
3.15 - Transportation/Traffic

3.15.1 - Introduction

This section describes the existing transportation setting and potential effects from the proposed project and assumed land use scenario within the project area. Descriptions and analysis in this section are based on information contained in the Transportation Impact Analysis, prepared in July 2011 by Fehr & Peers and included in this Recirculated Draft EIR as Appendix F.

3.15.2 - Environmental Setting

The project area is generally located south-southwest of the existing City boundaries (Exhibit 2-1) close to the community of Franklin-Laguna. Roadways are the primary existing transportation facilities within the SOIA Area. The existing roadway network consists of freeways, thoroughfares, arterials, collectors, and rural roadways. Roads within the SOIA Area are primarily rural. Railroads and related facilities are also present and are generally used for movement of goods. A description of the major transportation facilities, major roadway segments, current traffic volumes, and alternative transportation modes is provided below.

Study Area

The following 24 roadway and seven freeway segments were selected for analysis based on their proximity to the project sites, their expected usage by project traffic, and the project's expected travel characteristics.

Roadway Segments

1. Elk Grove Boulevard – Interstate 5 (I-5) to Franklin Boulevard
2. Elk Grove Boulevard – Franklin Boulevard to Bruceville Road
3. Elk Grove Boulevard – Bruceville Road to SR-99
4. Elk Grove Boulevard – SR-99 to Elk Grove-Florin Road
5. Elk Grove Boulevard – Elk Grove-Florin Road to Bradshaw Road
6. Grant Line Road – SR-99 to Bradshaw Road
7. Grant Line Road – Bradshaw Road to Elk Grove Boulevard
8. Grant Line Road – Elk Grove Boulevard to Wilton Road
9. Grant Line Road – Wilton Road to Calvine Road
10. Hood-Franklin Road – I-5 to Franklin Boulevard
11. Bilby Road – Franklin Boulevard to Bruceville Road
12. Kammerer Road – Bruceville Road to West Stockton Boulevard
13. Eschinger Road – Bruceville Road to SR-99
14. Dillard Road – State Route 99 (SR-99) to Wilton Road
15. Lambert Road – I-5 to Bruceville Road
16. Franklin Boulevard – Elk Grove Boulevard to Whitelock Parkway
17. Franklin Boulevard – Lambert Road to Hood-Franklin Road

Transportation/Traffic

18. Bruceville Road – Elk Grove Boulevard to Whitelock Parkway
19. Bruceville Road – Whitelock Parkway to Kammerer Road
20. Bruceville Road – Kammerer Road to Eschinger Road
21. Bruceville Road – Eschinger Road to Lambert Road
22. Elk Grove-Florin Road – East Stockton Boulevard to Elk Grove Boulevard
23. Waterman Road – Elk Grove Boulevard to Grant Line Road
24. Bradshaw Road – Elk Grove Boulevard to Grant Line Road

Freeway Segments

1. I-5 – North of Laguna Boulevard
2. I-5 – Laguna Boulevard to Elk Grove Boulevard
3. I-5 – Elk Grove Boulevard to Hood-Franklin Road
4. I-5 – Hood-Franklin Road to Twin Cities Road
5. SR-99 – Twin Cities Road to Dillard Road
6. SR-99 – Dillard Road to Grant Line Road
7. SR-99 – Grant Line Road to Elk Grove Boulevard

Level of Service

Level of service (LOS) is a qualitative measure describing the operating condition of intersections and roadways. LOS ranges from A through F, which represents driving conditions from best to worst, respectively. In general, LOS A represents free-flow conditions with no congestion, and LOS F represents severe congestion and delay under stop-and-go conditions.

Roadway and Freeway Segments

Roadway and freeway segments were analyzed by comparing average daily traffic volumes to the capacity thresholds presented in Table 3.15-1. The capacity thresholds for arterials and rural facilities are from the Sacramento County Traffic Impact Analysis Guidelines (2004). The capacity thresholds for freeways are from the City's Traffic Impact Analysis Guidelines (2000). These thresholds are used to identify the need for new or upgraded facilities.

In most cases, the results are representative of observed conditions. However, analysis results may not be representative of peak travel conditions where the presence of closely spaced intersections on arterial roadways or bottlenecks on freeway segments result in vehicle queuing and reduced travel speeds. As appropriate, these conditions are noted and discussed.

Table 3.15-1: Level of Service Definitions for Study Roadways¹

Facility Type	Number of Lanes	Maximum Daily Volume				
		LOS A	LOS B	LOS C	LOS D	LOS E
Arterial, Low Access Control ²	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 ³	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 ⁴	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 feet to 36 feet of pavement, paved shoulders	2	2,200	4,300	7,100	12,200	20,000
Rural 2-Lane Road, 24 feet to 36 feet of pavement, no shoulders	2	1,800	3,600	5,900	10,100	17,000
Freeway ⁵	4	28,000	43,200	61,600	74,400	80,000
	6	42,000	64,800	92,400	111,600	120,000
	8	56,000	86,400	123,200	148,800	160,000
Notes: ¹ Both number of lanes and daily volume thresholds are two-way totals. ² Low access control roads generally have frequent driveways and speeds of 25 to 35 mph. ³ Medium access control roads generally have limited driveways and speeds of 30 to 35 mph. ⁴ High access control roads generally have no driveways and speeds of 35 to 50 mph. ⁵ Freeway capacities from City of Elk Grove Traffic Impact Analysis Guidelines. Sources: Sacramento County 2004; Elk Grove 2000; Fehr & Peers 2011						

Existing Conditions

This chapter describes the existing transportation system and traffic operations near the project site. In general, the existing physical and operating characteristics of the roadway system, transit system, and bicycle/pedestrian system are described in this section to provide a context for understanding the severity of impacts caused by the proposed project and future annexation and urbanization activities that could be experienced in the SOIA Area. Exhibit 3.15-1 shows the existing average daily traffic volumes.

Roadway System

Implementation of the proposed project will most directly affect roadways in the County of Sacramento and the City of Elk Grove. SR-99 and I-5 will also serve the SOIA Area.

Transportation/Traffic

State Route 99 (SR-99)

SR-99 is a north–south freeway within the study area with interchanges at Laguna Boulevard, Elk Grove Boulevard, Grant Line Road, and Dillard Road. It consists of two lanes in each direction from south of Grant Line Road to just south of Elk Grove Boulevard, where a high occupancy vehicle (HOV) lane is added in each direction. The full-access SR-99/Grant Line Road interchange at the partial SR-99/Eschinger Road interchange (SB access only) would provide direct freeway access to the SOIA Area.

Interstate 5 (I-5)

I-5 is a north–south freeway within the study area with interchanges at Hood-Franklin Road, Elk Grove Boulevard, and Laguna Boulevard. It consists of two lanes in each direction south of Laguna Boulevard and three lanes in each direction north of Laguna Boulevard. The full-access I-5/Hood-Franklin Road interchange would provide direct freeway access to the SOIA Area.

Elk Grove Boulevard

Elk Grove Boulevard is a major east–west roadway that extends from I-5 to Grant Line Road. Through the study area, Elk Grove Boulevard is generally a six-lane roadway from I-5 to SR-99, a four-lane roadway from SR-99 to Elk Grove-Florin Road. East of Elk Grove-Florin Road, Elk Grove Boulevard narrows to two lanes.

Grant Line Road

Grant Line Road is a major north–south arterial that extends from SR-99 to White Rock Road in unincorporated Sacramento County. Grant Line Road has a Type L-9 partial cloverleaf interchange at SR-99 with a six-lane overcrossing that can accommodate eight through lanes. Grant Line Road transitions to two lanes east of SR-99.

Hood-Franklin Road

Hood-Franklin Road is an east–west two-lane rural roadway that extends from Franklin Boulevard/River Road in the west. It provides access from the project area to I-5. Hood-Franklin Road is located outside the County’s Urban Services Boundary. Hood-Franklin Road has a Type L-9 partial cloverleaf interchange at I-5 with a two-lane overcrossing.

Bilby Road

Bilby Road is an east–west two-lane collector roadway that extends from Franklin Boulevard to Bruceville Road in the east.



Source: Fehr and Peers



Michael Brandman Associates

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Exhibit 3.15-1 Average Daily Traffic Volumes-Existing Conditions

Kammerer Road

Kammerer Road is an east–west roadway that extends from SR-99 to Bruceville Road. Kammerer Road has six lanes between SR-99 and Lent Ranch Parkway and narrows to a two-lane facility to the west.

Eschinger Road

Eschinger Road is an east–west two-lane roadway between SR-99 and Bruceville Road. Eschinger Road is located outside the County’s Urban Services Boundary.

Dillard Road

Dillard Road is an east–west two-lane rural roadway that extends from SR-99 in the west to Jackson Road in the east. Dillard Road is located outside the County’s Urban Services Boundary.

Lambert Road

Lambert Road is an east–west two-lane rural roadway that extends from Bruceville Road west to River Road. Lambert Road is located outside the County’s Urban Services Boundary.

Franklin Boulevard

Franklin Boulevard is a north–south roadway that extends from Twin Cities Road (south of the SOIA Area) to the City of Sacramento in the north. It is a two-lane rural road between Lambert Road and Hood-Franklin Road and is outside the County’s Urban Services Boundary. In the City of Elk Grove, Franklin Boulevard is two lanes to Whitelock Parkway and a four-lane road between Whitelock Parkway and Elk Grove Boulevard.

Bruceville Road

Bruceville Road is a north–south roadway that extends from Desmond Road in southern Sacramento County north to Valley Hi Drive. From Lambert Road to Kammerer Road, Bruceville Road is a two-lane rural roadway and is outside the County’s Urban Services Boundary. In the City of Elk Grove, Bruceville Road is a two-lane arterial between Kammerer Road and Whitelock Parkway. North of Whitelock Parkway, Bruceville Road is four lanes.

Waterman Road

Waterman Road is a north–south two-lane roadway between Grant Line Road and Elk Grove Boulevard in the study area.

Bradshaw Road

Bradshaw Road is a north–south two-lane roadway between Grant Line Road and Elk Grove Boulevard in the study area.

This section describes the traffic conditions on the existing roadway and freeway segments.

Roadway and Freeway Segment Operations

Table 3.15-2 and Table 3.15-3 summarize study roadway and freeway segment operations under existing conditions, respectively, and include the following information for each study roadway segment:

- Daily roadway capacity
- Daily traffic volume (two-way total)
- Volume-to-capacity ratio
- LOS

As shown in Table 3.15-2, most of the study roadway segments operate acceptably, except for Elk Grove Boulevard between SR-99 and Elk Grove-Florin Road, which operates at LOS F. In addition, the segment of Elk Grove Boulevard between SR-99 and Bruceville Road experiences congested conditions during the evening peak hour that are characterized by significant vehicle queuing. The congestion on this segment is due primarily to the closely spaced ramp-terminal intersection at the SR-99/Elk Grove Boulevard interchange and several closely spaced intersections and driveways.

As shown in Table 3.15-3, all of the freeway segments operate acceptably at LOS E or better, based on daily traffic volumes. However, bottlenecks on SR-99 north of Elk Grove Boulevard cause vehicle queue spillback that can impact northbound SR-99 near Elk Grove Boulevard during the morning peak hour.

Table 3.15-2: Roadway Segment Level of Service – Existing Conditions

Roadway Segment	Daily Capacity ¹	Existing Conditions		
		Daily Volume ²	V/C Ratio ³	LOS ³
Elk Grove Boulevard – I-5 to Franklin Boulevard	54,000	24,000	0.44	A
Elk Grove Boulevard – Franklin Boulevard to Bruceville Road	54,000	29,600	0.55	A
Elk Grove Boulevard – Bruceville Road to SR-99	54,000	31,028	0.57	A
Elk Grove Boulevard – SR-99 to Elk Grove-Florin Road	36,000	37,700	1.05	F
Elk Grove Boulevard – Elk Grove-Florin Road to Bradshaw Road	18,000	13,800	0.77	C
Grant Line Road – SR-99 to Bradshaw Road	18,000	16,081	0.89	D
Grant Line Road – Bradshaw Road to Elk Grove Boulevard	18,000	9,525	0.53	A
Grant Line Road – Elk Grove Boulevard to Wilton Road	18,000	14,627	0.81	D

Table 3.15-2 (cont.): Roadway Segment Level of Service – Existing Conditions

Roadway Segment	Daily Capacity ¹	Existing Conditions		
		Daily Volume ²	V/C Ratio ³	LOS ³
Grant Line Road – Wilton Road to Calvine Road	18,000	16,200	0.90	D
Hood-Franklin Road – I-5 to Franklin Boulevard	20,000	5,295	0.26	C
Bilby Road – Franklin Boulevard to Bruceville Road	18,000	4,771	0.26	A
Kammerer Road – Bruceville Road to West Stockton Boulevard	17,000	1,900	0.11	B
Eschinger Road – Bruceville Road to SR-99	17,000	1,000	0.06	A
Dillard Road – SR-99 to Wilton Road	17,000	4,676	0.28	C
Lambert Road – I-5 to Bruceville Road	17,000	898	0.05	A
Franklin Boulevard – Elk Grove Boulevard to Whitelock Parkway	36,000	14,000	0.39	C
Franklin Boulevard – Hood-Franklin Road to Lambert Road	20,000	1,435	0.07	A
Bruceville Road – Elk Grove Boulevard to Whitelock Parkway	36,000	24,700	0.69	A
Bruceville Road – Whitelock Parkway to Kammerer Road	18,000	3,700	0.21	A
Bruceville Road – Kammerer Road to Eschinger Road	17,000	2,100	0.12	B
Bruceville Road – Eschinger Road to Lambert Road	17,000	1,500	0.09	A
Elk Grove Florin Road – East Stockton Boulevard to Elk Grove Boulevard	18,000	5,504	0.31	A
Waterman Road – Elk Grove Boulevard to Grant Line Road	18,000	5,630	0.31	A
Bradshaw Road – Elk Grove Boulevard to Grant Line Road	18,000	5,247	0.29	A
Notes: ¹ The capacity of each roadway is based on the number of lanes and the facility type. ² Daily traffic volumes are mid-week from 2009 and 2010 from City of Elk Grove and County of Sacramento. ³ The LOS is calculated based on facility type assignments from Table 3.15-1. Therefore, two roadways with the same V/C ratio but different facility types may be calculated to have different LOS values. Bold text indicates unacceptable LOS. Source: Fehr & Peers 2011; Elk Grove 2010; County of Sacramento 2010.				

Table 3.15-3: Freeway Segment Level of Service – Existing Conditions

Roadway Segment	Daily Capacity ¹	Existing Conditions		
		Daily Volume ²	V/C Ratio	LOS
I-5 – North of Laguna Boulevard	120,000	98,361	0.82	D
I-5 – Laguna Boulevard to Elk Grove Boulevard	80,000	68,724	0.86	D
I-5 – Elk Grove Boulevard to Hood-Franklin Road	80,000	55,199	0.69	C
I-5 – Hood-Franklin Road to Twin Cities Road	80,000	48,642	0.61	C
SR-99 – Twin Cities Road to Dillard Road	80,000	67,570	0.84	D
SR-99 – Dillard Road to Grant Line Road	80,000	62,520	0.78	D
SR-99 – Grant Line Road to Elk Grove Boulevard	80,000	67,395	0.84	D

Notes:
¹ The capacity of each roadway is based on the number of lanes and the facility type.
² Daily traffic volumes are mid-week from Caltrans for 2011.
Bold text indicates unacceptable LOS.
Source: Fehr & Peers 2011

Bicycles and Pedestrians

In the study area, the nearest dedicated bicycle and pedestrian facilities are limited to improved frontages in the City, with the closest facilities near the SR-99/Grant Line Road interchange. These facilities include pedestrian sidewalks, traffic signal–controlled crosswalks, Class II on-street bike lanes, and street lighting. Roadways in the SOIA Area are shared use facilities with no dedicated pedestrian or bicycle facilities, which is consistent with the predominantly agricultural land use.

Public Transit

The City operates e-tran to provide transit service to its residents. E-tran provides the following services:

- Fixed-route local bus service (e-tran) within the City
- Commuter service to Sacramento, Galt, and Lodi
- Connections to Sacramento Regional Transit District light rail transit stations on the SR-99 and US 50 corridors
- Park & ride facilities located throughout the community

The closest routes to the SOIA Area operate on Bilby Road between Franklin Boulevard and Bruceville Road and on Grant Line Road between Bradshaw Road and Waterman Road. The SOIA Area is not served by e-tran.

3.15.3 - Regulatory Framework

State

California Department of Transportation

The California Department of Transportation (Caltrans) is responsible for planning, designing, constructing, operating, and maintaining all state-owned roadways in Sacramento County. Federal highway standards are implemented in California by Caltrans. Any improvements or modifications to the state highway system within the Sacramento County or the City of Elk Grove need to be approved by Caltrans, and the County or City has no ability to unilaterally make improvements to the state highway system.

Caltrans operates and maintains SR-99, I-5, SR-16, and SR-160, which provides regional access to the City and the SOIA Area. Additionally, the Caltrans Division of Planning has four major functions: the Office of Advance Planning, Regional Planning/Metropolitan Planning Organization, Local Assistance/IGR/CEQA, and System Planning Public Transportation. For planning purposes, Caltrans has established LOS D as the minimal acceptable level of service for all roadways under its jurisdiction.

Local

SACOG 2035 Metropolitan Transportation Plan

The Sacramento Area Council of Governments (SACOG) is responsible for the preparation of, and updates to, the Metropolitan Transportation Plan (MTP) and the corresponding Metropolitan Transportation Improvement Program (MTIP). The MTP provides a 20-year transportation vision and corresponding list of projects. The MTIP identifies short-term projects (7-year horizon) in more detail. The current MTP, the MTP/SCS 2035, was adopted in 2012. However, the MTP current at the time of analysis was the MTP for 2035, adopted in 2008. Therefore, the analysis utilizes the MTP for 2035.

SACOG is also responsible for the oversight and distribution of most federal and state transportation funding sources. SACOG also develops the air quality plans and compliance measures, which incorporate mobile (vehicular) pollution sources.

The Sacramento County Department of Transportation (DOT) Traffic Impact Guidelines

The Sacramento County Department of Transportation (DOT) Traffic Impact Guidelines (2004) define the significance thresholds for traffic and circulation impacts in the County. Sacramento County defines the minimum acceptable operation level for its roadways and intersections to be LOS D for rural areas and LOS E for urban areas. The urban areas are those areas within the Urban Service Boundary as shown in the Land Use Element of the Sacramento County General Plan. The areas outside the Urban Service Boundary are considered rural.

County of Sacramento

The County of Sacramento General Plan establishes goals and policies to guide both present and future development within the County's jurisdiction. The proposed SOIA project does not include any development at this time; therefore, determination of any specific policies for future projects would be premature. However, a general policies discussion is included as follows to provide guidance to any future development within the SOIA boundaries.

- **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-2:** Promote continued mobility for individuals whose access to automobile transportation is limited by age, illness, income, desire, or disability.
- **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 to be 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 capita vehicle miles traveled (VMT).
- **CI-6:** Provide support for community based corridor planning processes on existing roadways with excess vehicle capacity within built communities to optimize the public right-of-way by utilizing the excess width for other modes of travel or public amenities such as bike lanes, landscaping, walkways, parking, or medians.
- **CI-7:** Plan and construct transportation facilities as delineated on the Transportation Plan of the Sacramento County General Plan. Transportation facilities shall be consistent with the Sacramento County, Municipal Services Agency Improvement Standards and Construction Specifications, and supplemented by the California Department of Transportation (Caltrans) design standards. The County may deviate from the adopted County Improvement Standards and Construction Specifications in circumstances where conditions warrant special treatment.
- **CI-8:** Maintain and rehabilitate the roadway system to maximize safety, mobility, and cost efficiency.
- **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 as shown in the Land Use Element of the Sacramento County General Plan. The areas outside the Urban Service Boundary are considered rural.

- **CI-10:** Land development projects shall be responsible to mitigate the project's adverse impacts to local and regional roadways.
- **CI-11:** To preserve public mobility, freeways and thoroughfares should have limited access and maintain functional characteristics that predominantly accommodate through traffic.
- **CI-12:** To preserve public safety and local quality of life on collector and local roadways, land development projects shall incorporate appropriate treatments of the Neighborhood Traffic Management Program.
- **CI-13:** Collaborate with regional transportation planning agencies and neighboring jurisdictions to provide cross jurisdictional mobility.
- **CI-14:** Pursue all available sources of funding for the development, improvement, and maintenance of the roadway system.
- **CI-15:** Support the relinquishment of State Highways to the County when the operation of the highway supports local travel demand rather than longer interregional travel demand. Relinquished State Highways shall be developed as a complete street that accommodates all modes of travel.
- **CI-16:** The County supports creating communities that promote access and mobility for all modes of travel through the development of roadway networks based on a grid or modified grid layout.

City of Elk Grove

Approval by LAFCo of this SOIA does not authorize any change in land use or governance. However, the proposed project would adjust the City of Elk Grove's SOI and allow the City the opportunity to file an annexation request with LAFCo to annex lands within the SOIA Area. The City of Elk Grove General Plan establishes goals and policies to guide both present and future development within the City's jurisdiction. The City of Elk Grove's General Plan policies regarding transportation that may apply to potential future development in the SOIA Area are provided below.

- **Policy CI-1:** Circulation planning for all modes of travel (vehicle, transit, bicycle, pedestrian, etc.) shall be coordinated with efforts to reduce air pollution.
- **Policy CI-2:** The City shall coordinate and participate with the City of Sacramento, Sacramento County and Caltrans on roadway improvements that are shared by the jurisdictions in order to improve operations.
- **Policy CI-3:** The City's efforts to encourage alternative modes of transportation will therefore focus on incentives to reduce vehicle use, rather than disincentives (which are generally intended to make driving and parking less convenient, more costly, or both). Incentives may include:
 - Preferential carpool and vanpool parking,
 - Bus turnouts, and
 - Pedestrian-friendly project designs

- **Policy CI-4:** Specific Plans, Special Planning Areas, and development projects shall be designed to promote pedestrian movement through direct, safe, and pleasant routes that connect destinations inside and outside the plan or project area.
- **Policy CI-5:** The City shall encourage the use of transportation alternatives that reduce the use of personal motor vehicles.
- **Policy CI-6:** The City shall require that transit service is provided in all areas of Elk Grove, including rural areas, so that transit dependent residents of those areas are not cut off from community services, events, and activities.
- **Policy CI-7:** The City shall encourage an approach to public transit service in Elk Grove which will provide the opportunity for workers living in other areas of Sacramento County to use all forms of public transit—including bus rapid transit and light rail—to travel to jobs in Elk Grove, as well as for Elk Grove workers to use public transit to commute to jobs outside the city.
- **Policy CI-8:** The City shall encourage the extension of bus rapid transit and/or light rail service to the planned office and retail areas north of Kammerer Road and west of Hwy 99.
- **Policy CI-10:** The City shall implement the roadway master plan shown in Figure CI-2. The following policies apply to selected roadways:
 - The City shall use the latest version of Caltrans’ “Transportation Concept Report” for I-5 and Hwy 99 to determine the planned width of these freeways.
 - “Expanded right-of-way” indicates roadways on which sufficient width is provided for a middle two-way turn lane and/or expanded turn pockets at roadway intersections.
 - The City will widen Grant Line Road north of Bradshaw Road only as needed to accommodate traffic, and strongly supports efforts to locate a future regional connector to provide traffic relief for this roadway. Grant Line Road north of Bradshaw Road should be widened in phases as needed, and should be widened to six lanes only if no alternative route for a future regional connector (see Policy CI-12) has been located and traffic conditions warrant the widening.
 - Urban area roads: LOS E
- **Policy CI-11:** The City shall assist Caltrans in implementing improvements to I-5 and Hwy 99 within the city.
- **Policy CI-13:** The City shall require that all roadways and intersections in Elk Grove operate at a minimum Level of Service “D” at all times.
- **Policy CI-14:** The City recognizes that Level of Service D may not be achieved on some roadway segments, and may also not be achieved at some intersections. Roadways on which LOS D is projected to be exceeded are shown in the General Plan Background Report, based on the latest traffic modeling conducted by the City. On these roadways, the City shall ensure that improvements to construct the ultimate roadway system as shown in this Circulation Element are completed, with the recognition that maintenance of the desired level of service may not be achievable.

- **Policy CI-15:** Development projects shall be required to provide funding or to construct roadway/intersection improvements to implement the City’s Circulation Master Plan. The payment of established traffic impact or similar fees shall be considered to provide compliance with the requirements of this policy with regard to those facilities included in the fee program, provided that the City finds that the fee adequately funds all required roadway and intersection improvements. If payment of established fees is used to provide compliance with this policy, the City may also require the payment of additional fees if necessary to cover the fair share cost of facilities not included in the fee program.
- **Policy CI-16:** The City shall encourage an approach to public transit service in Elk Grove which will provide the opportunity for workers living in other areas of Sacramento County to use all forms of public transit—including bus rapid transit and light rail—to travel to jobs in Elk Grove, as well as for Elk Grove workers to use public transit to commute to jobs outside the city.
- **Policy CI-21:** The City shall require the installation of traffic pre-emption devices for emergency vehicles (police and fire) at all newly constructed intersections, and shall seek to retrofit all existing intersections to incorporate these features.
- **Policy CI-22:** Where traffic calming devices or techniques are employed, the City shall coordinate design and implementation with the Elk Grove Police Department and the Elk Grove CSD to ensure adequate access for police and fire vehicles.

3.15.4 - Methodology

The impacts related to transportation and circulation from implementation of the 2003 Elk Grove General Plan were evaluated in the General Plan Environmental Impact Report. All mitigation measures identified for impacts in the Elk Grove General Plan EIR and adopted by the City continue to remain the responsibility of the City as part of implementation of the General Plan. Consequently, upon approval of any future annexation request for the SOIA Area, those General Plan policies and EIR mitigation measures are assumed to apply to development within the SOIA Area.

The traffic impact analysis evaluates impacts based on the assumed land use scenario discussed in Table 3.15-5 to provide a reasonable projection of future traffic impacts. However, please note that approval of the proposed project itself would not result in any development activities or land use changes. The development of such land use assumptions is used to inform the Sacramento LAFCo using possible land use designations in order to make an informed decision regarding the direct and indirect impacts resulting from the proposed SOIA application. As such, the use of the term “project” in the following sections should not be confused with any proposed development activity; the terms applies to the proposed SOIA application currently before the Sacramento LAFCo. The transportation impact analysis identifies foreseeable and possible impacts to roadway, transit, and bicycle/pedestrian facilities. For the purposes of this analysis, the criteria listed below were developed

in consultation with Caltrans, Sacramento County, the City of Elk Grove, and the Sacramento LAFCo to determine the significance of identified impacts.

Roadway System (Sacramento County)

Consistent with the County of Sacramento Traffic Impact Analysis Guidelines, a project is considered to have a significant effect if it would result in a roadway operating at an acceptable level of service to deteriorate to an unacceptable LOS. For roadways already operating at an unacceptable LOS, a project is considered to have a significant effect if it increases the volume-to-capacity ratio by more than 0.05.

The County defines the minimum acceptable operation level for its roadways to be LOS D for rural areas and LOS E for urban areas. The urban areas are those areas within the Urban Service Boundary as shown in the Land Use Element of the Sacramento County General Plan. The areas outside the Urban Service Boundary are considered rural.

Roadway System (City of Elk Grove)

Consistent with the City of Elk Grove Traffic Impact Analysis Guidelines, a project is considered to have a significant effect if it causes a roadway to change from LOS D or better to LOS E or F. For roadways that operate at unacceptable levels of service without the project, an impact is considered significant if the project increase the volume-to-capacity ratio by 0.05 or more.

Freeway Facilities

A Transportation Concept Report (TCR) assesses a highway's current and future operating conditions and uses and other information to establish a 20-year route concept for each segment of the route. A route concept consists of a concept LOS and a description of the concept facility. The TCR then determines the nature and extent of improvements to attain the route concept. The concept LOS applies to state highway intersections, interchange ramp terminal intersections, freeway segments, and freeway ramp junctions or weaving sections.

The Caltrans State Route 99 Transportation Corridor Concept Report (2010) and the Transportation Corridor Concept Report Interstate 5 (2010) identify the 20-year concept LOS for SR-99 and I-5 at LOS F in the study area.

Caltrans District 3 generally established minimum concept LOS standards for the 20-year horizon at LOS D for rural segments and LOS E for urban segments. Consistent with these minimum concept standards, the project was considered to have a significant effect if it would result in LOS F operations or add traffic to a freeway segment already operating at an unacceptable LOS F.

Bicycle and Pedestrian Facilities

Consistent with the County of Sacramento Traffic Impact Analysis Guidelines, a project is considered to have a significant effect on bicycle and pedestrian facilities if it would:

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

Transit System

A project is considered to have a significant effect if it would disrupt or interfere with existing or planned transit operations or facilities.

Traffic Volume Forecasts

This chapter outlines the development of traffic volume forecasts for the analysis of potential impacts associated with expanding the Elk Grove Sphere of Influence (SOI).

Traffic Model Assumptions and Forecasts

A modified version of SACOG's SACMET Regional Travel Demand Forecasting Model was used to develop daily roadway segment traffic volume forecasts under existing plus project and cumulative conditions without and with the SOIA Area.

As a regional-scale model, the SACMET Travel Demand Forecasting Model lacked sufficient detail for the local-scale application for the SOI amendment. The modifications included creating a "sub-area version" of the model that still retains the entire model but is calibrated and validated with the specific project study area of the City of Elk Grove and southern Sacramento County.

After modifications, the model was able to accurately replicate base year conditions and respond in the appropriate direction and magnitude when changes were made to input variables. Table 3.15-4 summarizes the model validation based on the thresholds contained in the Model Validation and Reasonableness Checking Manual (TMIP/FHWA 1997) and Travel Forecasting Guidelines (Caltrans 1992). The validation included each of the roadway segments listed in Chapter 1.

Table 3.15-4: Sub-Area Model Validation Summary

Roadway Segment	Daily Capacity ¹	Existing Conditions		
		Daily Volume ²	V/C Ratio	LOS
I-5 – North of Laguna Boulevard	120,000	98,361	0.82	D
I-5 – Laguna Boulevard to Elk Grove Boulevard	80,000	68,724	0.86	D
I-5 – Elk Grove Boulevard to Hood-Franklin Road	80,000	55,199	0.69	C
I-5 – Hood-Franklin Road to Twin Cities Road	80,000	48,642	0.61	C
SR-99 – Twin Cities Road to Dillard Road	80,000	67,570	0.84	D
SR-99 – Dillard Road to Grant Line Road	80,000	62,520	0.78	D
SR-99 – Grant Line Road to Elk Grove Boulevard	80,000	67,395	0.84	D
Notes: ¹ The capacity of each roadway is based on the number of lanes and the facility type. ² Daily traffic volumes are mid-week from Caltrans for 2011. Bold text indicates unacceptable LOS. Source: Fehr & Peers 2011				

As outlined above, the sub-area model was used to forecast traffic volumes for each analysis scenario. The Elk Grove SOIA Area model incorporates the following:

- 2035 land use forecasts in the SACMET planning area
- Additional traffic analysis zone (TAZ) detail in the SOIA Area
- Concept land use estimates for the SOIA Area based on estimates developed by LAFCo in consultation with City of Elk Grove. Table 3.15-5 shows the concept land use. These land use inputs were developed to provide a general concept for the potential future impacts that may result from future development in the SOIA Area. For purposes of developing the traffic volume forecasts, the concept land use was allocated to the SOIA Area using general land use transportation planning principles such as locating more intensive land uses (e.g., commercial uses) along major transportation corridors like Kammerer Road that are more accessible and consistent with planned development in Elk Grove north of Kammerer Road.
- Roadway network consistent with the MTP for 2035, adopted in 2008, as outlined in Table 3.15-5, showing major programmed improvements in the study area, which includes the western segment of the proposed Capital SouthEast Connector project.

Table 3.15-5: Land Use Estimates for Elk Grove SOIA Area

Land Use Category	Acres Proposed within the SOIA
Rural Residential (0.1 to 0.5 du/acre)	1,625
Estate Residential (0.6 to 4.0 du/acre)	320
Low Density Residential (4.1 to 7.0 du/acre)	2,390
Medium Density Residential (7.1 to 15.0 du/acre)	131
High Density Residential (15.1 to 30.0 du/acre)	76
Total – Residential	4,542
Office/Multi-Family (20.0 du/ac maximum)	146
Commercial/Office	28
Commercial/Office/Multi-Family	32
Commercial	659
Office	46
Public Schools	483
Institution	113
Public/Quasi Public	230
Light Industry	247
Heavy Industry	357
Total – Retail/Non-Retail	2,340
Open Space ¹	987
Total – SOI Area	7,869
Note: SOI Area limited to FEMA 100-year floodplain Source: MBA 2011 (See Section 2, Project Description).	

Table 3.15-6: MTP 2035 Roadway Projects

Roadway	Improvement
Bruceville Road	Widen 6 lanes from Big Horn Road to Kammerer Road
Franklin Boulevard	Widen 6 lanes from Elk Grove Boulevard to Whitelock Parkway
Grant Line Road	Widen 4 lanes from Waterman Road to Calvine Road
	Widen 6 lanes from East Stockton Boulevard to Waterman Road with UPRR overcrossing
Kammerer Road	Widen 6 lanes from SR-99 to Bruceville Road
	Extend 4 lanes from Bruceville Road to I-5 with UPRR overcrossing
Source: SACOG 2008.	

SOI Amendment Area Trip Generation and Distribution

Based on the land use estimates summarized in Table 3.15-5, the SOIA Area would generate about 218,000 vehicle trips per day. Of these trips, about 6 to 9 percent would stay within the SOIA Area under existing and cumulative conditions, respectively. This higher trip internalization under existing conditions is due in part to improved accessibility caused by the planned MTP roadway improvements summarized in Table 3.15-6. The external trip distribution is summarized in Table 3.15-7.

Table 3.15-7: SOIA Area Project Trip Distribution

North	South	East	West
75%	17%	7%	1%
Source: Fehr & Peers 2011			

Traffic Forecasts

All traffic volume forecasts were adjusted using the difference method, which accounts for the difference between the base year traffic model volumes and existing counts by adding the increment of growth from the traffic model (future model – base year model) to the existing count for each study facility. Exhibit 3.15-2 through Exhibit 3.15-4 present the following information:

- Exhibit 3.15-2: Average Daily Traffic Volumes – Existing Plus Project Conditions.
- Exhibit 3.15-3: Average Daily Traffic Volumes – Cumulative No Project Conditions
- Exhibit 3.15-4: Average Daily Traffic Volumes – Cumulative Plus Project Conditions.



Source: Fehr and Peers

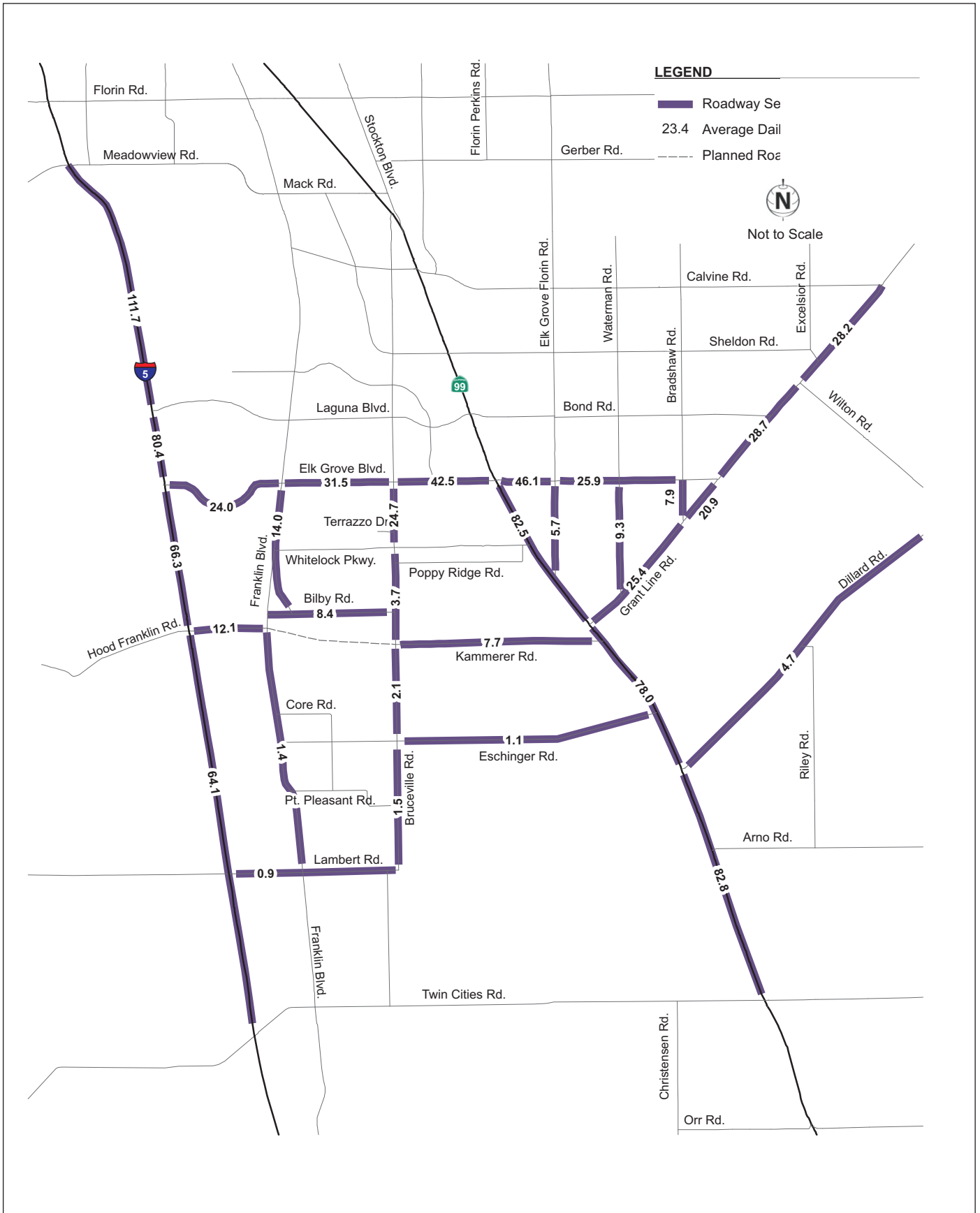


Michael Brandman Associates

32330002 • 09/2011 | 3.15-2_traffic_existing_project_conditions.cdr

Exhibit 3.15-2 Average Daily Traffic Volumes-Existing Plus Project Conditions

SACRAMENTO LAFCo • ELK GROVE OF INFLUENCE AMENDMENT
RECIRCULATED DRAFT ENVIRONMENTAL IMPACT REPORT



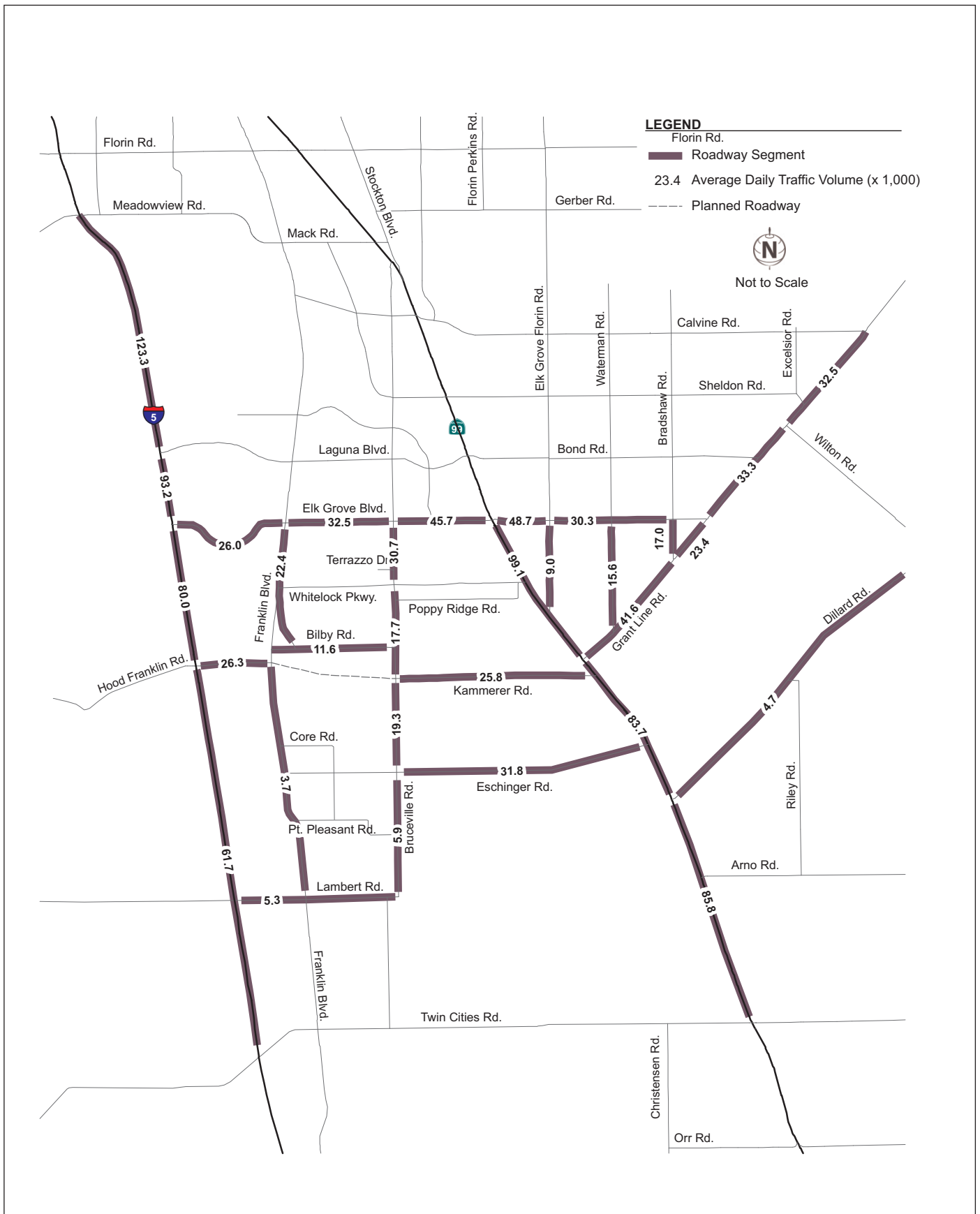
Source: Fehr and Peers



Michael Brandman Associates

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Exhibit 3.15-3 Average Daily Traffic Volumes-Existing No Project Conditions



Source: Fehr and Peers



Michael Brandman Associates

32330002 • 07/2011 | 3.15-4_traffic_cumulative_no_conditions.cdr

Exhibit 3.15-4 Average Daily Traffic Volumes-Cumulative Plus Project Conditions

3.15.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, transportation impacts resulting from the implementation of the proposed project would be considered significant if the project would:

- a) Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
- b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.
- c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. (Refer to Section 7, Effects Found Not to Be Significant.)
- d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- e) Result in inadequate emergency access.
- f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

3.15.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Existing Plus Project Traffic

Impact TRANS-1: Future annexation and development activities within the proposed project may generate new vehicle trips that may contribute to unacceptable traffic operations under existing plus project conditions.

Impact Analysis

This impact evaluates the potential impacts associated with expanding the Elk Grove SOIA Area to the south and southwest of the existing Elk Grove city limits.

For existing plus project conditions, the SOIA Area was assumed to be completely developed under 2010 conditions. The traffic volume forecasts shown on Exhibit 3.15-2 were analyzed using the analysis methodology presented earlier, which included the use of the assumed land use scenario identified in Table 3.15-5.

Roadway and Freeway Segment Operations

Table 3.15-8 and Table 3.15-9 summarize study roadway and freeway segment operations under existing plus project conditions, respectively, and include the following information for each study roadway segment:

- Daily roadway capacity
- Daily traffic volume (two-way total)
- Volume-to-capacity ratio
- LOS

The proposed project is likely to have indirect impacts on ten roadway segments and one freeway segment should the SOIA Area fully develop. Specific impact statements and mitigation measures are presented below.

Table 3.15-8: Roadway Segment Level of Service – Existing Plus Project Conditions

Roadway Segment	Daily Capacity ¹	Existing Conditions			Existing Plus Project		
		Daily Volume	V/C Ratio ³	LOS ²	Daily Volume	V/C Ratio ³	LOS ²
Elk Grove Boulevard – I-5 to Franklin Boulevard	54,000	24,000	0.44	A	26,000	0.48	A
Elk Grove Boulevard – Franklin Boulevard to Bruceville Road	54,000	29,600	0.55	A	32,400	0.60	A

Table 3.15-8 (cont.): Roadway Segment Level of Service – Existing Plus Project Conditions

Roadway Segment	Daily Capacity ¹	Existing Conditions			Existing Plus Project		
		Daily Volume	V/C Ratio ³	LOS ²	Daily Volume	V/C Ratio ³	LOS ²
Elk Grove Boulevard – Bruceville Road to SR-99	54,000	31,028	0.57	A	43,300	0.80	D
Elk Grove Boulevard – SR-99 to Elk Grove-Florin Road	36,000	37,700	1.05	F	43,700	1.21	F
Elk Grove Boulevard – Elk Grove-Florin Road to Bradshaw Road	18,000	13,800	0.77	C	18,600	1.03	F
Grant Line Road – SR-99 to Bradshaw Road	18,000	16,081	0.89	D	26,600	1.48	F
Grant Line Road – Bradshaw Road to Elk Grove Boulevard	18,000	9,525	0.53	A	12,900	0.72	C
Grant Line Road – Elk Grove	18,000	14,627	0.81	D	23,800	1.32	F

Table 3.15-8 (cont.): Roadway Segment Level of Service – Existing Plus Project Conditions

Roadway Segment	Daily Capacity ¹	Existing Conditions			Existing Plus Project		
		Daily Volume	V/C Ratio ³	LOS ²	Daily Volume	V/C Ratio ³	LOS ²
Boulevard to Wilton Road							
Grant Line Road – Wilton Road to Calvine Road	18,000	16,200	0.90	D	18,600	1.03	F
Hood-Franklin Road – I-5 to Franklin Boulevard	20,000	5,295	0.26	C	12,100	0.61	D
Bilby Road – Franklin Boulevard to Bruceville Road	18,000	4,771	0.26	A	9,900	0.55	A
Kammerer Road – Bruceville Road to West Stockton Boulevard	17,000	1,900	0.11	B	17,100	1.01	F
Eschinger Road – Bruceville Road to SR-99	17,000	1,000	0.06	A	29,300	1.72	F
Dillard Road – SR-99 and Wilton Road	17,000	4,676	0.28	C	6,400	0.38	D
Lambert Road – Bruceville Road (West) and Bruceville Road (East)	17,000	898	0.05	A	4,800	0.28	C
Franklin Boulevard – Elk Grove Boulevard to Whitelock Parkway	36,000	14,000	0.39	C	25,300	0.70	C
Franklin Boulevard – Hood-Franklin Road to Lambert Road	20,000	1,435	0.07	A	27,600	1.38	F
Bruceville Road – Elk Grove Boulevard to Whitelock Parkway	36,000	24,700	0.69	A	27,500	0.76	C
Bruceville Road – Whitelock Parkway to Kammerer Road	18,000	3,700	0.21	A	22,600	1.26	F
Bruceville Road – Kammerer Road to Eschinger Road	17,000	2,100	0.12	B	29,300	1.72	F
Bruceville Road – Eschinger Road to Lambert Road	17,000	1,500	0.09	A	5,400	0.32	C
Elk Grove-Florin Road – East Stockton Boulevard to Elk Grove Boulevard	18,000	5,504	0.31	A	10,400	0.58	A
Waterman Road – Elk Grove Boulevard to Grant Line Road	18,000	5,630	0.31	A	10,500	0.58	A
Bradshaw Road – Elk Grove Boulevard to Grant Line Road	18,000	5,247	0.29	A	11,700	0.65	B

Notes:

¹ The capacity of each roadway is based on the number of lanes and the facility type.

² Level of service (LOS) based on Traffic Impact Analysis Guidelines, City of Elk Grove, July 2000.

³ The LOS is calculated based on facility type assignments from Table 3.15. Therefore, two roadways with the same V/C ratio but different facility types may be calculated to have different LOS values.

Bold text indicates unacceptable LOS.

Shading indicates project impact.

Source: Fehr & Peers 2011; Elk Grove 2010; County of Sacramento 2010

Table 3.15-9: Freeway Segment Level of Service – Existing Plus Project Conditions

Roadway Segment	Daily Capacity ¹	Existing Conditions			Existing Plus Project		
		Daily Volume	V/C Ratio ³	LOS2	Daily Volume	V/C Ratio ³	LOS2
I-5 – North of Laguna Boulevard	120,000	98,361	0.82	D	103,400	0.86	D
I-5 – Laguna Boulevard to Elk Grove Boulevard	80,000	68,724	0.86	D	77,800	0.97	E
I-5 – Elk Grove Boulevard to Hood-Franklin Road	80,000	55,199	0.69	C	66,500	0.83	D
I-5 – Hood-Franklin Road to Twin Cities Road	80,000	48,642	0.61	C	48,700	0.61	C
SR-99 – Twin Cities Road to Dillard Road	80,000	67,570	0.84	D	69,500	0.87	D
SR-99 – Dillard Road to Grant Line Road	80,000	62,520	0.78	D	67,600	0.85	D
SR-99 – Grant Line Road to Elk Grove Boulevard	80,000	67,395	0.84	D	92,800	1.16	F

Notes:
¹ The capacity of each roadway is based on the number of lanes and the facility type.
² Level of service (LOS) based on Traffic Impact Analysis Guidelines, City of Elk Grove, July 2000.
³ The LOS is calculated based on facility type assignments from Table 3.15. Therefore, two roadways with the same V/C ratio but different facility types may be calculated to have different LOS values.
 Bold text indicates unacceptable LOS.
 Shading indicates project impact.
 Source: Fehr & Peers 2010; Elk Grove 2010; County of Sacramento 2010

Implementation of the proposed project would not result in an increase in average daily traffic volumes; however, the proposed project is likely to have indirect impacts on roadways in the County of Sacramento and City of Elk Grove under existing plus project conditions. The increase in traffic volume would cause deterioration in the daily LOS, resulting in a significant impact for the following existing roadways:

- Elk Grove Boulevard – SR-99 to Elk Grove-Florin Road
- Elk Grove Boulevard – Elk Grove-Florin Road to Bradshaw Road
- Grant Line Road – SR-99 to Bradshaw Road
- Grant Line Road – Elk Grove Boulevard to Wilton Road
- Grant Line Road – Wilton Road to Calvine Road
- Kammerer Road – Bruceville Road to West Stockton Boulevard
- Eschinger Road – Bruceville Road to SR-99
- Franklin Boulevard – Hood-Franklin Road to Lambert Road
- Bruceville Road – Whitelock Parkway to Kammerer Road
- Bruceville Road – Kammerer Road to Eschinger Road

Adequate roadways have not yet been identified to support the potential land use changes that could potentially result from the proposed project. Over 218,000 vehicle trips per day would be added to the existing roadway network without adding new roadways or assuming that existing roadways would be widened. Under these circumstances, many of the study roadways would operate at levels worse than the stated significance criteria, resulting in a significant impact.

Implementation of the proposed project would not result in an increase in average daily traffic volumes; however, the proposed project is likely to have indirect impacts on I-5 and SR-99 through the study area under existing plus project conditions. As shown in Table 3.15-9, the increase in traffic volume would cause deterioration in daily level of service from LOS D to LOS F on the segment of SR-99 from Grant Line Road to Elk Grove Boulevard, resulting in a significant impact.

As discussed earlier, bottlenecks on SR-99 north of Elk Grove Boulevard cause vehicle queue spillback that can impact northbound SR-99 near Elk Grove Boulevard during the morning peak hour. The State Route 99 Transportation Corridor Concept Report does not show any improvements for this segment of SR-99 for the 20-year concept facility. The “ultimate” facility for this segment is a six-lane freeway with two high-occupancy vehicle lanes.

This impact occurs because adequate capacity does not exist on SR-99 to accommodate buildout of the project area.

Impacts and Mitigation Measures

Below are descriptions of impacts and mitigation measures.

Roadway Improvements

To accommodate the addition of project trips to the existing network should the SOIA Area fully develop, substantial roadway improvements will have to be constructed. Future development within the project area will be responsible for constructing on- and off-site roadway infrastructure, including new north-south roadway connections to planned development in the City of Elk Grove (north of Kammerer Road) and east-west connections for access to I-5 and SR-99. Depending on the specific location and intensity of development within the project area, these improvements could include the following:

- Widening Grant Line Road to four lanes from SR-99 to Calvine Road
- Constructing a grade-separated crossing of the Union Pacific Railroad (UPRR) east of SR-99 on Grant Line Road
- Widening of Eschinger Road from Bruceville Road to SR-99
- Widening Kammerer Road to four lanes from Bruceville Road and West Stockton Boulevard
- Widening or upgrading Franklin Boulevard from Hood-Franklin Road to Lambert Road

- Widening Bruceville Road from Whitelock Parkway to Eschinger Road
- Constructing elements of the SouthEast Connector project like the extension of Kammerer Road from Bruceville Road to Franklin Boulevard, a grade-separated crossing of the UPRR, and upgrade of the I-5/Hood-Franklin Road Interchange.
- Upgrading the SR-99/Eschinger Road interchanges

The impacted segment of Elk Grove Boulevard from SR-99 to Elk Grove-Florin Road is identified as a four-lane arterial in the City's General Plan Circulation Element. The segment is already four lanes. Therefore, widening this segment of Elk Grove Boulevard to reduce the significance of the impact would be inconsistent with the City's General Plan. The specific number of lanes and scope of specific roadway mitigation improvements will be established by subsequent traffic studies that will be required for all future development and annexation proposals. Sufficient travel lanes to provide acceptable LOS D operations on roadways within the project area and in the City would be determined in these studies.

Some of the roadways affected may not be subject to control by the City if the project area were annexed by the City and developed. Examples include segments of Franklin Boulevard and Bruceville Road. Improvements to these roadways would require coordination and adherence to regulatory standards of the County of Sacramento. Therefore, the City would cooperate with the County of Sacramento to establish mitigation improvements that will provide level of service consistent with the County's General Plan.

The City—in cooperation with Caltrans, the County of Sacramento, the City of Sacramento, and the Sacramento Area Council of Governments—would identify a funding strategy to construct additional mainline capacity and operational improvement on SR-99. The funding strategy could include fair-share contribution from future development in the project area. The specific improvements would be based on Caltrans's concept for SR-99 and may include operational improvement downstream of the impact segment.

Conclusion

The project could indirectly result in future urbanization of the SOIA Area and could contribute to unacceptable intersection and freeway operations under existing plus project conditions. Necessary improvements to improve operations to acceptable levels are discussed above. However, the actual improvements needed in the future would depend on the location, type, and level of intensity of future growth in the SOIA Area and, at that time, appropriate mitigation would be designed. The following mitigation would require the preparation of traffic studies for future projects and consultation with appropriate agencies. However, because the location and intensity of future development is not known at this time, it is not certain that identified improvements would reduce potential impacts to a less than significant level. In addition, impacts on local roadways outside of the City's jurisdiction

would require consultation with other agencies (e.g., Sacramento County and Caltrans), and the City cannot assure that mitigation for improvements outside its jurisdiction would be implemented. Therefore, this impact would remain significant and unavoidable.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM TRANS-1 At the time of submittal of any application to annex territory within the SOIA Area, the City of Elk Grove will consult with Sacramento County and Caltrans to establish transportation improvement plans and funding mechanisms to provide service levels consistent with the City's and County's General Plans. In addition, any future annexation and development activity within the SOIA Area will require the preparation of traffic impact analyses that would include discussion of the project's fair-share contribution and mitigation strategies.

Level of Significance After Mitigation

Significant and unavoidable impact.

Cumulative Conditions Traffic

Impact TRANS-2: Future annexation and development activities within the proposed project may generate new vehicle trips that may contribute to unacceptable traffic operations under cumulative conditions.

Impact Analysis

This impact evaluates traffic conditions under cumulative conditions.

The purpose of the cumulative (2035) transportation impact analysis is to determine whether implementation of the proposed project in addition to planned cumulative growth will adversely affect the planned transportation system. The MTP for 2035 identifies roadway and transit improvements that are proposed to accommodate future travel demand and are included in Table 3.15-6 for major study area facilities.

The SOIA Area is located just south of the western segment of the proposed Capital SouthEast Connector project, which is a 35-mile roadway that will link communities in El Dorado County and Sacramento County and the cities of Elk Grove, Rancho Cordova, and Elk Grove. It will connect between US 50 in El Dorado Hills and I-5 at Hood-Franklin Road southwest of Elk Grove. Many of the roadway improvements shown in Table 3.15-6 are located along potential alignments of the SouthEast Connector project, including improvements on Grant Line Road, Kammerer Road, and Hood-Franklin Road. There are no planned roadway improvements in the SOIA Area.

Roadway and Freeway Segment Operations

Table 3.15-10 and Table 3.15-11 summarize study roadway and freeway segment operations under cumulative conditions, respectively, and include the following information for each study roadway segment:

- Daily roadway capacity
- Daily traffic volume (two-way total)
- Volume-to-capacity ratio
- LOS

The LOS results indicate that implementation of the proposed project would result in indirect impacts on five roadway segments and six freeway segments. Specific impact statements and mitigation are presented below.

Table 3.15-10: Roadway Segment Level of Service – Cumulative Plus Project Conditions

Roadway Segment	Daily Capacity ¹	Cumulative Conditions			Cumulative Plus Project		
		Daily Volume	V/C Ratio ³	LOS ²	Daily Volume	V/C Ratio ³	LOS ²
Elk Grove Boulevard – I-5 to Franklin Boulevard	54,000	24,000	0.44	A	26,000	0.48	A
Elk Grove Boulevard – Franklin Boulevard to Bruceville Road	54,000	31,500	0.58	A	32,500	0.60	B
Elk Grove Boulevard – Bruceville Road to SR-99	54,000	42,500	0.79	C	45,700	0.85	D
Elk Grove Boulevard – SR-99 to Elk Grove-Florin Road	36,000	46,100	1.28	F	48,700	1.35	F
Elk Grove Boulevard – Elk Grove-Florin Road to Bradshaw Road	36,000	25,900	0.72	C	30,300	0.84	D
Grant Line Road – SR-99 to Bradshaw Road	54,000	25,400	0.47	A	41,600	0.77	C
Grant Line Road – Bradshaw Road to Elk Grove Boulevard	36,000	20,900	0.58	A	23,400	0.65	B
Grant Line Road – Elk Grove Boulevard to Wilton Road	36,000	28,700	0.80	C	33,300	0.93	E
Grant Line Road – Wilton Road to Calvine Road	36,000	28,200	0.78	C	32,500	0.90	E
Hood-Franklin Road – I-5 to Franklin Boulevard	36,000	12,100	0.34	A	26,300	0.73	C
Bilby Road – Franklin Boulevard to Bruceville Road	36,000	8,400	0.23	A	11,600	0.32	A

Table 3.15-10 (cont.): Roadway Segment Level of Service – Cumulative Plus Project Conditions

Roadway Segment	Daily Capacity ¹	Cumulative Conditions			Cumulative Plus Project		
		Daily Volume	V/C Ratio ³	LOS ²	Daily Volume	V/C Ratio ³	LOS ²
Kammerer Road – Bruceville Road to West Stockton Boulevard	54,000	7,700	0.14	A	25,800	0.48	A
Eschinger Road – Bruceville Road to SR-99	17,000	1,100	0.06	A	31,800	1.87	F
Dillard Road – SR-99 To Wilton Road	17,000	4,700	0.28	C	4,700	0.28	C
Lambert Road – I-5 to Bruceville Road	17,000	900	0.05	A	5,300	0.31	C
Franklin Boulevard – Elk Grove Boulevard to Whitelock Parkway	36,000	10,600	0.29	A	22,400	0.62	B
Franklin Boulevard – Hood-Franklin Road to Lambert Road	20,000	1,400	0.07	A	3,700	0.19	B
Bruceville Road – Elk Grove Boulevard to Whitelock Parkway	54,000	24,700	0.46	A	30,700	0.57	A
Bruceville Road – Whitelock Parkway to Kammerer Road	54,000	3,700	0.07	A	17,700	0.33	A
Bruceville Road – Kammerer Road to Eschinger Road	17,000	2,100	0.12	B	19,300	1.14	F
Bruceville Road – Eschinger Road to Lambert Road	17,000	1,500	0.09	A	5,900	0.35	C
Elk Grove Florin Road – East Stockton Boulevard to Elk Grove Boulevard	18,000	5,700	0.32	A	9,000	0.50	D
Waterman Road – Elk Grove Boulevard to Grant Line Road	36,000	9,300	0.26	A	15,700	0.44	A
Bradshaw Road – Elk Grove Boulevard to Grant Line Road	54,000	7,900	0.15	A	17,000	0.31	A

Notes:

¹ The capacity of each roadway is based on the number of lanes and the facility type.

² Level of service (LOS) based on Traffic Impact Analysis Guidelines, City of Elk Grove, July 2000.

³ The LOS is calculated pursuant to both the V/C Ratio and the functional classification of the roadway. Therefore, two roadways with the same V/C ratio but different functional classifications may be calculated to have different LOS values.

Bold text indicates unacceptable LOS.

Shading indicates project impact.

Source: Fehr & Peers 2011; Elk Grove 2010; County of Sacramento 2010

Table 3.15-11: Freeway Segment Level of Service – Cumulative Plus Project Conditions

Roadway Segment	Daily Capacity ¹	Cumulative Conditions			Cumulative Plus Project		
		Daily Volume	V/C Ratio ³	LOS ²	Daily Volume	V/C Ratio ³	LOS ²
I-5 – North of Laguna Boulevard	120,000	111,700	0.93	E	123,300	1.03	F
I-5 – Laguna Boulevard to Elk Grove Boulevard	80,000	80,400	1.00	F	93,200	1.17	F
I-5 – Elk Grove Boulevard to Hood-Franklin Road	80,000	66,300	0.83	D	80,000	1.00	F
I-5 – Hood-Franklin Road to Twin Cities Road	80,000	64,100	0.80	D	61,700	0.77	D
SR-99 – Twin Cities Road to Dillard Road	80,000	82,800	1.03	F	85,800	1.07	F
SR-99 – Dillard Road to Grant Line Road	80,000	78,000	0.97	E	83,700	1.05	F
SR-99 – Grant Line Road to Elk Grove Boulevard	80,000	82,500	1.03	F	99,100	1.24	F

Notes:
¹ The capacity of each roadway is based on the number of lanes and the facility type.
² Level of service (LOS) based on Traffic Impact Analysis Guidelines, City of Elk Grove, July 2000.
³ The LOS is calculated based on facility type assignments from Table 3.15. Therefore, two roadways with the same V/C ratio but different facility types may be calculated to have different LOS values.
Bold text indicates unacceptable LOS.
Shading indicates project impact.
Source: Fehr & Peers 2010; Elk Grove 2010; County of Sacramento 2010

Implementation of the proposed project would not result in an increase in average daily traffic volumes on roadways; however, the proposed project is likely to have indirect impacts on the County of Sacramento and the City of Elk Grove under cumulative plus project conditions. The increase in traffic volume under cumulative conditions would cause deterioration in the daily LOS, resulting in a significant impact for the following roadways:

- Elk Grove Boulevard – SR-99 to Elk Grove-Florin Road
- Grant Line Road – Elk Grove Boulevard to Wilton Road
- Grant Line Road – Wilton Road to Calvine Road
- Eschinger Road – Bruceville Road to SR-99
- Bruceville Road – Kammerer Road to Lambert Road

The impact results because adequate roadways have not yet been identified to support the potential land use changes that would occur under implementation of the proposed project. Under these circumstances, many of the study roadways would operate at levels worse than the stated significance criteria, thereby resulting in a significant impact.

Implementation of the proposed project would indirectly result in an increase in average daily traffic volumes on I-5 and SR-99 through the study area under cumulative and project conditions, should the SOIA Area fully develop. As shown in Table 3.15-11, the increase in traffic volume would impact all of the study freeway segments except for the segment of I-5 from Elk Grove Boulevard to Twin Cities Road.

As discussed earlier, bottlenecks on SR-99 north of Elk Grove Boulevard cause vehicle queue spillback that can impact northbound SR-99 near Elk Grove Boulevard during the morning peak hour. The State Route 99 Transportation Corridor Concept Report does not show any improvements for the impacted segment of SR-99 for the 20-year concept facility. Transportation Corridor Concept Report Interstate 5 shows the addition of a high-occupancy vehicle (HOV) lane on I-5 north of Hood-Franklin Road. However, Caltrans identifies the 20-year concept level of service for I-5 and SR-99 as LOS F for the study segments.

This impact would occur because adequate capacity is not planned on I-5 or SR-99 to accommodate cumulative traffic volumes with buildout of the proposed SOIA Area.

Impacts and Mitigation Measures

Below are descriptions of impacts and mitigation measures.

Roadway Improvements

To accommodate the addition of project trips to the future roadway network should the SOIA Area fully develop, substantial roadway improvements will have to be constructed. Future development within the project area will be responsible for constructing on- and off-site roadway infrastructure or the payment of its fair share of traffic impact fees to the City's Roadway Fee program, which assists in delivering roadway projects. Examples of future projects include new north-south roadway connections to planned development in the City (north of Kammerer Road) and east-west connections for access to I-5 and SR-99. Depending on the specific location and intensity of development within the project area, these improvements could include the following:

- Widening Grant Line Road from Elk Grove Boulevard to Calvine Road
- Widening Kammerer Road to four lanes from Bruceville Road to West Stockton Boulevard
- Widening Bruceville Road from Kammerer Road to Lambert Road
- Upgrading the SR-99/Eschinger Road interchanges

The impacted segment of Elk Grove Boulevard from SR-99 to Elk Grove-Florin Road is identified as a four-lane arterial on the City's General Plan Circulation Element. The segment is already four lanes. Therefore, widening this segment of Elk Grove Boulevard to reduce the significance of the impact would be inconsistent with the City's General Plan. The specific number of lanes and scope of specific roadway mitigation improvements will be established by subsequent traffic studies that will

be required for all future development proposals. Sufficient travel lanes to provide acceptable LOS D operations on roadways within the project area and in the City would be determined in these studies.

Some of the roadways affected by this mitigation measure would not be in the jurisdiction of the City if the project area were annexed by the City and developed. Examples include segments of Bruceville Road. Improvements to these roadways would require consultation with and adherence to regulatory standards of the County of Sacramento. Therefore, the City should cooperate with the County of Sacramento to establish mitigation improvements that will provide levels of service consistent with the County's General Plan.

Conclusion

The project could indirectly result in future urbanization of the SOIA Area and could contribute to unacceptable intersection and freeway operations under cumulative plus project conditions. Necessary improvements to improve operations to acceptable levels have been identified. However, it is not certain that identified mitigation would reduce identified impacts to a less than significant level, and some of the identified impacts are outside the jurisdiction of the City. Because of the early stage of project approval and planning, the uncertainty of potential land uses, the fact that local roadway improvements outside the City's jurisdiction cannot be guaranteed, and the uncertainty of the exact magnitude and method of implementation of mitigation measures in the future, the mitigation measure cannot be found with certainty to substantially lessen or avoid this potential impact. Therefore, the impact remains significant and unavoidable.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement Mitigation Measure TRANS-1.

Level of Significance After Mitigation

Significant and unavoidable impact.

Roadway Safety

Impact TRANS-3: The project would not increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Impact Analysis

This impact is related to site-specific design features and potential incompatible uses. Potential hazardous design features that may occur to provide access to future development include sharp curves, dangerous intersections, or shared turn lanes (sometimes referred to as "suicide" lanes). However, any future roadway improvements required within the Elk Grove city limits or SOIA Area would be constructed to American Association of State Highway and Transportation Officials (AASHTO), Caltrans, Sacramento County, and City of Elk Grove roadway standards as applicable

and would therefore not result in potential traffic related hazards. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

Less than significant impact.

Emergency Access

Impact TRANS-4: The project would not result in inadequate emergency access.

Impact Analysis

This impact is related to site-specific design features and emergency access. Emergency access impacts would be evaluated at a project-specific level by the City at the time of future development application submittal. In addition, compliance with City of Elk Grove General Plan Policy CI-2, which indicates that the City will coordinate and participate with the City of Sacramento, Sacramento County, and Caltrans on roadway improvements that are shared by the jurisdictions in order to improve operations, would assure that continuous and adequate emergency access would occur throughout the SOIA Area. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

Less than significant impact.

Public Transit, Bicycles, and Pedestrians

Impact TRANS-5: Future annexation and development activities within the proposed project may conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Impact Analysis

This impact will evaluate project accessibility to public transit, bicycles, and pedestrians.

Bicycles and Pedestrian

The proposed project would not construct or develop any structures or infrastructure (including roadways) that could potentially result in the decreased performance or safety of public transit, bicycle, or pedestrian facilities. However, future annexation and development activities within the proposed SOIA Area may substantially increase demand for bicycle and pedestrian facilities. The project area has only limited dedicated bicycle or pedestrian facilities. Most bicycle and pedestrian travel is limited to existing roadways that must be shared with autos.

Policy CI-5 (CI-5-Action 5) of the Elk Grove General Plan states that the City will develop and implement Pedestrian and Bikeway Master Plans to provide safe and convenient pedestrian and on- and off-street bicycle facilities throughout the City. The City's current Bicycle and Pedestrian Master Plan includes proposed facilities on Kammerer Road, Grant Line Road, and potential extension on Bruceville Road into the SOIA Area and along the planned alignment of the Kammerer Road extension to Franklin Road. The City has not planned for comprehensive bicycle and pedestrian facilities in the SOIA Area, as the area is not within the City's jurisdiction. Please note that the City may initiate comprehensive planning for the project area at an undetermined future time pursuant to approval of the SOIA application.

Future development of the project area may create a substantial demand for new bicycle and pedestrian facilities in the project area. This could include new off-street bike paths, on-street bike lanes or bike routes, and sidewalks. This is considered a significant impact. Mitigation Measure TRANS-5a is recommended to reduce impacts to less than significant.

Public Transit

The proposed project would not construct or develop any structures or infrastructure (including roadways) that could potentially result in the decreased performance or safety of public transit, bicycle, or pedestrian facilities. However, future annexation and development activities within the proposed SOIA Area may substantially increase demand for public transit service under existing plus project conditions. The project area is not served by existing public transit, and future service is not planned to extend to the SOIA Area. This is a potentially significant impact.

Policy CI-5 of the Elk Grove General Plan states that the City will require transit service to be provided in all areas of Elk Grove, including rural areas, so that transit-dependent residents of those areas are not cut off from community services, events, and activities. Policy CI-7 states that the City will encourage an approach to public transit service in Elk Grove that will provide the opportunity for workers living in other areas of Sacramento County to use all forms of public transit, including bus rapid transit and light rail, to travel to jobs in Elk Grove, as well as for Elk Grove workers to use public transit to commute to jobs outside the City.

Should the SOIA Area become urbanized, it would create a substantial demand for new transit service to the project area. This could include bus or fixed-rail transit. Since plans to extend transit to the area have not yet been prepared, this impact is significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM TRANS-5a At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall update the City's Bicycle and Pedestrian Master Plan to delineate bicycle and pedestrian facilities in the SOIA Area consistent with the goals and policies of the City's General Plan. The update will identify on- and off-street bikeways and pedestrian routes as well as support facilities. Development in the SOIA Area shall be responsible for implementing the master plan recommendation as development occurs in the project area.

MM TRANS-5b At the time of submittal of any application to annex territory within the Sphere of Influence Amendment (SOIA) Area, the City of Elk Grove shall complete a transit master plan for the SOIA Area consistent with policies of the City's General Plan. This plan will identify the roadways to be used by bus transit routes, locations for bus turnouts and pedestrian shelters, locations for bus transfer stations, alignment for fixed-route rail service, and the location of rail service stations. Future development in the SOIA Area and the City of Elk Grove shall be responsible for implementing the master plan recommendations as development occurs in the project area.

Level of Significance After Mitigation

Implementation of the above mitigation measures would ensure that future bicycle and transit needs are properly planned and designed to support potential developments.

Less than significant impact.

