basic	AM	29.5	D	29.5	D
			PM	19.9	C	20.2	C

Notes:

a- Density measured in passenger cars/lane/mile (pc/ln/mi)

Impact: Existing-Plus-Commercial Project Alternative Transit Facilities

Level of Impact: Less than Significant

The current transit routes are identified and further discussed in the Existing Roadway System section of this chapter.

The RT Master Plan indicates that Antelope Road from Watt Avenue to Sunrise Marketplace is slated for future Hi-Bus service, with the intent to connect the proposed light rail extension to Citrus Heights and Roseville and the street tram between Citrus Heights and Rancho Cordova. According to the RT Master Plan, Hi-Bus service is intended to serve the community with higher quality and higher capacity buses and frequencies of 5-30 minutes. The segment of Antelope Road that interfaces with the proposed project is included in this planned future Hi-Bus service area.

While this project condition may increase ridership, an expanded, higher capacity service is planned in the project vicinity. Regional Transit did not indicate that the project as proposed would exceed current service capacity. No conflicts with the RT Master Plan have been identified. Therefore, any impacts are anticipated to be *less than significant.*

Mitigation Measures

None recommended.

Cumulative Impacts – Commercial Project Alternative

Cumulative (2035)-Plus-Commercial Project Alternative Analysis

Kimley-Horn prepared a Supplemental Traffic Impact Analysis for the Commercial Project Alternative in December of 2015. The addition of the Commercial Project Alternative to Cumulative (2035) conditions results in a significant impact at two intersections and one roadway segment, as defined by the significance criteria in this chapter. The addition of the proposed Commercial Project Alternative results in three fewer roadway segment impacts than the Cumulative-Plus-Preferred project analysis, which identified significant impacts to four roadway segments.

Impact: Cumulative-Plus-Commercial Project Alternative Intersections

Level of Impact: Less than Significant with Mitigation

The TIA analysis identified two intersections that meet the significance criteria established in this chapter for the Cumulative-Plus-Commercial Project Alternative condition

Table TC-18). These two intersections, identified as Intersections No. 10 and No. 13, have been identified as having significant impacts in each of the project scenarios.

CUMULATIVE-PLUS-COMMERCIAL PROJECT ALTERNATIVE INTERSECTION ANALYSIS

DON JULIO BOULEVARD AND ELKHORN BOULEVARD (SACRAMENTO COUNTY)

This intersection, identified as Intersection No. 10, operates at LOS F for both peak hour periods for the baseline cumulative condition. The increase in delay exceeds five seconds when the project is added, therefore resulting in a *significant impact.*

The impact can be fully mitigated if the project adds a second westbound right-turn lane and a northbound right-turn overlap signal phase at the intersection. The original study (for the Preferred Project) included a westbound right-turn overlap signal phase that is not necessary for the Commercial Project Alternative. If the mitigation is applied as recommended, the project impact will be *less than significant.*

Table TC-18: Cumulative (2035) and Cumulative-Plus-Commercial Project Alternative LOS at Intersections

Jurisdiction	ID	Intersection	Control	Peak Hour	Cumulative		Cumulative plus Project	
					Delay	LOS	Delay	LOS
Sacramento County	1	Walerga Rd & Antelope Rd	Signal	AM	64.4	E	49.4	D
				PM	102.0	F	74.0	E
	2	Esteem Dr & Antelope Rd	SSSC	AM	ECL	F	12.6 (NBR)	B
					Signal Warranted: Yes		Signal Warranted: No	
				PM	ECL	F	13.3 (NBR)	B
					Signal Warranted: Yes		Signal Warranted: No	
	3	Don Julio Blvd & Antelope Rd	Signal	AM	167.7	F	76.2	E
				PM	298.0	F	80.4	F
	6	Palmerson Dr & Elverta Rd	Signal	AM	21.4	C	50.4	D
				PM	15.4	B	30.3	C
	7	Winje Dr/Titan Dr & Elverta Rd	Signal	AM	33.6	C	75.2	E
				PM	10.4	B	29.6	C
	8	Pismo Beach Dr & Elverta Rd	Signal	AM	10.1	B	30.0	C
				PM	6.8	A	49.6	D
	9	Antelope Rd/Sand City Dr & Elverta Rd	Signal	AM	253.8	F	257.8	F
				PM	419.4	F	221.3	F
	10	Don Julio Blvd & Elkhorn Blvd	Signal	AM	133.4	F	**172.0**	**F**
				PM	123.6	F	**194.9**	**F**
	11	I-80 WB Ramp & Elkhorn Blvd	Signal	AM	26.4	C	33.8	C
				PM	90.7	F	90.7	F
	12	I-80 EB Ramp & Elkhorn Blvd	Signal	AM	25.3	C	34.0	C
				PM	101.9	F	101.4	F
	13	Walerga Rd & Elverta Rd	Signal	AM	75.6	E	**557.9**	**F**
				PM	75.8	E	**311.1**	**F**
	14	Walerga Rd & Elkhorn Blvd	Signal	AM	47.7	D	64.6	E
				PM	67.8	E	67.6	E
	15	Don Julio Blvd & N Loop Rd/Heartland	Signal	AM	88.7	F	83.7	F
				PM	86.7	F	80.6	F
	16	Don Julio Blvd & Poker Ln	Signal	AM	56.0	E	68.9	E
				PM	122.9	F	56.6	E
	17	Don Julio Blvd & La Tour Dr	AWSC	AM	39.4	E	49.1	E
					Signal Warranted: Yes		Signal Warranted: Yes	
				PM	47.7	E	54.7	F
					Signal Warranted: No		Signal Warranted: No	
	18	Monument Dr & Antelope Rd	SSSC	AM	34.2 (NBL)	D	36.5 (NBL)	E
					Signal Warranted: No		Signal Warranted: No	
				PM	46.0 (NBL)	E	47.9 (NBL)	E
					Signal Warranted: No		Signal Warranted: No	
	19	Component Wy & Antelope Rd	SSSC	AM	47.2 (NBL)	E	42.4 (NBR)	E
					Signal Warranted: No		Signal Warranted: No	
				PM	65.2 (NBL)	F	52.3 (NBR)	F
					Signal Warranted: No		Signal Warranted: No	
City of Citrus Heights	4	I-80 WB Ramp & Antelope Rd	Signal	AM	32.1	C	47.4	D
				PM	60.8	E	75.9	E
	5	I-80 EB Ramp & Antelope Rd	Signal	AM	32.5	C	36.2	D
				PM	58.7	E	64.4	E

Notes:

Bold represents unacceptable operations. Shaded represents significant impact. ECL = Exceeds Calculable Limit

WALERGA ROAD AND ELVERTA ROAD (SACRAMENTO COUNTY)

This intersection, identified as Intersection No. 13, operates at an acceptable LOS E without the Commercial Project Alternative. With the addition of the project, the intersection is reduced to LOS F, therefore resulting in a *significant impact.*

The project can partially mitigate impacts to the intersection by contributing a proportionate share of 2.31-percent (compared to 3.58-percent for the Preferred Project) to roadway improvements. The mitigation would include adding a second westbound right-turn lane and associated overlap signal phase, and adding a dual northbound right-turn lane and associated overlap signal phase.

Because the intersection is already operating at an unacceptable level of service, the SacDOT indicates that in these cases, payment of a fair share contribution provides for mitigation of an impact. In addition, according to Section 15130 of the California Environmental Quality Act Guidelines, an EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus not significant. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure designed to alleviate the cumulative impact. Therefore, with payment of a fair share contribution, as required by the prescribed mitigation, the project's contribution to the significant impact is less than cumulatively considerable and therefore considered ***less than significant with mitigation.***

MITIGATION MEASURES:

CTC-3:(Intersection No. 10) Prior to issuance of building permits, the project proponent shall accomplish the following improvements for the intersection of Don Julio Boulevard and Elkhorn Boulevard, to the satisfaction of the Sacramento County Department of Transportation:

- Add a second westbound right-turn lane;
- Adjust the traffic signal timing to provide northbound right-turn overlap signal phases.

CTC-4:(Intersection No. 13) Prior to issuance of building permits, the project proponent shall pay a fair share toward the cost of the following improvements for impacts to the intersection of Walerga Road and Elverta Road:

- Add a second westbound right-turn lane and associated overlap signal phase.
- Add dual northbound right-turn lanes and associated overlap signal phase. The project's mitigation share is calculated at 2.31%.

IMPACT: CUMULATIVE-PLUS-COMMERCIAL PROJECT ALTERNATIVE ROADWAY SEGMENTS

LEVEL OF IMPACT: LESS THAN SIGNIFICANT WITH MITIGATION

CUMULATIVE-PLUS-COMMERCIAL PROJECT ALTERNATIVE ROADWAY SEGMENT ANALYSIS

Significant impacts to roadway segments occur when one of the significance criteria, as discussed earlier in this chapter, are met. One roadway segment is expected to deteriorate to unacceptable levels as a result of the Cumulative-Plus-Commercial Project Alternative **Table TC-19**.

ANTELOPE ROAD BETWEEN DON JULIO BOULEVARD AND ROSEVILLE ROAD (SACRAMENTO COUNTY)

This roadway operates at LOS F without the project; additionally, the project increases the volume-to-capacity ratio by more than 5-percent. The deterioration in roadway segment function constitutes a significant impact.

The significant impact at this roadway could be mitigated by widening Antelope Road from four to six lanes; however, this widening would necessitate the removal of several homes. As indicated for the Preferred Project, this is not a currently scheduled County project. If expanded to six lanes, this segment would operate at an acceptable LOS C.

Because the segment is already operating at an unacceptable level of service, the SacDOT indicates that in these cases, payment of a fair share contribution provides for mitigation of an impact. In addition, according to Section 15130 of the California Environmental Quality Act Guidelines, an EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus not significant. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure designed to alleviate the cumulative impact. Therefore, with payment of a fair share contribution, as required by the prescribed mitigation, the project's contribution to the significant impact is less than cumulatively considerable and therefore considered ***less than significant with mitigation***.

MITIGATION MEASURES

Mitigation Measure CTC-2, as discussed in the Existing-Plus-Commercial Project Alternative section, may be applied.

Table TC-19: Cumulative and Cumulative-Plus-Commercial Project Alternative Roadway Segment LOS

Roadway Segment		Roadway Classification	LOS Thresh.	Capacity	Cumulative			Cumulative plus Project		
					ADT	V/C Ratio	Calc. LOS	ADT	V/C Ratio	Calc. LOS
Sacramento County										
Titan Dr >	Elverta Rd - Antelope HS Dwy	Residential collector without frontage	E	10,000	3,842	0.384	A	4,246	0.425	A
Palmerson Dr >	N Loop Blvd - Everta Rd	Residential collector with frontage	E	8,000	6,690	0.836	E	6,657	0.832	E
Elverta Rd >	Palmerson Dr - Walerga Rd	6-Lane Arterial (Moderate Access Control)	E	54,000	41,708	0.772	C	38,980	0.722	C
Antelope Rd >	Watt Ave - Walerga Rd	4-Lane Arterial (Moderate Access Control)	E	36,000	32,544	0.904	E	33,329	0.926	E
	Walerga Rd - Esteem Dr	4-Lane Arterial (Moderate Access Control)	E	36,000	64,938	1.804	F	32,576	0.905	E
	Don Julio Blvd - Roseville Rd	6-Lane Arterial (Moderate Access Control)	E	54,000	62,333	1.154	F	**74,267**	**1.375**	**F**
Elkhorn Blvd >	Walerga Rd - Don Julio Blvd	6-Lane Arterial (Moderate Access Control)	E	54,000	49,057	0.908	E	48,180	0.892	D
	Don Julio Blvd - Roseville Rd	6-Lane Arterial (Moderate Access Control)	E	54,000	77,379	1.433	F	79,616	1.474	F
	Roseville Rd - I-80 WB Ramps	6-Lane Arterial (Moderate Access Control)	E	54,000	79,347	1.469	F	81,422	1.508	F
Don Julio Blvd >	N Loop Blvd - Poker Ln	2-Lane Arterial (Moderate Access Control)	E	18,000	18,635	1.035	F			
		4-Lane Arterial (Moderate Access Control)	E	36,000				25,709	0.714	C
	Poker Ln - Antelope Rd	2-Lane Arterial (Moderate Access Control)	E	18,000	23,021	1.279	F			
		4-Lane Arterial (Moderate Access Control)	E	36,000				33,901	0.942	E
	Antelope Rd - Elkhorn Blvd	4-Lane Arterial (Moderate Access Control)	E	36,000	32,687	0.908	E	35,295	0.980	E
Watt Ave >	Antelope Rd - Elkhorn Blvd	6-Lane Arterial (Moderate Access Control)	E	54,000	58,754	1.088	F	58,772	1.088	F
Walerga Rd >	Elverta Rd - Antelope Rd	4-Lane Arterial (Moderate Access Control)	E	36,000	49,056	1.363	F	48,959	1.360	F
	Antelope Rd - Elkhorn Blvd	4-Lane Arterial (Moderate Access Control)	E	36,000	44,659	1.241	F	45,021	1.251	F

Notes:

Bold represents unacceptable operations. Shaded represents significant impact.

Impact: Cumulative-Plus-Commercial Project Alternative Freeway Facilities

Level of Impact: Less than Significant

To determine whether or not the Cumulative-Plus-Commercial Project Alternative would create an impact on freeway facilities, the level of service for the Cumulative condition was compared to possible Cumulative-Plus-Commercial Project Alternative conditions, as shown in **Table TC-20**.

The Cumulative-Plus-Commercial Project Alternative conditions do not result in the reduction of LOS such than an unacceptable LOS F is reached. No other significance criteria are met; therefore, impacts to freeway facilities are *less than significant.*

Mitigation Measures:

None recommended.

Table TC-20: Cumulative and Cumulative-Plus-Commercial Project Alternative Freeway Facility LOS

INTERSTATE 80				Cumulative		Cumulative-plus-Project	
Direction	**Segment**	**Type**	**Peak Hour**	**Density**	**LOS**	**Density**	**LOS**
Eastbound	West of Elkhorn Blvd Off Ramp	Basic	AM	24.0	C	24.4	C
			PM	43.7	E	44.9	E
	Elkhorn Blvd Off Ramp	Diverge	AM	16.0	B	16.8	B
			PM	32.7	D	33.7	D
	Elkhorn Blvd Off Ramp to Elkhorn Blvd SB On Ramp	Basic	AM	17.2	B	17.2	B
			PM	21.7	C	21.7	C
	Elkhorn Blvd SB On Ramp	Merge	AM	22.8	C	22.8	C
			PM	24.5	C	24.5	C
	Elkhorn Blvd NB On Ramp	Merge	AM	25.9	C	25.9	C
			PM	14.7	B	14.7	B
	Elkhorn Blvd NB On Ramp to Truck Weigh Station	Basic	AM	25.0	C	25.0	C
			PM	27.9	D	27.9	D
	Truck Weigh Station to Antelope Rd Off Ramp	Weave	AM	26.4	C	26.4	C
			PM	31.0	D	31.0	D
	Antelope Rd Off Ramp to Antelope Rd On Ramp	Basic	AM	21.5	C	21.5	C
			PM	20.9	C	20.9	C
	Antelope Rd On Ramp	Merge	AM	20.7	C	21.2	C
			PM	28.0	C	28.4	D
	East of Antelope Rd On Ramp	Basic	AM	29.7	D	30.1	D
			PM	24.8	C	25.0	C
Westbound	East of Antelope Rd Off Ramp	Basic	AM	29.5	D	29.8	D
			PM	29.7	D	30.3	D
	Antelope Rd Off Ramp	Diverge	AM	39.4	E	39.4	E
			PM	31.6	D	31.6	D
	Antelope Rd Off Ramp to Antelope Rd NB On Ramp	Basic	AM	25.5	C	25.5	C
			PM	21.2	C	21.2	C
	Antelope Rd NB On Ramp	Merge	AM	20.9	C	20.9	C
			PM	25.2	C	25.2	C
	Antelope Rd SB On Ramp to Truck Weigh Station	Weave	AM	31.4	D	31.4	D
			PM	23.9	C	23.9	C
	Truck Weigh Station to Elkhorn Blvd Off Ramp	Basic	AM	35.2	E	35.2	E
			PM	25.4	C	25.4	C
	Elkhorn Blvd Off Ramp	Diverge	AM	42.3	E	42.3	E
			PM	24.9	C	24.9	C
	Elkhorn Blvd Off Ramp to Elkhorn Blvd NB On Ramp	Basic	AM	26.9	D	26.9	D
			PM	17.8	B	17.8	B
	Elkhorn Blvd NB On Ramp	Merge	AM	26.0	C	26.0	C
			PM	26.8	C	26.8	C
	Elkhorn Blvd SB On Ramp	Merge	AM	51.8	E	52.5	E
			PM	34.2	D	35.5	E
	West of Elkhorn Blvd SB On Ramp	Basic	AM	43.4	E	44.4	E
			PM	25.1	C	26.0	C

Notes:

a- Density measured in passenger cars/lane/mile (pc/ln/mi)

Impact: Cumulative-Plus-Commercial Project Alternative Bicycle and Pedestrian Facilities

Level of Impact: Less than Significant

As discussed in the Environmental Setting of this chapter, the general project area is primarily built out, and bicycle and pedestrian infrastructure is fairly comprehensive.

The Cumulative-Plus-Commercial Project Alternative condition, similar to the preferred project, would include bicycle lanes and sidewalks along the primary roadways. Because these primary roadways ultimately interface with the offsite network, it would not be anticipated that the project would remove or obstruct bicycle or pedestrian facilities, or preclude future ones. Other than intermittent temporary obstruction during project construction, no impacts are anticipated. Impacts to bicycle and pedestrian facilities are *less than significant.*

Mitigation Measures

None recommended.

Impact: Cumulative-Plus-Commercial Project Alternative Transit Facilities

Level of Impact: Less than Significant

The current transit routes are identified and further discussed in the Existing Roadway System section of this chapter.

The RT Master Plan indicates that Antelope Road from Watt Avenue to Sunrise Marketplace is slated for future Hi-Bus service, with the intent to connect the proposed light rail extension to Citrus Heights and Roseville and the street tram between Citrus Heights and Rancho Cordova. According to the RT Master Plan, Hi-Bus service is intended to serve the community with higher quality and higher capacity buses and frequencies of 5-30 minutes. The segment of Antelope Road that interfaces with the proposed project is included in this planned future Hi-Bus service area.

While this project condition may increase ridership, an expanded, higher capacity service is planned in the project vicinity. Regional Transit did not indicate that the project as proposed would exceed current service capacity. No conflicts with the RT Master Plan have been identified. Therefore, any impacts are anticipated to be *less than significant.*

Mitigation Measures

None recommended.