5.13 TRANSPORTATION

This section describes potential impacts to the transportation system associated with implementation of the proposed Project. The impact analysis examines the vehicular, transit, bicycle, and pedestrian components of the City's overall transportation system.

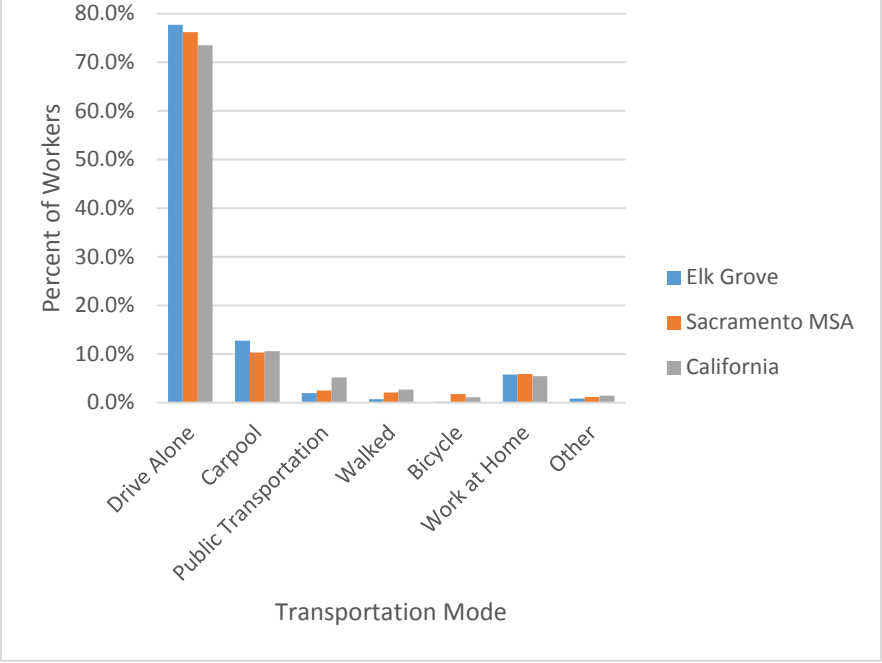
5.13.1 EXISTING SETTING

This section provides a contextual background to the City's transportation system. The proposed Project addresses the overall planning and development of the circulation of residents and visitors in a multimodal framework. The General Plan addresses the correlation between the quality of the transportation network and the quality of life, while preserving the City's character.

Travel Characteristics

Based on the 2016 5-year American Community Survey, in the City and the State of California, most residents commute by automobile (drive alone or in carpool) to get to work. The share of commuters driving to work is higher in the City (about 90 percent) compared to the Sacramento Metropolitan Statistical Area (MSA) (about 87 percent) and California (about 84 percent). However, more City commuters carpool, consistent with the availability of carpool lanes on State Route (SR) 99 between the City and downtown Sacramento. Those using public transit to get to work accounted for the next highest share (about 2 percent). In the City, fewer residents use public transportation to get to work compared to the Sacramento MSA (about 2.5 percent) and California (about 5 percent). Additionally, fewer residents (about 1 percent) rely on active transportation (walking and bicycling) to get to work than the local MSA and the State as a whole (both about 4 percent). About 6 percent of residents work at home. **Figure 5.13-1** compares the method of transportation to work between the three regions.

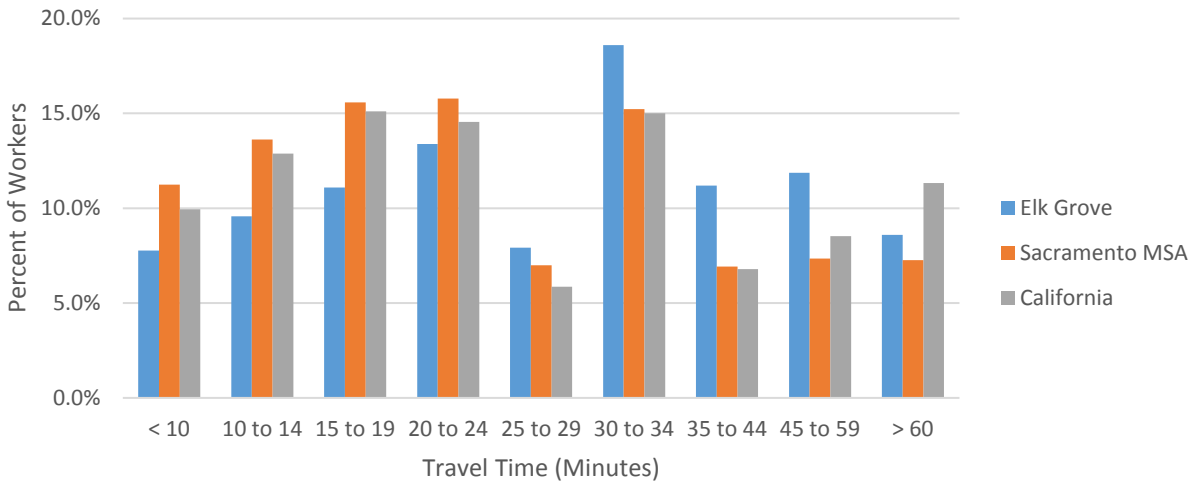
FIGURE 5.13-1
METHODS OF TRANSPORTATION TO WORK



According to the 2016 5-year American Community Survey, about 58 percent of workers living in the City traveled more than 25 minutes to work with an average reported travel time of about 28 minutes. While only 44 percent of workers living in the Sacramento MSA travel more than 25 minutes to work, the average commute time of workers in the Sacramento MSA is shorter than that of residents, at about 21 minutes. Work travel times for the City are longer than California as a whole, with about 48 percent of commuters in California traveling more than 25 minutes. The average commute time for California as a whole is about 24 minutes.

Work trips of this length are consistent with the dominant mode of travel to work (automobile) and with regional employment centers in downtown Sacramento and Rancho Cordova, which are each about 30 minutes from the City during the morning and evening peak periods. **Figure 5.13-2** compares the travel time to work of the three regions.

FIGURE 5.13-2
TRAVEL TIME TO WORK



Roadway System – Roadway Characteristics

The Planning Area is located in south Sacramento County, about 15 miles south of the City of Sacramento. Regional freeway access is provided by Interstate 5 (I-5) and SR 99. Grant Line Road provides access to regional destinations north and east of the City such as the City of Rancho Cordova, City of Folsom, and the community of El Dorado Hills in El Dorado County. The City is served by a network of arterial-level roadways on a 1-mile grid with interchanges on both I-5 and SR 99. I-5 has interchanges at Laguna Boulevard, Elk Grove Boulevard, and Hood Franklin Road that provide direct access to the City. SR 99 has interchanges at Calvine Road, Sheldon Road, Laguna Boulevard/Bond Road, Elk Grove Boulevard, and Grant Line Road that provide direct access to the City. The City's roadways include the following classifications:

- **Interstates and State Highways:** State highways provide mostly uninterrupted travel by car, bus, or truck, and are designed for high speeds over long distances. They have fully controlled access through on- and off-ramps, typically with separation between opposing traffic flows. Driveways and alternative modes of transportation such as walking or bicycling are forbidden, and intersections may only occur as freeway interchanges. There are two highways that cross through the Planning Area: Interstate 5 and California State Route 99.

- **Principal Arterials:** Principal arterials provide limited access on high-speed roads with a limited number of driveways and intersections. Principal arterials also allow bicycles, and pedestrians may be permitted in limited locations. Principal arterials are generally designed for longer trips at the county or regional level.

- **Major Arterials:** Major Arterials provide controlled access for all transportation modes to enter and leave the urban area. In addition, significant intra-area travel, such as between residential areas and commercial or business areas, should be served by this system. Major Arterials can include sidewalks for pedestrian connections, linking land uses to transit. They may have street parking or bike lanes. Arterials range in size from two to eight lanes. Major Arterials in the Rural Area are subject to the separate Rural Roads Improvement Standards, and may have separate pedestrian pathways, but no sidewalks.

- **Minor Arterials/Collectors:** Minor Arterials/Collectors are two-lane roadways providing access to all transportation modes, with a focus on local access. Pedestrian connections link land uses to local destinations and transit. The right-of-way associated with arterial/collectors may feature medians, parking lanes, and bike lanes. Arterial/collectors in the Rural Area are subject to the separate Rural Roads Improvement Standards, and may have separate pedestrian and multiuse pathways, but no sidewalks, and may have reduced speed requirements. This classification also includes Primary and Secondary Residential Streets.

- **Local Roads:** Local roads provide direct access to most properties and provide access to the higher roadway classifications described above. They are generally designed to discourage through traffic. Local roads are typically two lanes and are designed for low vehicle speeds. In the urban area of the City, they include pedestrian sidewalks. In the Rural Area, there are no sidewalks.

The City's backbone roadway system, including the number of existing and ultimate planned travel lanes, is shown **Figure 5.13-3** and described below.

- **Big Horn Boulevard** is a four-lane arterial street extending from Franklin Boulevard to Whitelock Parkway, with extension to Bilby Road in construction and future extension to Kammerer Road planned. Big Horn Boulevard, as currently constructed, is consistent with its existing General Plan designation.

- **Bilby Road** is an east–west roadway that extends from Franklin Boulevard to Bruceville Road, with extension to Big Horn Boulevard in construction and future extension to Promenade Parkway planned. Bilby Road is designated as a two-lane collector between Franklin Boulevard and Bruceville Road and as a four-lane arterial west of Bruceville Road to Promenade Parkway in the Lent Ranch Area.

- **Bond Road** is an east–west roadway that extends from SR 99 to Grant Line Road. Bond Road is six lanes from SR 99 to E. Stockton Boulevard (i.e., at the SR 99 Interchange) and four lanes between E. Stockton Boulevard to Bradshaw Road. East of Bradshaw Road, Bond Road is two lanes. Bond Road is improved to its existing General Plan designation between SR 99 and Bradshaw Road. In the existing General Plan, Bond Road is designated as a four-lane arterial between E. Stockton Boulevard and Bradshaw Road, and east of Bradshaw Road, as a four-lane roadway with expanded right-of-way. Bond Road east of Bradshaw Road is subject to the Elk Grove Rural Road Improvement Policy.

- **Bradshaw Road** is a two-lane north–south roadway extending from Folsom Boulevard in Sacramento County to Grant Line Road in Elk Grove. Bradshaw Road is designated as a six-lane arterial in the existing General Plan.

- **Bruceville Road** is a north–south road extending from Valley Hi Drive near the Kaiser Permanente hospital complex in unincorporated Sacramento County south through the City into San Joaquin County. Bruceville Road is four lanes between Sheldon Road and Laguna Boulevard, six lanes between Laguna Boulevard and Elk Grove Boulevard, four lanes between Elk Grove Boulevard and Whitelock Parkway, and two lanes south of Whitelock Parkway. Bruceville Road is designated as a six-lane arterial in the existing General Plan.

- **Calvine Road** is an east–west road extending from SR 99 to Grant Line Road and forms the City's northern edge. Calvine Road is six lanes from Power Inn Road to Cliffcrest Drive, transitions to four lanes from Cliffcrest Drive to Vintage Park Drive, and then to five lanes between Vintage Park Drive and Elk Grove-Florin Road. East of Elk Grove-Florin Road, Calvine alternates between four, five, and six lanes to Vineyard Road, where it continues as a two-lane road to Grant Line Road. Calvine Road is designated as a six-lane arterial in the existing General Plan.

- **Center Parkway** is a roughly north–south road extending west of Bruceville Road to the City limits. Center Parkway is four lanes from Hampton Cove Way (at the City limits) to Sheldon Road. Center Parkway is designated as a six-lane arterial in the existing General Plan.

- **Elk Grove Boulevard** is an east–west road extending from I-5 to Grant Line Road. Elk Grove Boulevard is six lanes from I-5 to East Stockton Boulevard, then four lanes to Elk Grove-Florin Road, and then two lanes to Grant Line Road. Elk Grove Boulevard is constructed to its General Plan designation between I-5 and Waterman Road. Elk Grove Boulevard is designated in the existing General Plan as a four-lane arterial east of Waterman Road.

- **Elk Grove-Florin Road** is a north–south arterial extending from Florin Road in Sacramento County to East Stockton Boulevard (near SR 99) in south Elk Grove. Elk Grove-Florin Road has four through lanes from Brittany Park Road to Elk Grove Boulevard and two lanes from Elk Grove Boulevard to East Stockton Boulevard. Elk Grove-Florin Road is designated as a six-lane arterial in the existing General Plan from Brittany Park Road to Bond Road, as a four-lane arterial between Bond Road and Elk Grove Boulevard, and as a two-lane collector south of Elk Grove Boulevard.

- **Franklin Boulevard** is a north–south arterial extending from the City of Sacramento south through the City into San Joaquin County. Franklin Boulevard is five lanes (in the City itself) north of Big Horn Boulevard, five lanes between Big Horn Boulevard and Laguna Boulevard, six lanes between Laguna Boulevard and Elk Grove Boulevard, and four lanes between Elk Grove Boulevard and Whitelock Parkway. South of Whitelock Parkway, Franklin Boulevard is two lanes. In the existing General Plan, Franklin Boulevard is designated as a six-lane arterial north of Whitelock Parkway and two lanes south.

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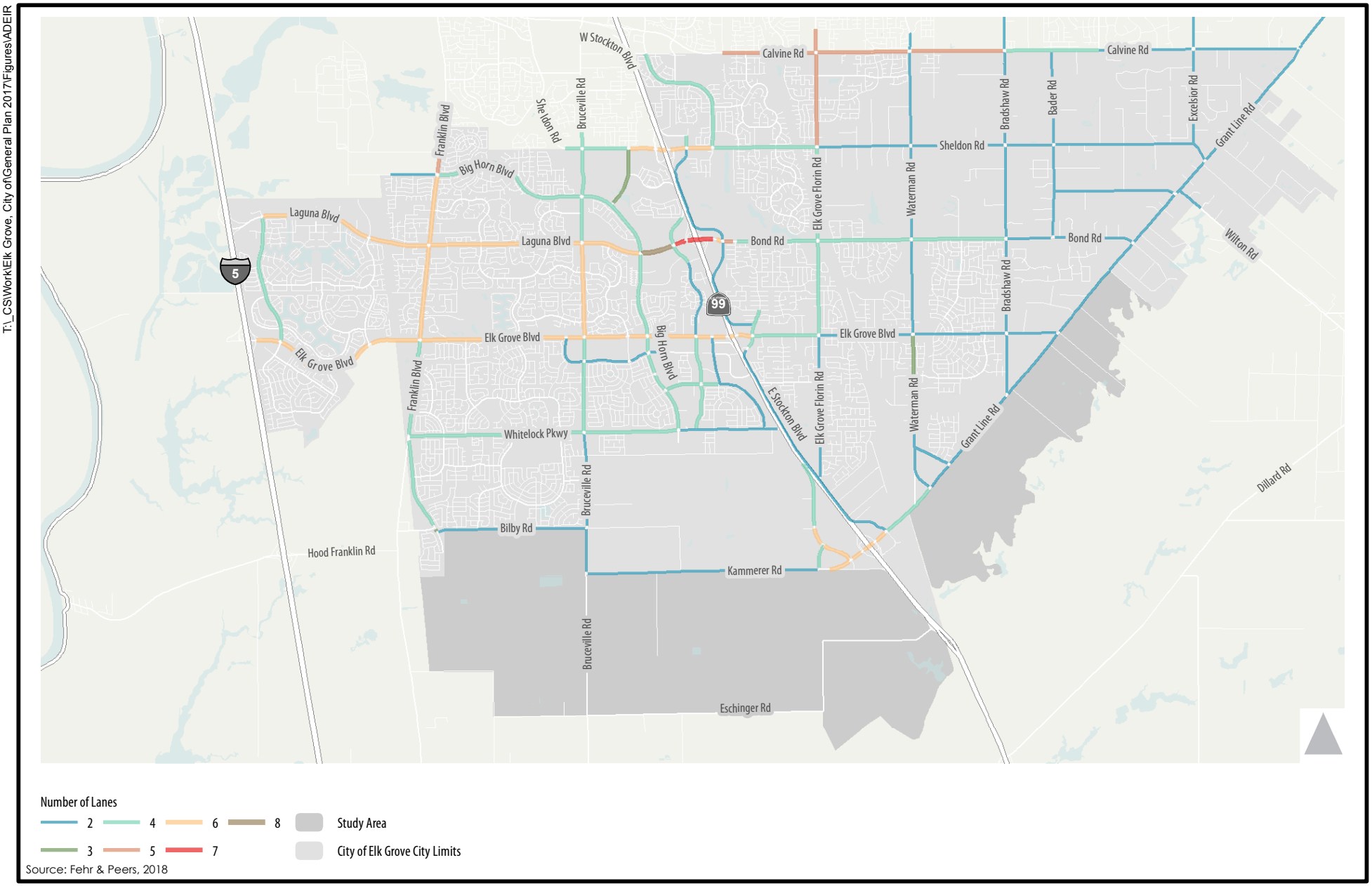

Source: Fehr & Peers, 2018

City of Elk Grove
Development Services

Figure 5.13-3
Existing Backbone Roadway and Number of Lanes

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- **Grant Line Road** traverses the City in a southwest to northeast direction. Grant Line Road extends from SR 99 through the City to White Rock Road in Rancho Cordova. Grant Line Road is six lanes between SR 99 and East Stockton Boulevard. Between East Stockton and Waterman Road, Grant Line Road is four lanes. East of Waterman Road Grant Line Road is two lanes. In the existing General Plan, Grant Line Road is designated as an eight-lane arterial between SR 99 and Bradshaw Road and as a six-lane arterial east of Bradshaw Road. Grant Line Road between Equestrian Drive and Calvine Road is subject to the Elk Grove Rural Road Improvement Policy. Grant Line Road is also part of the Capital SouthEast Connector project.

- **Kammerer Road** is an east–west road extending from Bruceville Road to West Stockton Boulevard. Kammerer Road is two lanes from Bruceville Road to just west of Lent Ranch Parkway. Kammerer Road is part of the Capital SouthEast Connector project and is designated in the existing General Plan as an eight-lane arterial from SR 99 to Lent Ranch Parkway and as a six-lane arterial from Lent Ranch Parkway to Franklin Boulevard. The existing General Plan includes the extension of Kammerer Road from Bruceville Road to Franklin Boulevard.

- **Laguna Boulevard** is an east–west roadway extending from I-5 to SR 99. Laguna Boulevard is six lanes from I-5 to Big Horn Boulevard and eight lanes between Big Horn Boulevard and Laguna Springs Drive/I-5. Laguna Boulevard is constructed to its existing General Plan designation.

- **Sheldon Road** is an east–west roadway that extends from Bruceville Road to Grant Line Road. Sheldon Road is five lanes from Bruceville Road to Lewis Stein Road, six lanes from Lewis Stein Road to Power Inn Road, four lanes between Power Inn Road and Elk Grove-Florin Road, and two lanes east of Elk Grove-Florin Road. Sheldon Road is improved to its existing General Plan designation between Lewis Stein Road and Elk Grove-Florin Road. In the existing General Plan, Sheldon Road is designated as a four-lane arterial between Elk Grove-Florin Road and Bradshaw Road, and as a two-lane roadway with expanded right-of-way between Bruceville Road and Grant Line Road. Sheldon Road between Elk Grove-Florin Road and Grant Line Road is subject to the Elk Grove Rural Road Improvement Policy.

- **Waterman Road** is a north–south roadway that extends from Calvine Road to Grant Line Road in the City. Waterman Road is generally two lanes with widening at improved intersections to accommodate its existing General Plan designation as a four-lane arterial. The segments of Waterman Road located one-half mile north and south of Sheldon Road are subject to the Elk Grove Rural Road Improvement Policy.

- **Whitelock Parkway** is an east–west road extending from Franklin Boulevard to Lotz Parkway. Whitelock Parkway is designated as a four-lane arterial in the existing General Plan and is constructed to its ultimate width. An interchange, serving only the area west of SR 99, is planned at SR 99.

- **State Route 99** is a north–south freeway that provides a connection between the major cities in the Central Valley, from Sacramento and Stockton in the north to the cities of Modesto, Merced, Fresno, and Bakersfield in the south. Access to SR 99 is provided through interchanges at Grant Line Road, Elk Grove Boulevard, Laguna Boulevard/Bond Road, and Sheldon Road. This section of SR 99 generally has two mainline travel lanes and one high-occupancy vehicle lane in either direction with a posted speed limit of 65 mph.

- **Interstate 5** is a north–south freeway that traverses California and is a major national freeway that connects between Mexico and Canada. Near the Hood Franklin Road interchange, I-5 is a four-lane freeway and transitions to a six-lane freeway north of Laguna Boulevard.

Existing Traffic Operations

Data Collection

To provide a baseline for the transportation analysis, traffic counts were collected at the existing study intersections at various dates in 2014, 2015, and 2016. The intersection turning movement counts were conducted during the AM (7:00 to 9:00) and PM (4:00 to 6:00) peak periods. During the counts, weather conditions were generally dry, no unusual traffic patterns were observed, and the Elk Grove Unified School District was in full session. Pedestrians were also counted at each study intersection.

Each intersection's peak hour within the peak period was used for the analysis. For the majority of study intersections, the counts indicate that the AM peak hour is 7:00 AM to 8:00 AM and the PM peak hour is 5:00 PM to 6:00 PM.

The following data sources were also used in the analysis of study facilities:

- Freeway traffic count data provided by Caltrans and available through the Caltrans Performance Measurement System (PeMS).
- Traffic signal timings provided by the City.

Intersection Operations and Roadway Capacity Utilization

Level of service (LOS) is a qualitative measure that describes operational conditions as they relate to the traffic stream and perceptions of motorists and passengers. LOS generally describes these conditions in terms of factors such as speed and travel time, delays, freedom to maneuver, traffic interruptions, comfort, convenience, and safety. The operational levels of service are given letter designations from A to F, with A representing the best operating conditions (free-flow) and F the worst (severely congested flow with high delays). Intersections generally are the capacity-controlling locations with respect to traffic operations on arterial and collector streets in urban areas. LOS does not reflect the perspective of other roadway users such as pedestrians and bicyclists. **Table 5.13-1** provides general definitions of each LOS grade.

TABLE 5.13-1
LEVEL OF SERVICE DEFINITIONS

Level of Service	Description
A	LOS A describes primarily free-flow operation.
B	LOS B describes reasonably unimpeded operation.
C	LOS C describes stable operation.
D	LOS D indicates a less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speed.
E	LOS E is characterized by unstable operation and significant delay.
F	LOS F is characterized by flow at extremely low speeds or stop and go conditions.

Source: Transportation Research Board 2010; Fehr & Peers 2017

Existing intersection LOS are shown in **Figure 5.13-4** and **Figure 5.13-5** for the AM and PM peak hours, respectively. Roadway results are shown in **Figure 5.13-6**, and the results are summarized in **Table 5.13-2**. **Appendix F** includes detailed analysis results.

As shown in **Table 5.13-2**, most intersections and roadway segments operate at LOS D or better. Five of the ten study freeway segments operate at LOS E or F.

The intersections that operate at LOS E or F include:

- Calvine Road/Elk Grove Florin Road: AM LOS E and PM LOS F
- Calvine Road/Waterman Road: AM LOS E
- Bond Road/Elk Grove Florin Road: AM and PM LOS E
- Sheldon Road/Waterman Road: AM and PM LOS F
- Sheldon Road/Bradshaw Road: AM and PM LOS F
- Bond Road/Bader Road: AM LOS E
- Laguna Boulevard/Franklin Boulevard: AM and PM LOS E
- Bighorn Boulevard/Bruceville Road: PM LOS F
- Elk Grove Boulevard at southbound offramp: PM LOS F

TABLE 5.13-2
PEAK HOUR INTERSECTION AND DAILY ROADWAY LEVEL OF SERVICE COMPARISON – EXISTING CONDITIONS

LOS	Number of Facilities Operating at Indicated Level of Service			
	Intersections		Roadway and Freeway Segments	
	AM	PM	Daily	
			Roadways	Freeways
A–C	60	64	96	1
D	9	5	35	4
E	5	2	2	2
F	2	5	2	3
Total	**76**	**76**	**135**	**10**

Source: Fehr & Peers 2017

Bicycle and Pedestrian Facilities

Bicycle and pedestrian trips account for approximately 2.8 percent of all work trips and 4.9 percent of all non-work trips made by residents and employees in suburban areas (SACOG 2000).

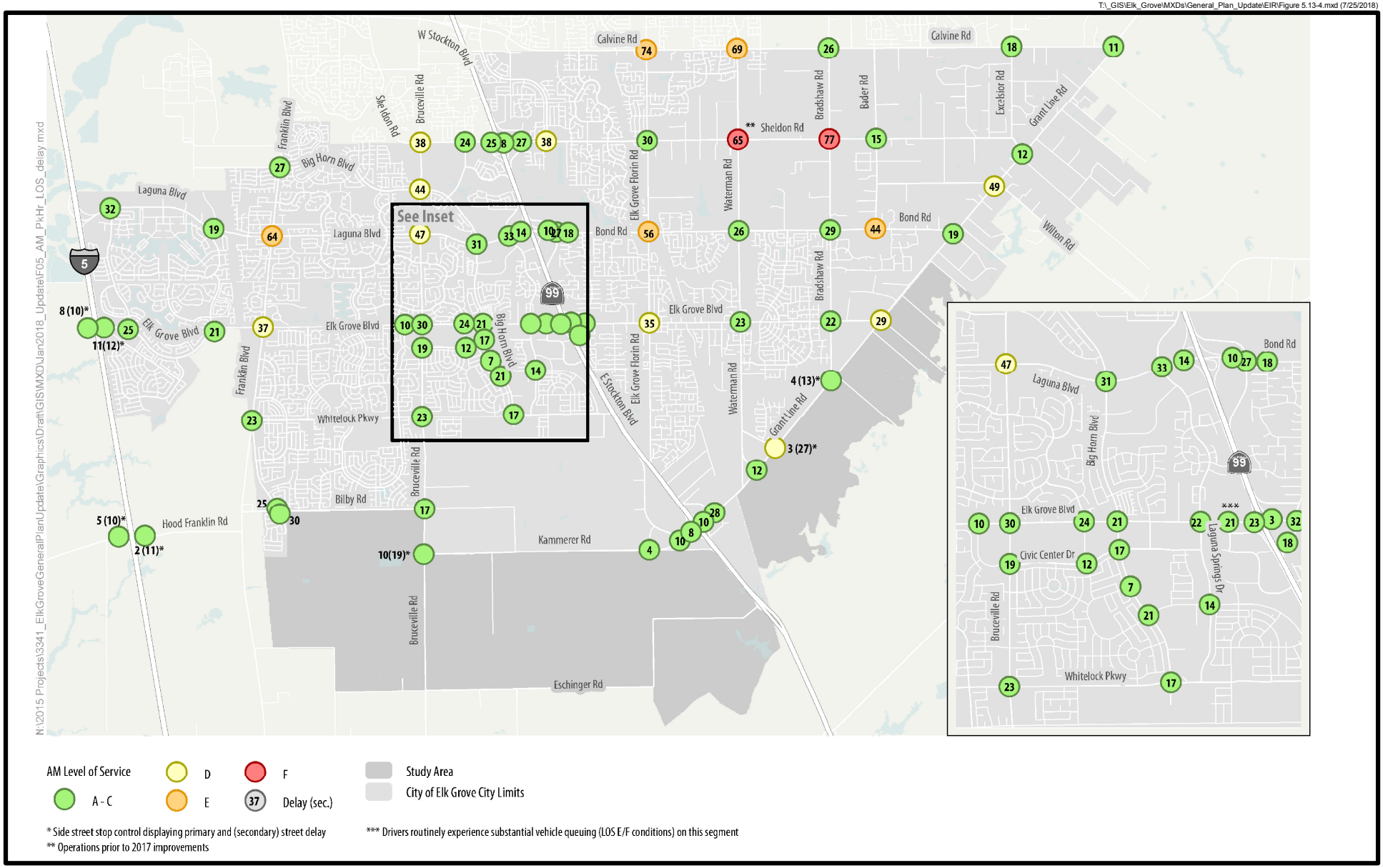
The majority of the bike paths in the City limits are Class II lanes, which are located on existing streets or highways and are striped for one-way bicycle travel. Below are descriptions of bicycle paths and their classifications.

- Class I bike paths provide a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross-flow minimized.
- Class II bike lanes are striped lanes for one-way bike travel on a street or highway.
- Class III bike routes provide for shared use with pedestrians or motor vehicle traffic.
- Class IV bikeways are on-street bike lanes that are physically separated from the adjacent general travel lane.

In July 2014, the City Council adopted the Bicycle, Pedestrian, and Trails Master Plan, which replaced the Trails Master Plan (2007) and Bicycle and Pedestrian Master Plan (2004). The plan identifies existing facilities, opportunities, constraints, and destination points for bicycle users and pedestrians. Existing and proposed bicycle and pedestrian facilities documented in the plan are shown on **Figure 5.13-7**. **Figure 5.13-8** shows existing sidewalk coverage.

Transit Facilities

The City is served by its own transit system, e-Tran, which includes local transit service and commuter routes. Local transit service is provided on weekdays (seven routes) and Saturdays (four routes). There is no Sunday service. E-Tran provides ten commuter routes that operate Monday through Friday. The current e-Tran system map is shown on **Figure 5.13-9**.



City of Elk Grove
Development Services

Figure 5.13-4
Existing AM Peak Hour Intersection LOS/Delay

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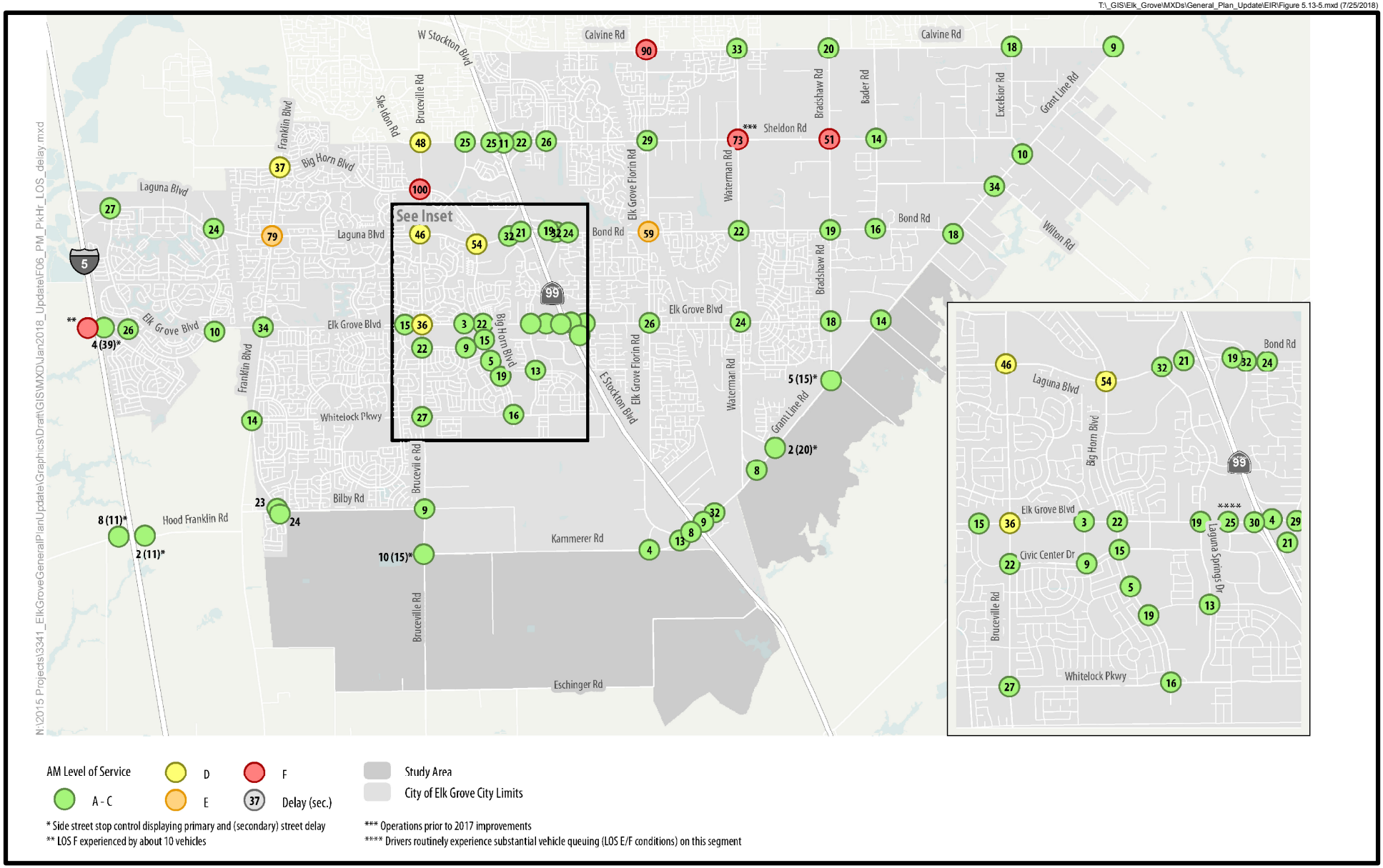

City of Elk Grove
Development Services

Figure 5.13-5
Existing PM Peak Hour Intersection LOS/Delay

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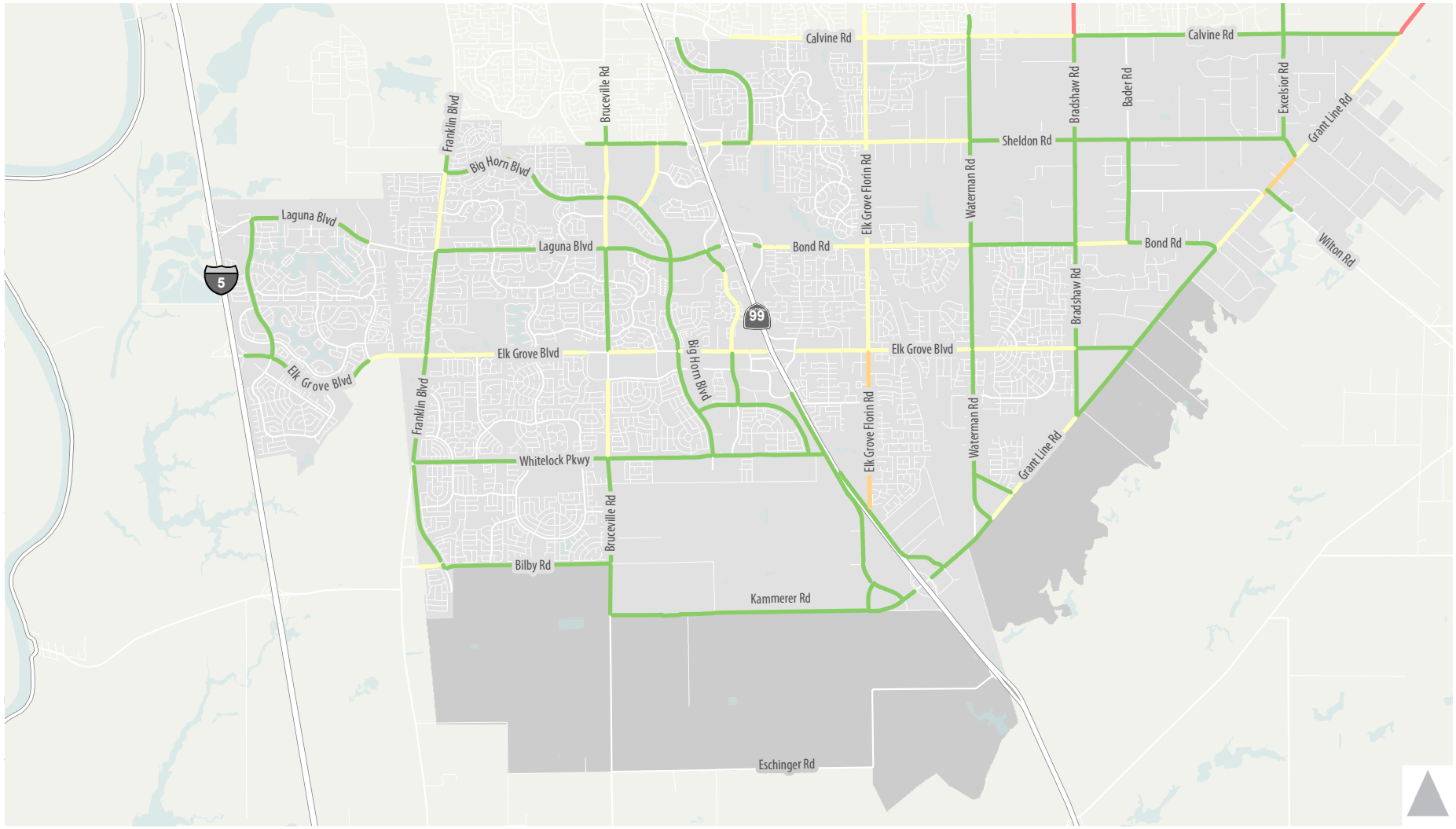

Roadway Level of Service
C or Better
D
E
F
Study Area
City of Elk Grove City Limits

Source: Fehr & Peers, 2018

City of Elk Grove
Development Services

Figure 5.13-6
Existing Roadway Segment LOS

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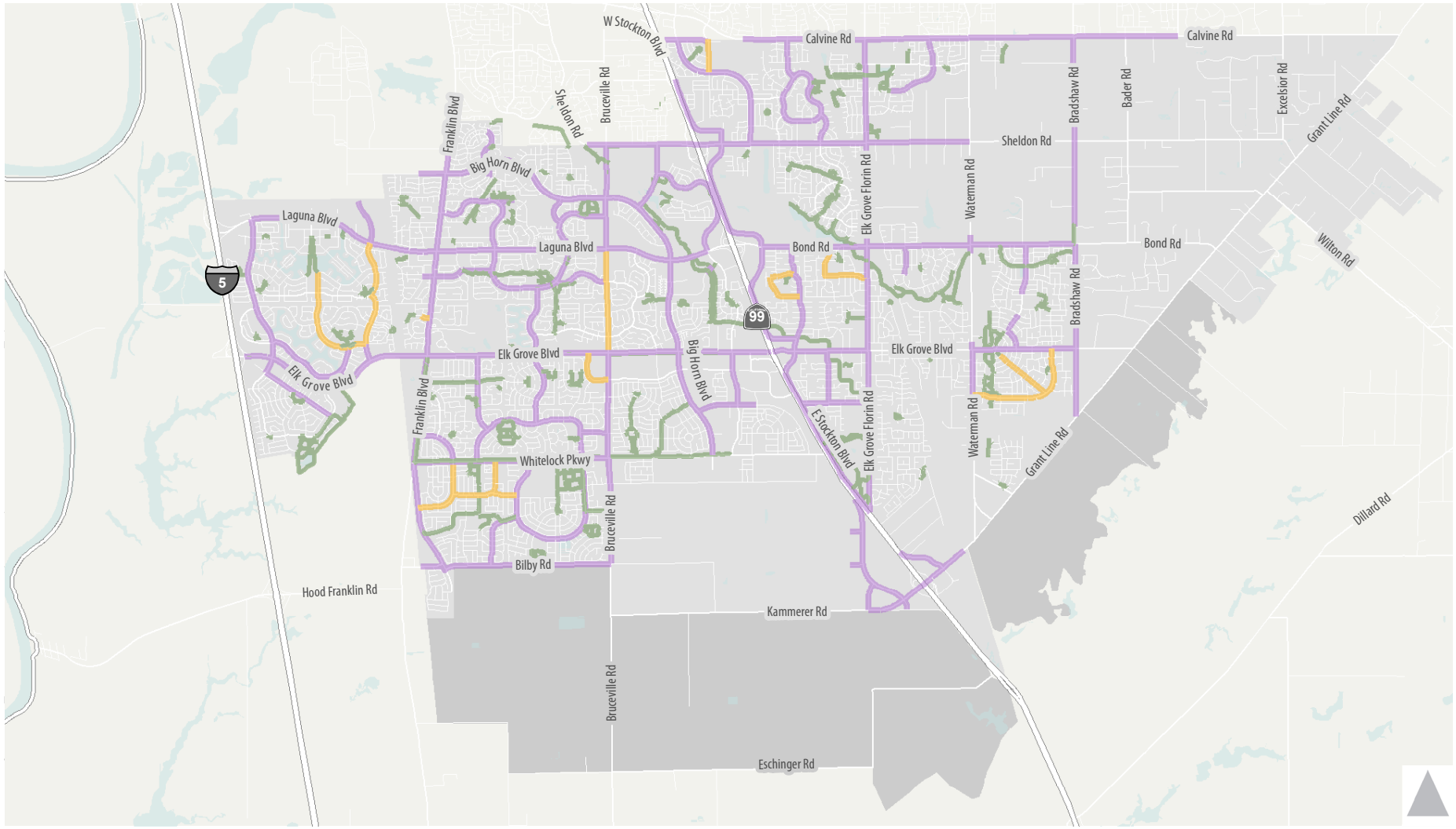

Source: Fehr & Peers, 2018

City of Elk Grove
Development Services

Figure 5.13-7
Existing Bicycle Facilities

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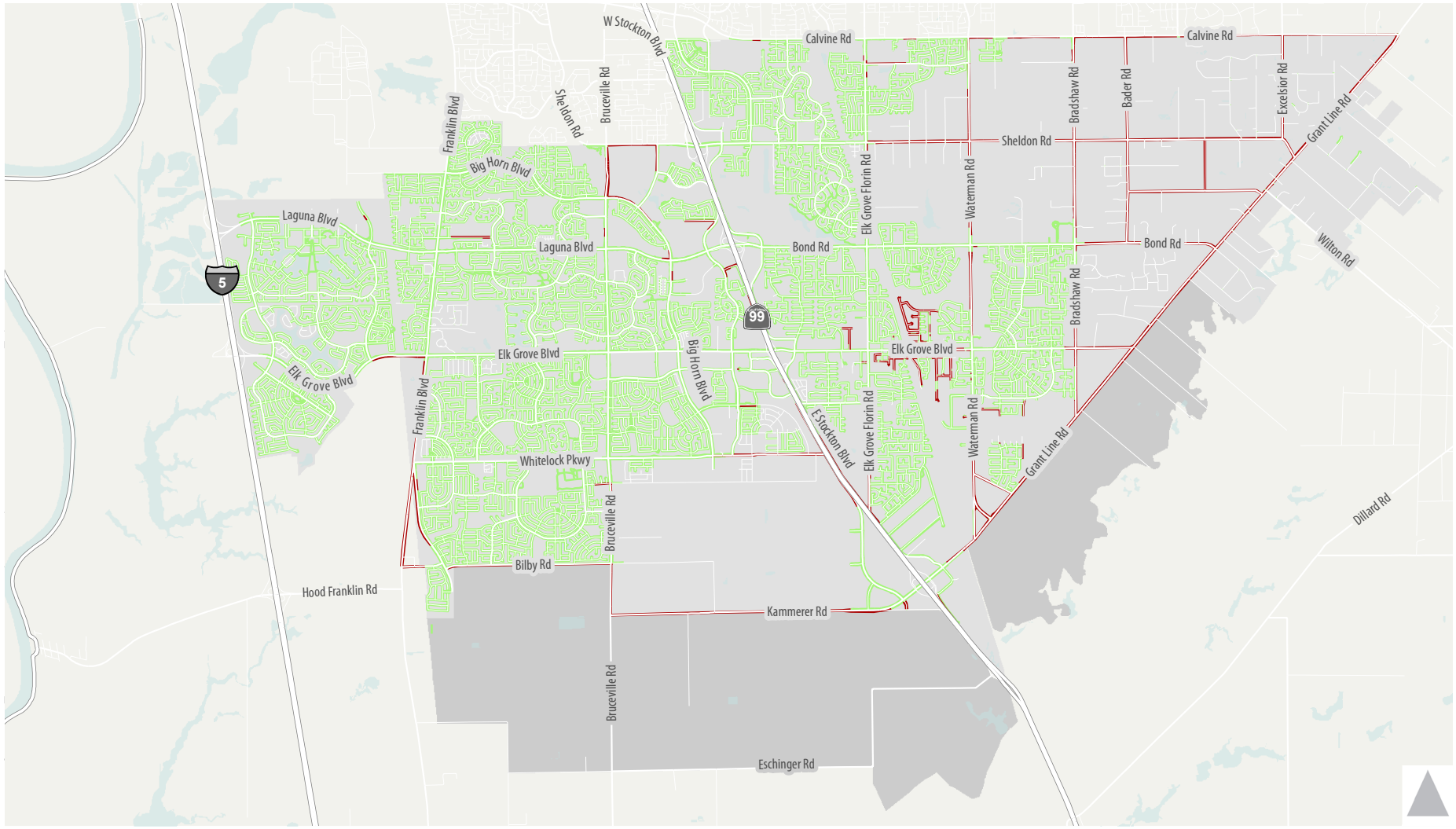

Source: Fehr & Peers, 2018

City of Elk Grove
Development Services

Figure 5.13-8
Existing Sidewalk Coverage

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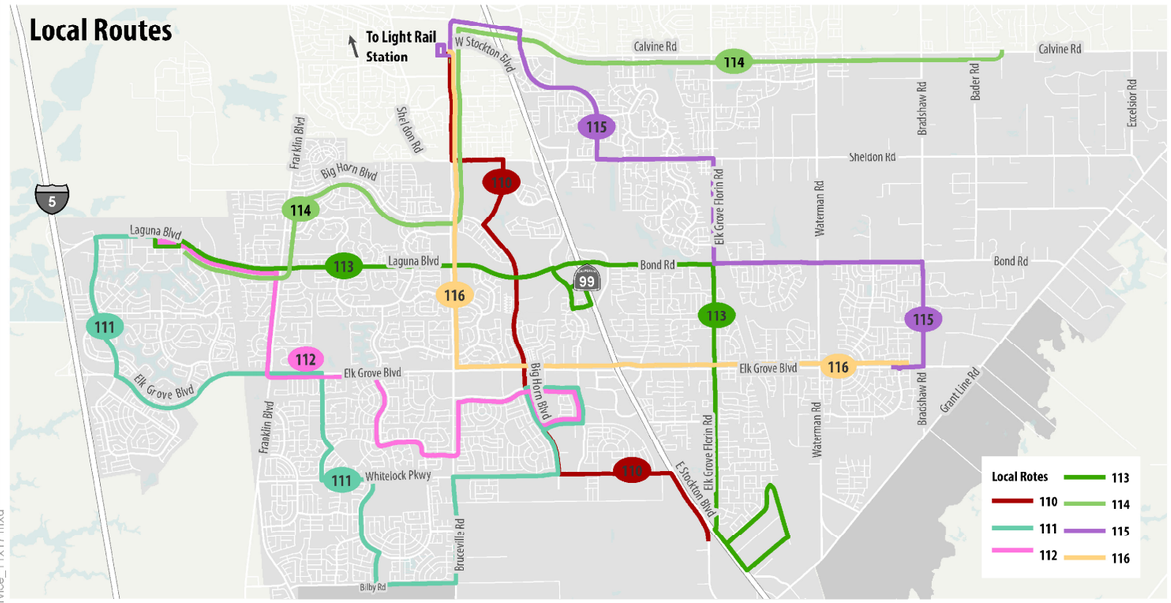

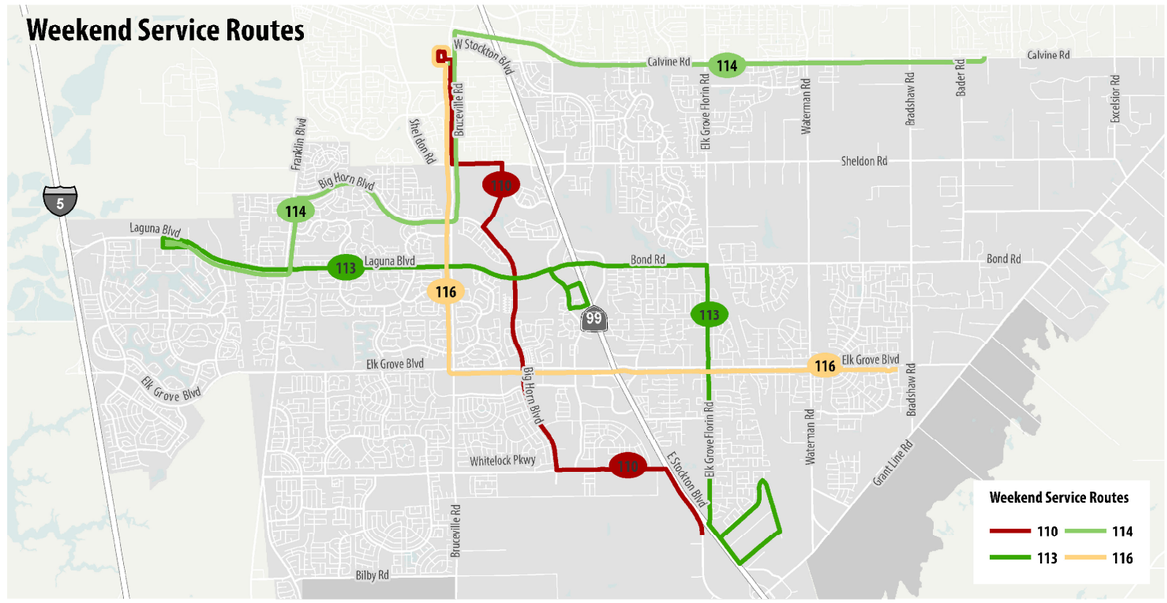

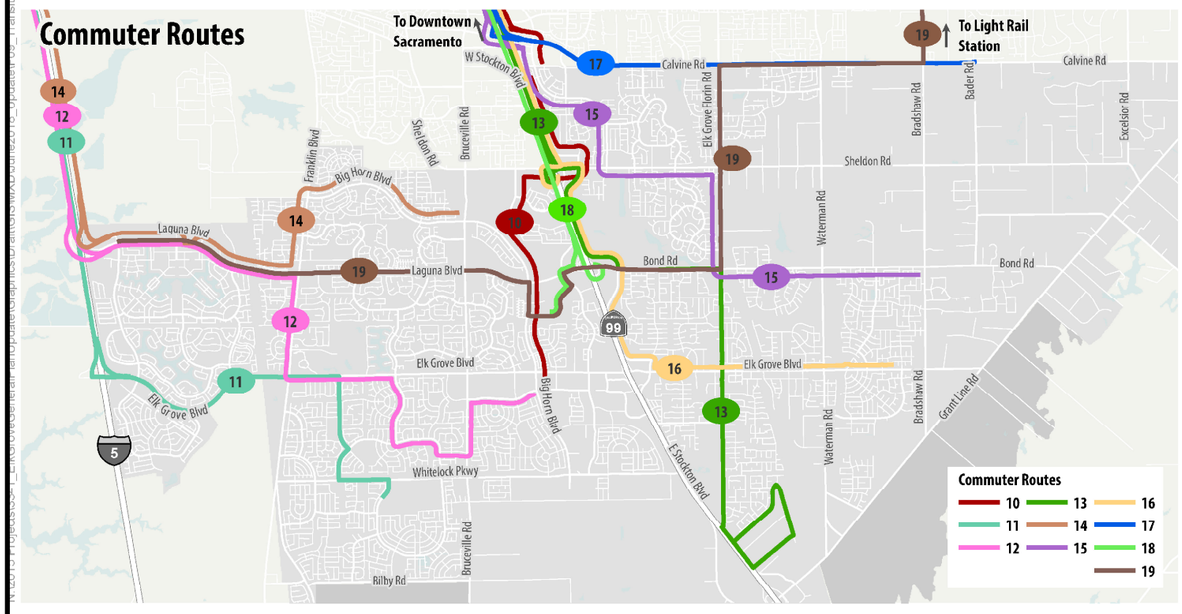

Study Area

City of Elk Grove City Limits

City of Elk Grove
Development Services

Figure 5.13-9
Existing Transit Facilities

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5.13.2 REGULATORY FRAMEWORK

FEDERAL

There are no applicable federal regulations pertaining to transportation that apply directly to the proposed Project.

STATE

California Department of Transportation

Caltrans is responsible for operating and maintaining the State highway system. In the Project vicinity, I-5 and SR 99 fall under Caltrans jurisdiction. Caltrans provides administrative support for transportation programming decisions made by the California Transportation Commission for State funding programs. The State Transportation Improvement Program is a multiyear capital improvement program that sets priorities and funds transportation projects envisioned in long-range transportation plans.

State Route 99 and Interstate 5 Corridor System Management Plan

In May 2009, Caltrans approved the State Route 99 & Interstate 5 Corridor System Management Plan. The purpose of this plan is to identify existing route conditions and future needs and to communicate the vision for the development of each route over a 20-year planning horizon. Plan objectives are to improve safety, reduce travel time or delay on all modes, reduce traffic congestion, improve connectivity between modes and facilities, improve travel time reliability, and expand mobility options along the corridor in a cost-effective manner. Caltrans has established LOS F as the 'concept LOS' for I-5 and SR 99 through the City. The concept LOS is a generalized level of service for large study segments used by Caltrans that reflects the minimum level of service or quality of operations acceptable for each route segment.

Guide for the Preparation of Traffic Impact Studies

The *Guide for the Preparation of Traffic Impact Studies* (Caltrans 2002) provides general guidance regarding the preparation of traffic impact studies for projects that may have an impact on the State highway system. The guidance includes identifying when a traffic study should be prepared and the methodology to use when evaluating operating conditions on the State highway system.

The guidance also states: "Caltrans endeavors to maintain a target LOS at the transition between LOS 'C' and LOS 'D' on state highway facilities; however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS." It also states that where "an existing State highway facility is operating at less than the appropriate target LOS, the existing MOE [measure of effectiveness] should be maintained."

Deputy Directive DD-64-R1 – Complete Streets – Integrating the Transportation System

Caltrans provides for the needs of travelers of all ages and abilities in all programming, planning, design, construction, operations, and maintenance activities and products on the State highway system. Caltrans views all transportation improvements as opportunities to improve safety, access, and mobility for all travelers in California and recognizes bicycles, pedestrians, and transit modes as integral elements of the transportation system.

Caltrans develops multimodal projects in balance with community goals, plans, and values. Implicit in these objectives is addressing the safety and mobility needs of bicyclists, pedestrians, and transit users in all projects, regardless of funding. Bicycle, pedestrian, and transit travel is facilitated by creating "complete streets," beginning early in the system planning process and continuing through project delivery and maintenance and operations.

California Public Utilities Commission

The California Public Utilities Commission sets guidelines for interactions between railroad facilities and ground transportation facilities. This includes location and type of crossing guards, design of railroad crossings, and other design criteria in and around railroad facilities. The guidelines come in the form of general orders.

General Order NO. 75-D – Regulations Governing Standards for Warning Devices for At-Grade Highway-Rail Crossings in the State of California

The general order provides regulations that govern the standards for warning devices for at-grade highway-rail crossings for motor vehicles, pedestrians, and/or bicycles. All warning devices shall be in substantial conformance with the applicable Standards, Guidance and Options set forth in the Manual on Uniform Traffic Control Devices in the for adopted by Caltrans.

Senate Bill 743

On September 27, 2013, Governor Brown signed Senate Bill (SB) 743, which made several changes to the California Environmental Quality Act (CEQA) for projects located in areas served by transit. The changes direct the Governor's Office of Planning and Research (OPR) to develop a new approach for analyzing transportation impacts under CEQA, which eliminates vehicle delay and level of service as CEQA impacts for many parts of California. SB 743 also creates a new exemption for certain projects that are consistent with a specific plan and, in some circumstances, eliminates the need to evaluate aesthetic and parking impacts of a project. The intent of SB 743 is to more appropriately balance the needs of congestion management with Statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions.

The City, through the Project and this EIR, is implementing SB 743 through the utilization of the changes proposed to the State CEQA Guidelines.

REGIONAL

Sacramento Area Council of Governments

The Sacramento Area Council of Governments (SACOG) is an association of local governments in the six-county Sacramento region. Its members include the Counties of Sacramento, El Dorado, Placer, Sutter, Yolo, and Yuba as well as 22 cities, including Elk Grove. SACOG provides transportation planning and funding for the region, and serves as a forum for the study and resolution of regional issues. In addition to preparing the region's long-range transportation plan (the Metropolitan Transportation Plan), SACOG assists in planning for transit, bicycle networks, clean air, and airport land uses.

SACOG approved the 2016 *Metropolitan Transportation Plan/Sustainable Communities Strategy* (MTP/SCS), and EIR in February 2016. The MTP/SCS is a federally mandated, long-range, fiscally constrained transportation plan for the six-county area. Most of this area is designated a federal

nonattainment area for ozone, indicating that the transportation system is required to meet stringent air quality emissions budgets to reduce pollutant levels that contribute to ozone formation. To receive federal funding, transportation projects nominated by cities, counties, and agencies must be consistent with the MTP/SCS.

The *2017–2020 Metropolitan Transportation Improvement Program* is a list of transportation projects and programs to be funded and implemented over the next three years. SACOG submits this document to Caltrans and amends the program on a quarterly cycle. Only projects listed in the MTP/SCS may be included in the improvement program.

5.13.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

CEQA Thresholds

The impact analysis provided below is based on the following CEQA Guidelines Appendix G thresholds of significance. A project is considered to have a significant effect on the environment if it will:

1) 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.

2) 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.

3) 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.

4) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

5) Result in inadequate emergency access.

6) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

City of Elk Grove Thresholds

As noted above, SB 743 was signed in 2013, requiring a move away from vehicle delay and LOS as a threshold for CEQA transportation analysis. SB 743 requires OPR to identify new metrics for identifying and mitigating transportation impacts and, in November 2017, OPR released a CEQA Guidelines update package identifying vehicle miles traveled (VMT) per capita, VMT per employee, and net VMT as new metrics for transportation analysis. It is anticipated that regulatory language changes to CEQA will be adopted in 2018 and that Statewide implementation will occur on January 1, 2020.

However, while LOS will be removed as a threshold under CEQA, the new VMT metrics are not yet required and the City's current General Plan policies use LOS goals. Specifically, existing Policy CI-13 has a goal that roadway segments and intersections shall be maintained at LOS D or better, though existing Policy CI-14 acknowledges that LOS D may not be achieved on some roadway segments and may also not be achieved at some intersections. Therefore, both LOS and VMT are evaluated in this EIR to be consistent with the existing and future standards.

The following evaluation criteria were also used to determine the significance of Project impacts.

Intersections

An impact to a roadway segment is considered significant, and mitigation measures must be identified when:

- The traffic generated by the Project degrades the level of service from an acceptable LOS D or better (without the Project) to an unacceptable LOS E or LOS F (with the Project).
- The level of service (without Project) is unacceptable and Project-generated traffic increases the average vehicle delay by more than 5 seconds.

Roadway Segments

An impact to a roadway segment is considered significant, and mitigation measures will be identified when:

- The traffic generated by the Project degrades the level of service from an acceptable LOS D or better (without the Project) to an unacceptable LOS E or LOS F (with the Project).
- The level of service (without the Project) is unacceptable and Project-generated traffic increases the volume-to-capacity (V/C) ratio by 0.05 or more.

Freeway Facilities

An impact is considered significant on freeway facilities if the Project causes the facility to change from an acceptable to unacceptable level of service based on the concept LOS defined by Caltrans.

For facilities that are or will be (in the cumulative condition) operating at unacceptable LOS without the Project, an impact is considered significant if the Project:

- Increases the V/C ratio on a freeway mainline segment or freeway ramp junction by 0.05.
- Increases the number of peak-hour vehicles on a freeway mainline segment or freeway ramp junction ramp junction by more than 5 percent.

The 20-year concept LOS for both SR 99 and I-5 is LOS F.

Bicycle/Pedestrian/Transit Facilities

An impact is considered significant if implementation of the Project would disrupt or interfere with existing or planned bicycle, pedestrian, or transit facilities.

METHODOLOGY

The transportation analysis addresses the roadway, transit, bicycle, pedestrian, and rail components of the transportation system assuming adoption and implementation of the proposed Project. Analysis of the roadway system is based on the projected capacity utilization of existing and planned roadways, while the other components of the transportation network are evaluated based on whether implementation of the proposed Project would disrupt or interfere with the physical or operational condition of existing or planned facilities or services in 2036. Given the long-term nature of the proposed Project, the analysis does not attempt to develop a scenario in which development under the proposed Project is added to the existing condition without background levels of traffic being added. Thus, the analysis presented below represents the cumulative condition in which regional background traffic increases are included in modeling. This methodology represents a conservative approach, as the change from existing conditions reported in the analysis also report the impact associated with the background trips in the future conditions.

The influence of the proposed Project policy choices on the roadway system was quantified through an analysis of the roadway system that measures daily VMT on the regional roadway network, daily roadway capacity utilization for local City streets and Caltrans freeway facilities, and AM and PM peak hour intersection operations for local City intersections. The analysis included 145 roadway segments and 83 intersections and involved a multistep process to transform land use and network changes associated with the proposed Project into VMT and daily AM and PM peak hour traffic volume forecasts. The process started with a modified version of SACOG's regional SACSIM travel model.

Modifications to the model were made to tailor it for the City and the proposed Project. The transportation network, traffic analysis zone system, and select model parameters were refined to improve the model's ability to replicate existing observed traffic volume conditions, although the model may require further refinements if used for subsequent project-scale analysis. The network refinements focused on adding more local roadways and incorporating modifications to the proposed Project circulation diagram. More traffic analysis zones were added to improve how the traffic is assigned to the roadway network.

The modified version of SACOG's SACSIM model was used to develop VMT forecasts for the transportation analysis and for the air pollution and greenhouse gas analysis. All three resource areas require different VMT inputs. **Table 5.13-3** compares the three methods used to estimate VMT for the project analysis, include the types of trips included in the calculation, the amount of VMT captured by the method, and the source of the VMT. VMT for the air quality and GHG analysis are not discussed further in this chapter.

The transportation VMT analysis methodology presented in **Table 5.13-3** follows and is consistent with the technical guidance provided by the Governor's Office and Planning and Research (OPR), which is documented in Technical Advisory on Evaluating Transportation Impacts in CEQA (Office of Planning and Research, November 2017). Key aspects of the methodology include a more complete accounting of household and workplace travel, does not truncate trip lengths arbitrarily by using the entire SACSIM model area to calculate trip length, and measures transportation efficiency by analyzing VMT per service population.

TABLE 5.13-3
VEHICLE MILES TRAVELED METHODS

Method		Analysis Application	Approach	Formula	Trip Types Included[1]	Full Accounting?		Source
						Trip Length	Trips	
Boundary		Air Quality	Estimates/forecasts VMT for a specific boundary area, like the City of Elk Grove	Volume x Distance for all model links in the boundary	II IX XI XX	Does not account for entire trip length	Excludes trips without an origin or destination at the home	Assigned model roadway network
OD[2]	RTAC[3]	GHG	Estimates/forecasts VMT based on all trips that have one end in a project location	Trips x Trip Length	II 50% IX 50% XI	Fully accounts for entire trip length	Excludes trips without an origin or destination at the home	Model origin-destination trip matrix
	Tour-Based	Transportation	Estimates/forecasts VMT based on all trips that have one end in a project location	Trips x Trip Length	II IX XI	Fully accounts for entire trip length	Includes trips without an origin or destination at the home	SACSIM's DAYSIM travel diary

Source: Fehr & Peers 2017
Notes:
1 RTAC – Regional Targets Advisory Committee
2 OD – Origin/Destination
3 Description of Trip Types:
II – Internal to Internal Trips
IX – Internal to External Trips
XI – External to Internal Trips
XX – External to External (Through) Trips

The final step in the forecasting and analysis process compared daily traffic volume forecasts to roadway segment volume thresholds to analyze AM and PM peak hour intersection traffic operations. Roadway capacity utilization was used to assess the need for capacity expansion. Roadway capacity utilization is not fully sensitive to traffic operational conditions given the fluctuations that can occur in traffic conditions within any one hour, but it provides sufficient information to gauge the potential need for roadway capacity expansion. The intersection operations analysis considers the operational conditions during traditional morning and evening peak hours and the competition for green time at the intersection. However, performing this type of analysis for conditions decades into the future is somewhat speculative, given the limitations associated with predicting individual turning movement volumes.

Intersections were analyzed using procedures and methodologies in the Highway Capacity Manual (Transportation Research Board 2010). These methodologies were applied using the Synchro/SimTraffic traffic operations analysis software. SimTraffic, a micro-simulation model, analyzed intersection operations near interchanges on SR 99 where congested conditions cause vehicle queues to spill back through adjacent intersections. **Table 5.13-4** presents the intersection LOS thresholds for signal- and stop-controlled intersections.

TABLE 5.13-4
INTERSECTION LEVEL OF SERVICE THRESHOLDS

Level of Service	Average Control Delay (seconds/vehicle)[1]	
	Signal Control	Stop Control
A	≤10.0	≤10.0
B	10.1–20.0	10.1–15.0
C	20.1–35.0	20.1–25.0
D	35.1–55.0	35.1–35.0
E	55.1–80.0	55.1–50.0
F	>80.0	>50.0

Source: Fehr & Peers 2017

Roadway segments were analyzed by comparing average daily traffic volumes to the capacity thresholds for arterials, expressway, and freeway facilities. These are presented **Table 5.13-5**.

TABLE 5.13-5
LEVEL OF SERVICE DEFINITIONS FOR STUDY ROADWAYS

Facility Type	Lanes	Median	Speed	Maximum Daily Volume		
				LOS C	LOS D	LOS E
Arterial (Moderate Access Control)	2	No	25	4,200	13,600	18,900
			30	5,600	14,600	18,900
			35	7,000	15,700	18,900
			40	8,400	16,600	18,900
			45	9,800	17,700	18,900
			55	12,500	18,600	18,900
		Yes	25	4,400	14,300	19,900
			30	5,900	15,400	19,900
			35	7,400	16,500	19,900
			40	8,800	17,500	19,900
			45	10,300	18,600	19,900
			55	13,200	19,600	19,900
Arterial (Moderate Access Control)	4	No	30	10,700	29,800	36,000
			35	14,000	31,600	36,000
			40	17,100	33,500	36,000
			45	20,300	35,300	36,000
		Yes	30	11,300	31,400	37,900
			35	14,700	33,300	37,900
			40	18,000	35,300	37,900
			45	21,400	37,200	37,900

Facility Type	Lanes	Median	Speed	Maximum Daily Volume		
				LOS C	LOS D	LOS E
Arterial (Moderate Access Control)	5	Yes	45	26,700	45,600	46,100
Arterial (Moderate Access Control)	6	Yes	30	16,300	46,400	54,300
			35	21,500	48,900	54,300
			40	26,700	51,500	54,300
			45	31,900	54,000	54,300
Arterial (High Access Control)	6	Yes	55	48,000	54,000	60,000
Arterial	7	Yes	45	44,800	59,400	63,200
Arterial (Moderate Access Control)	8	Yes	55	57,600	64,800	72,000
Arterial (High Access Control)				64,000	72,000	80,000
Expressway	4	Yes	55	57,600	64,800	72,000
	6	Yes	55	86,400	97,200	108,000
Freeway	4	Yes	65	61,600	74,400	80,000
	6	Yes	65	92,400	111,600	120,000
	8	Yes	65	123,200	148,800	160,000

Source: Fehr & Peers 2017

General Plan Policies and Standards

The proposed Project contains the following policies and standards related to transportation and circulation.

Policy MOB-1-1: Achieve State-mandated reductions in VMT by requiring land use and transportation projects to comply with the following metrics and limits. These metrics and limits shall be used as thresholds of significance in evaluating projects subject to CEQA.

Projects that do not achieve the limits outlined below shall be subject to all feasible mitigation measures necessary to reduce the VMT for, or induced by, the project to the applicable limits. If the VMT for or induced by the project cannot be reduced consistent with the performance metrics outlined below, the City may consider approval of the project, subject to a statement of overriding considerations and mitigation of transportation impacts to the extent feasible, provided some other stated form of public objective including specific economic, legal, social, technological or other considerations is achieved by the project.

(a) **New Development** – Any new land use plans, amendments to such plans, and other discretionary development proposals (referred to as "development projects") are required to demonstrate a 15 percent reduction in VMT from existing (2015) conditions. To demonstrate this reduction, conformance with the following land use and cumulative VMT limits is required:

(i) **Land Use** – Development projects shall demonstrate that the VMT produced by the project at buildout is equal to or less than the VMT limit of the project's General Plan land use designation, as shown in Table 6-1, which incorporates the 15 percent reduction from 2015 conditions.

Table 6-1: Vehicle Miles Traveled Limits by Land Use Designation

Land Use Designation	VMT Limit (daily per service population)
Commercial and Employment Land Use Designations	
Community Commercial	41.6
Regional Commercial	44.3
Employment Center	47.1
Light Industrial/Flex	24.5
Light Industrial	24.5
Heavy Industrial	39.5
Mixed Use Land Use Designations	
Village Center Mixed Use	41.6
Residential Mixed Use	21.2
Public/Quasi Public and Open Space Land Use Designations	
Parks and Open Space	0.0
Resource Management and Conservation[1]	0.0
Public Services	53.1
Residential Land Use Designations	
Rural Residential	34.7
Estate Residential	49.2
Low Density Residential	21.2
Medium Density Residential	20.9
High Density Residential	20.6
Other Land Use Designations	
Agriculture	34.7

Notes:

1. *These land use designations are not anticipated to produce substantial VMT, as they have no residents and few to no employees. These land use designations therefore have no limit and are exempt from analysis.*

(ii) **Cumulative for Development Projects in the Existing City –** Development projects within the existing (2017) City limits shall demonstrate that cumulative VMT within the City including the project would be equal to or less than the established Citywide cumulative limit of 6,367,833 VMT (total daily VMT)

(iii) **Cumulative for Development Projects within Growth Areas –** Development projects located in Study Areas shall demonstrate that cumulative VMT within the applicable Study Area would be equal to or less than the established limit shown in Table 6-2.

Table 6-2: Study Area Total Vehicle Miles Traveled Limits

Study Area	VMT Limit (total VMT at buildout)
North Study Area	37,622
East Study Area	420,612
South Study Area	1,311,107
West Study Area	705,243

(b) **Transportation Projects** – Transportation projects likely to lead to a substantial or measurable increase in VMT shall:

(i) **Not increase VMT per service population.** Projects must demonstrate that the VMT effect of the project does not exceed the project's baseline condition VMT.

(ii) **Be consistent with the regional projections and plans.** The project shall be specifically referenced or listed in the region's MTP/SCS and accurately represented in the regional travel forecasting model. Qualifying transportation projects that are not consistent with the MTP/SCS shall also demonstrate that the cumulative VMT effect does not increase regional VMT per service population.

Policy MOB-1-2: Consider all transportation modes and the overall mobility of these modes when evaluating transportation design and potential impacts during circulation planning.

Policy MOB-1-3: Strive to implement the roadway performance targets (RPT) for operations of roadway segments and intersections, while balancing the effectiveness of design requirements to achieve the targets with the character of the surrounding area as well as the cost to complete the improvement and ongoing maintenance obligations. The Transportation Network Diagram reflects the implementation of the RPT policy at a macro level; the City will consider the specific design of individual segments and intersections in light of this policy and the guidance in the Transportation Network Diagram.

To facilitate this analysis, the City shall use the following guidelines or targets. Deviations from these metrics may be approved by the approving authority (e.g., Zoning Administrator, Planning Commission, City Council).

(a) **Vehicular Design Considerations** – The following targets apply to vehicular mobility:

(i) **Intersection Performance** – Generally, and except as otherwise determined by the approving authority or as provided in this General

Plan, the City will seek to achieve, to the extent feasible and desired, the peak-hour delay targets identified in Table 6-3.

Table 6-3: Vehicular Design Considerations: Intersection Performance Targets

Intersection Control	Intersection Control (Delay in Seconds)
Stop (Side-Street & All-Way)	< 35.1
Signal	< 55.1
Roundabout	< 35.1

(ii) **Roadway Performance** – Generally, and except as otherwise determined by the approving authority or as provided in this General Plan, the City will seek to achieve, to the extent feasible and desired, the average daily traffic design targets identified in Table 6-4.

Table 6-4: Vehicular Design Considerations: Segment Performance Targets

Facility Type	Number of Lanes	Median	Speed (mph)	Average Daily Traffic Design Target (Number of Vehicles)
Arterial or Arterial\Collector	2	No	25	13,600
			30	14,600
			35	15,700
			40	16,600
			45	17,700
			55	18,600
		Yes	25	14,300
			30	15,600
			35	16,500
			40	17,500
			45	18,600
			55	19,600
	4	No	30	29,800
			35	31,600
			40	33,500
			45	35,300
	4	Yes	30	31,400
			35	33,300
			40	35,300
			45	37,200
	5	Yes	45	45,600
	6	Yes	30	46,400
			35	48,900
			40	51,500
			45	54,000
	7	Yes	45	59,400

Facility Type	Number of Lanes	Median	Speed (mph)	Average Daily Traffic Design Target (Number of Vehicles)
	8	Yes	45	64,800
			55	72,000
Expressway	4[a]	Yes	55	64,800
	6	Yes	55	97,200
Freeway	4	Yes	55+	74,400
	6	Yes	55+	111,600
	8	Yes	55+	148,800

a. For the SouthEast Connector Expressway, the City may implement alternative design targets in consultation with the JPA.

(iii) **Pedestrian and Bicycle Performance** – The City will seek the lowest stress scores possible for pedestrian and bicycle performance after considering factors including design limitations and financial implications.

Policy MOB-2-1: The City shall consider the recommendations in the Comprehensive Land Use Plans (CLUPs) for airports near Elk Grove in the review of potential land uses or projects.

Policy MOB-2-2: The City shall ensure that new development is designed to protect public safety from airport operations consistent with recommendations and requirements of the Airport Land Use Commission, Caltrans, and the Federal Aviation Administration.

Policy MOB-3-1: Implement a balanced transportation system using a layered network approach to building complete streets that ensure the safety and mobility of all users, including pedestrians, cyclists, motorists, children, seniors, and people with disabilities.

Policy MOB-3-2: Support strategies that reduce reliance on single-occupancy private vehicles and promote the viability of alternative modes of transport.

Standard MOB-3-2.a: Require new commercial development for projects equal to and greater than 100,000 square feet to provide an electric vehicle charging station and new residential development to pre-wire for plug-in electric vehicles.

Policy MOB-3-3: Whenever capital improvements that alter street design are being performed within the public right-of-way, retrofit the right-of-way to enhance multimodal access to the most practical extent possible.

Policy MOB-3-4: As new roads are constructed, assess how the needs of all users can be integrated into the street design based on the local context and functional classification.

Policy MOB-3-5: Strive to balance needs for personal travel, goods movement, parking, social activities, business activities, and ease of maintenance when planning, operating, maintaining, and expanding the roadway network.

Policy MOB-3-6: Execute complete streets design in accordance with neighborhood context and consistent with specific guidance in community plans or area plans, as applicable.

Policy MOB-3-7: Develop a complete and connected network of sidewalks, crossings, paths, and bike lanes that are convenient and attractive, with a variety of routes in pedestrian-oriented areas.

Policy MOB-3-8: Provide a thorough and well-designed wayfinding signage system to help users of all modes of travel navigate the City in an efficient manner.

Policy MOB-3-9: As funds become available, provide for the operation and maintenance of facilities for bicycle and pedestrian networks proportionate to the travel percentage milestone goals for each mode of transportation in the Bicycle, Pedestrian, and Trails Master Plan.

Policy MOB-3-10: Design and plan roadways such that the safety of the most vulnerable user is considered first using best practices and industry design standards.

Policy MOB-3-11: Consider the safety of schoolchildren as a priority over vehicular movement on all streets within the context of the surrounding area, regardless of street classifications. Efforts shall specifically include tightening corner-turning radii to reduce vehicle speeds at intersections, reducing pedestrian crossing distances, calming motorist traffic speeds near pedestrian crossings, and installing at-grade pedestrian crossings to increase pedestrian visibility.

Policy MOB-3-12: Provide for safe and convenient paths and crossings along major streets within the context of the surrounding area, taking into account the needs of the disabled, youth, and the elderly.

Policy MOB-3-13: Continue to design streets and approve development applications in a manner that reduces high traffic flows and parking demand in residential neighborhoods.

Policy MOB-3-14: Regulate the provision and management of parking on private property to align with parking demand, with consideration for access to shared parking opportunities.

Policy MOB-3-15: Utilize reduced parking requirements when and where appropriate to promote walkable neighborhoods and districts and to increase the use of transit and bicycles.

Policy MOB-3-16: Establish parking maximums, where appropriate, to prevent undesirable amounts of motor vehicle traffic in areas where pedestrian, bike, and transit use are prioritized.

Policy MOB-3-17: Ensure new multifamily and commercial developments provide bicycle parking and other bicycle support facilities appropriate for the users of the development.

Policy MOB-4-1: Ensure that community and area plans, specific plans, and development projects promote pedestrian and bicycle movement via direct, safe, and pleasant routes that connect destinations inside and outside the plan or project area. This may include convenient pedestrian and bicycle connections to public transportation.

Policy MOB-4-2: Provide on-site facilities and amenities for active transportation users at public facilities, including bicycle parking and/or storage and shaded seating areas.

Policy MOB-4-3: Prioritize infrastructure improvements that benefit bicycle and pedestrian safety and convenience over vehicle efficiency improvements within and near community facilities, activity centers, and other pedestrian-oriented areas.

Policy MOB-4-4: Employ the recommendations and guidelines in the Bicycle, Pedestrian, and Trails Master Plan when planning and designing bicycle, pedestrian, and trail facilities and infrastructure, including updates to the Capital Improvement Program.

Policy MOB-4-5: Encourage employers to offer incentives to reduce the use of vehicles for commuting to work and increase commuting by active transportation modes. Incentives may include a cash allowance in lieu of a parking space and on-site facilities and amenities for employees such as bicycle storage, shower rooms, lockers, trees, and shaded seating areas.

Policy MOB-5-1: Support a pattern of land uses and development projects that are conducive to the provision of a robust transit service.

Policy MOB-5-2: Advocate for the City's preferred fixed transit alignment for light rail or bus rapid transit from north of the city to the Southeast Policy Area and ensure proposed projects are complementary to such an alignment.

Policy MOB-5-3: Consult with the Sacramento Regional Transit District when identifying and designing complete streets improvements near likely light rail alignment corridors in order to prioritize access to and use of transit to sites along that corridor.

Policy MOB-5-4: Support mixed-use and high-density development applications close to existing and planned transit stops.

Policy MOB-5-5: Promote strong corridor connections to and between activity centers that are safe and attractive for all modes.

Policy MOB-5-6: Provide the appropriate level of transit service in all areas of Elk Grove, through fixed-route service in urban areas, and complementary demand response service in rural areas, so that transit-dependent residents are not cut off from community services, events, and activities.

Policy MOB-5-7: Maintain and enhance transit services throughout the City in a manner that ensures frequent, reliable, timely, cost-effective, and responsive service to meet the City's needs. Enhance transit services where feasible to accommodate growth and transit needs as funding allows.

Policy MOB-5-8: Continue working with community partners to expand public transit service that benefits Elk Grove workers, residents, students, and visitors. Examples of expanded transit service include increased service frequency, establishing additional routes and stops, and creating dedicated transit lanes.

Policy MOB-5-9: Encourage the extension of bus rapid transit and/or light rail service to existing and planned employment centers by requiring a dedication of right-of-way. Advocate and plan for light rail alignment and transit stop locations that best serve the needs of the community and fit within the planned mobility system.

Policy MOB-5-10: Encourage commuter rail transportation by providing for a potential train station location for Amtrak and/or other rail service providers along the Union Pacific Railroad's Sacramento Subdivision line.

Policy MOB-6-1: Plan and pursue funding to construct strategic grade-separated crossings of rail lines, prioritizing available funds using appropriate metrics.

Policy MOB-6-2: Coordinate with the UPRR to ensure freight rail lines and crossings are maintained.

Policy MOB-6-3: Work with the UPRR to minimize the impact of train noise on adjacent sensitive land uses through the continued implementation of Quiet Zones.

Policy MOB-6-4: Regulate truck travel as appropriate for the transport of goods, consistent with circulation, air quality, congestion management, and land use goals.

Policy MOB-6-5: Safely accommodate truck traffic serving the City's industrial areas.

Policy MOB-7-1: Prioritize roadway improvements that result in appropriate capacity and multiuser facilities on major arterials consistent with the Transportation Network Diagram.

Standard-7-1.a: Generally, new roadway construction or road widening shall be completed to the ultimate width as provided in this General Plan and shall also provide required bicycle and pedestrian improvements and paths. However, phased improvements may be allowed based upon the timing of development and facility demand as determined by the City Engineer. Regardless, all roadways, pedestrian facilities, and bike routes or bikeways shall be constructed in logical and complete segments, connected from intersection to intersection, to provide safe and adequate access.

Policy MOB-7-2: Coordinate and participate with the City of Sacramento, Sacramento County, Capital SouthEast Connector Joint Powers Authority and Caltrans on roadway improvements that are shared by jurisdictions in order to improve operations. This may include joint transportation planning efforts, roadway construction, and funding.

Policy MOB-7-3: Require the dedication of right-of-way and the installation of roadway improvements as part of the review and approval of development projects. The City shall require the dedication of major road rights-of-way (generally, arterials and expressways) at the earliest opportunity in the development process.

Policy MOB-7-4: Require new development projects to provide funding or to construct roadway/intersection improvements to implement the City's Transportation Network Diagram. The payment of adopted roadway development or similar fees shall be considered compliant with the requirements of this policy with regard to those facilities included in the fee program, provided the City finds that the fee adequately funds required roadway and intersection improvements. If payment of adopted fees is used to achieve 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 MOB-7-5: Assist Caltrans in implementing improvements to Interstate 5 and State Route 99 within the City as outlined in the most recent Caltrans Transportation Concept Report.

Policy MOB-7-6: Support efforts to develop the Capital SouthEast Connector, providing a regional roadway connection from Interstate 5 and State Route 99 to US 50. The City will work with the Capital SouthEast Connector Joint Powers Authority in implementing the planned roadway improvements without diminishing or altering any City-approved projects, land use authority, or authority to determine access to the Capital SouthEast Connector.

Policy MOB-7-7: Discourage the creation of private roadways unless the roadways are constructed to public roadway standards.

Policy MOB-7-8: Support and use infrastructure improvements and technological advancements such as intelligent transportation management tools to facilitate the movement and security of goods throughout the City in an efficient manner.

Policy MOB-7-9: Assist in the provision of support facilities for emerging technologies such as advanced fueling stations (e.g., electric and hydrogen) and smart roadway signaling/signage.

Policy MOB-7-10: Work with a broad range of agencies to encourage and support programs that increase regional average vehicle occupancy. Examples include providing traveler information, shuttles, preferential parking for carpools/vanpools, transit pass subsidies, road and parking pricing, and other methods.

Policy MOB-7-11: Encourage and create incentives for the use of environmentally friendly materials and innovative approaches in roadway designs that limit runoff and urban heat island effects. Examples include permeable pavement, bioswales, and recycled road base, asphalt, and concrete.

PROJECT IMPACTS AND MITIGATION MEASURES

Conflict with an Applicable Plan, Ordinance, or Policy Establishing Measures of Effectiveness for the Performance of the Circulation System by Resulting in Unacceptable Levels of Service on City of Elk Grove Roadways and Intersections –– City Facilities (Standards of Significance 1 and 2)

Impact 5.13.1 Implementation of the proposed Project could cause unacceptable level of service conditions at some intersections and on some roadway segments. This impact is considered **potentially significant**.

The proposed Project includes land use and transportation network changes that would increase future traffic volumes on City roadways. **Figure 5.13-10** shows the circulation diagram for the proposed Project, including the expected future number of lanes on each roadway.

Intersection and roadway LOS results are shown on the following figures, and summarized in **Appendix F**, with the proposed Project and the transportation improvements displayed on **Figure 5.13-10**:

- **Figure 5.13-11** – General Plan Update AM Peak Hour Intersection LOS/Delay
- **Figure 5.13-12** - General Plan Update PM Peak Hour Intersection LOS/Delay
- **Figure 5.13-13** - General Plan Update Roadway Segment LOS

As shown on **Figures 5.13-11** through **5.13-13**, numerous intersections and roadway segments will exceed the current General Plan LOS thresholds. **Table 5.13-6** compares existing intersection and roadway segment operations to conditions with proposed Project at buildout with regional growth in 2036 based on current General Plan policies. **Table 5.13-7** shows intersection and interchange level of service under 2015 and cumulative conditions.

TABLE 5.13-6
PEAK HOUR INTERSECTION AND DAILY ROADWAY LEVEL OF SERVICE COMPARISON

LOS	Number of Facilities Operating at Indicated Level of Service							
	Existing				Proposed Project (2036)			
	Intersections		Roadway and Freeway Segments		Intersections		Roadway and Freeway Segments	
	AM	PM	Daily		AM	PM	Daily	
			Roadways	Freeways			Roadways	Freeways
A–C	60	64	96	1	20	28	27	—
D	9	5	35	4	21	19	69	—
E	5	2	2	2	14	11	6	—
F	2	5	2	3	28	25	33	10
Total	**76**	**76**	**135**	**10**	**83**	**83**	**135**	**10**

Source: Fehr & Peers 2017

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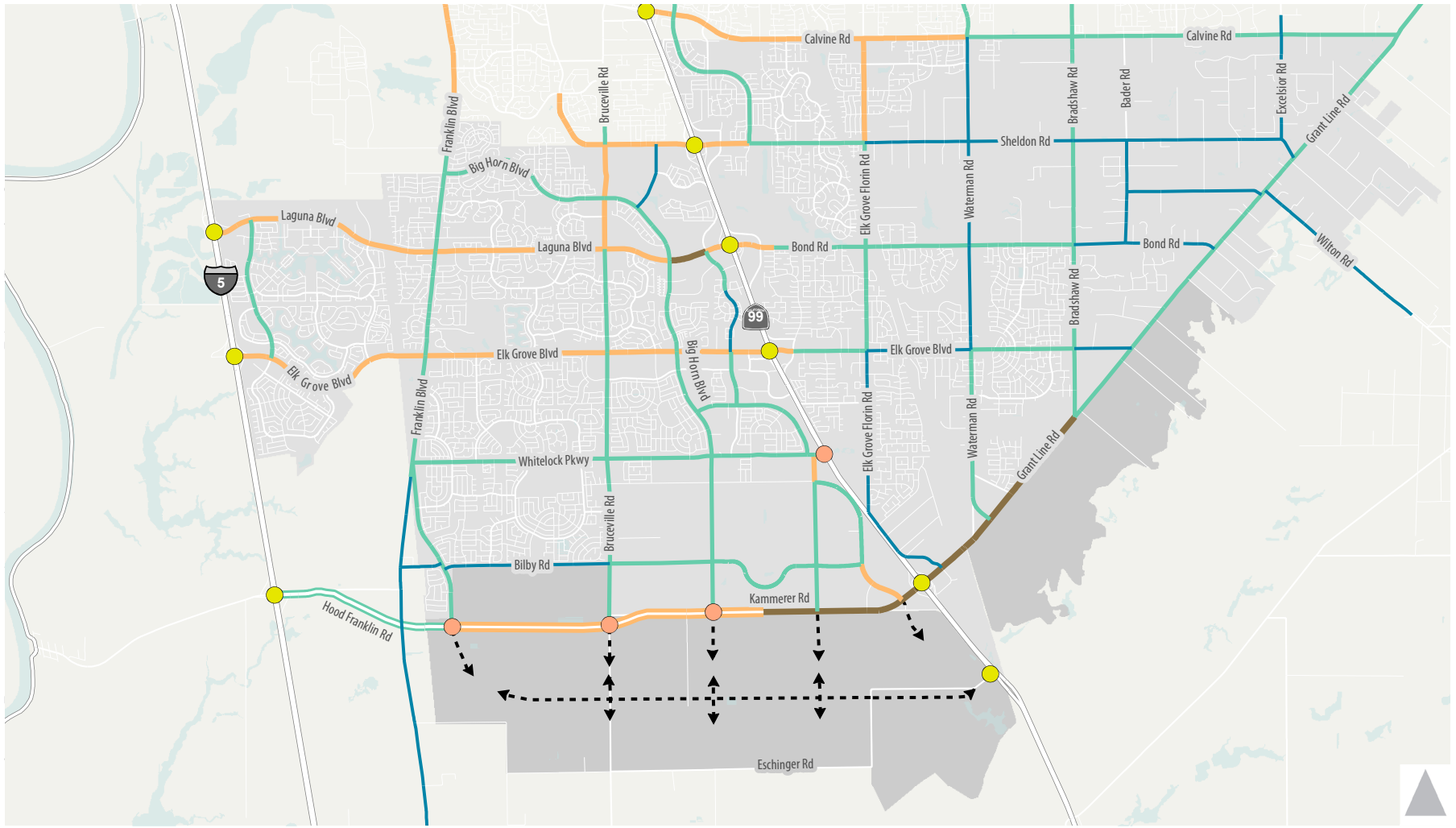

Source: Fehr & Peers, 2018

City of Elk Grove
Development Services

Figure 5.13-10
General Plan Update roadway System and Sizing Diagram

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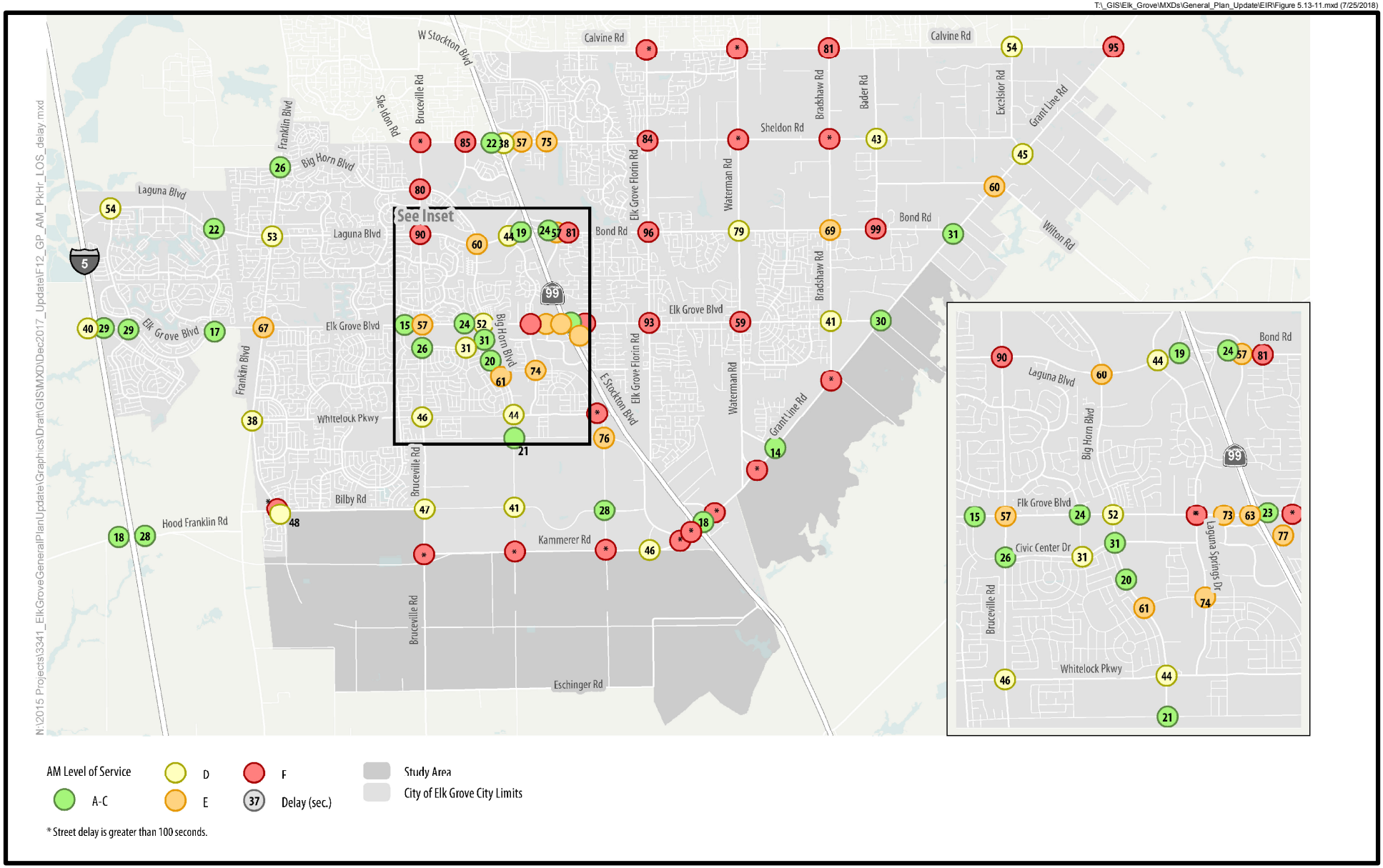

City of Elk Grove
Development Services

Figure 5.13-11
Full General Plan Buildout with Study Areas
AM Peak Hour Intersection LOS/Delay

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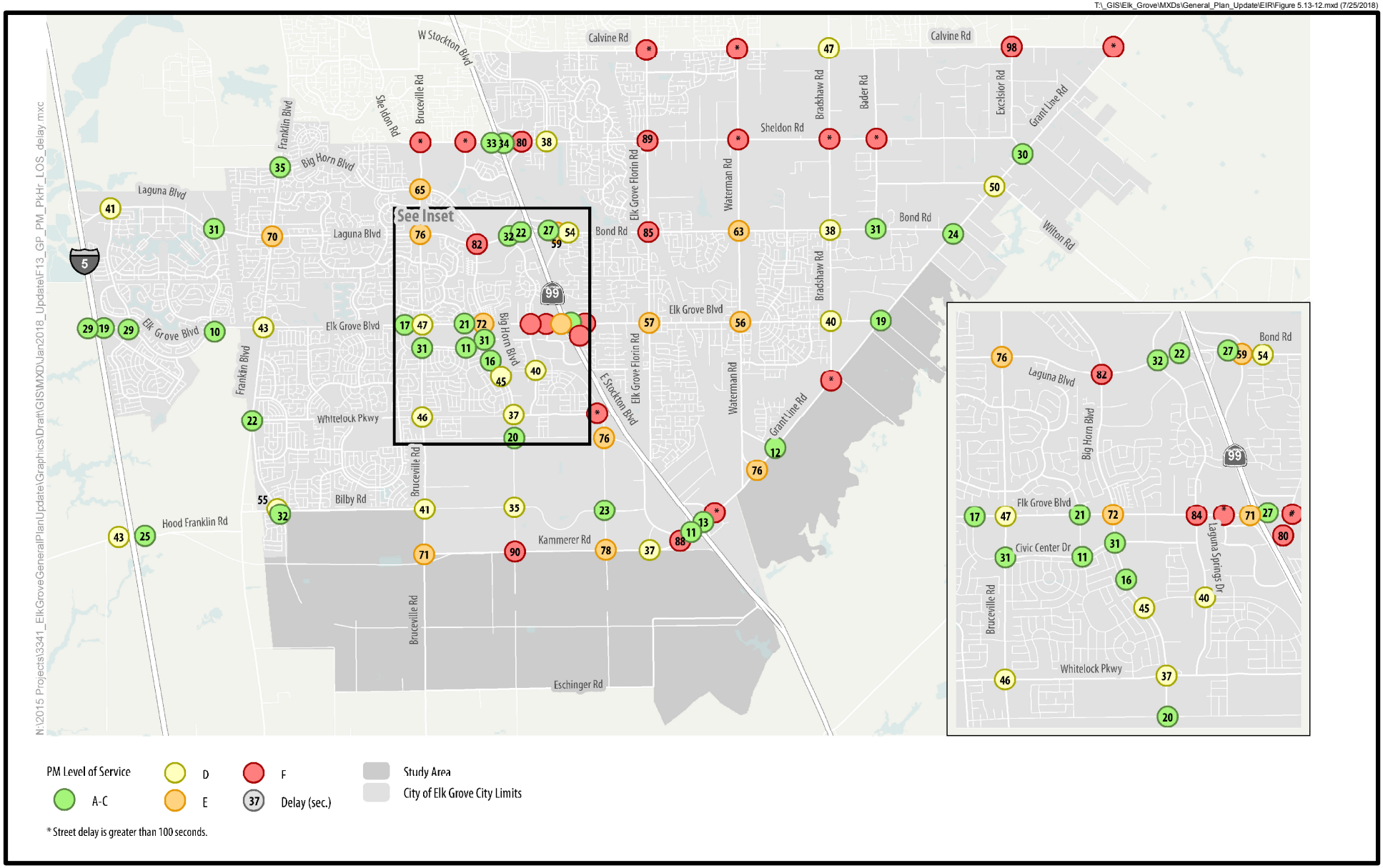

City of Elk Grove
Development Services

Figure 5.13-12
Full General Plan Buildout with Study Areas
PM Peak Hour Intersection LOS/Delay

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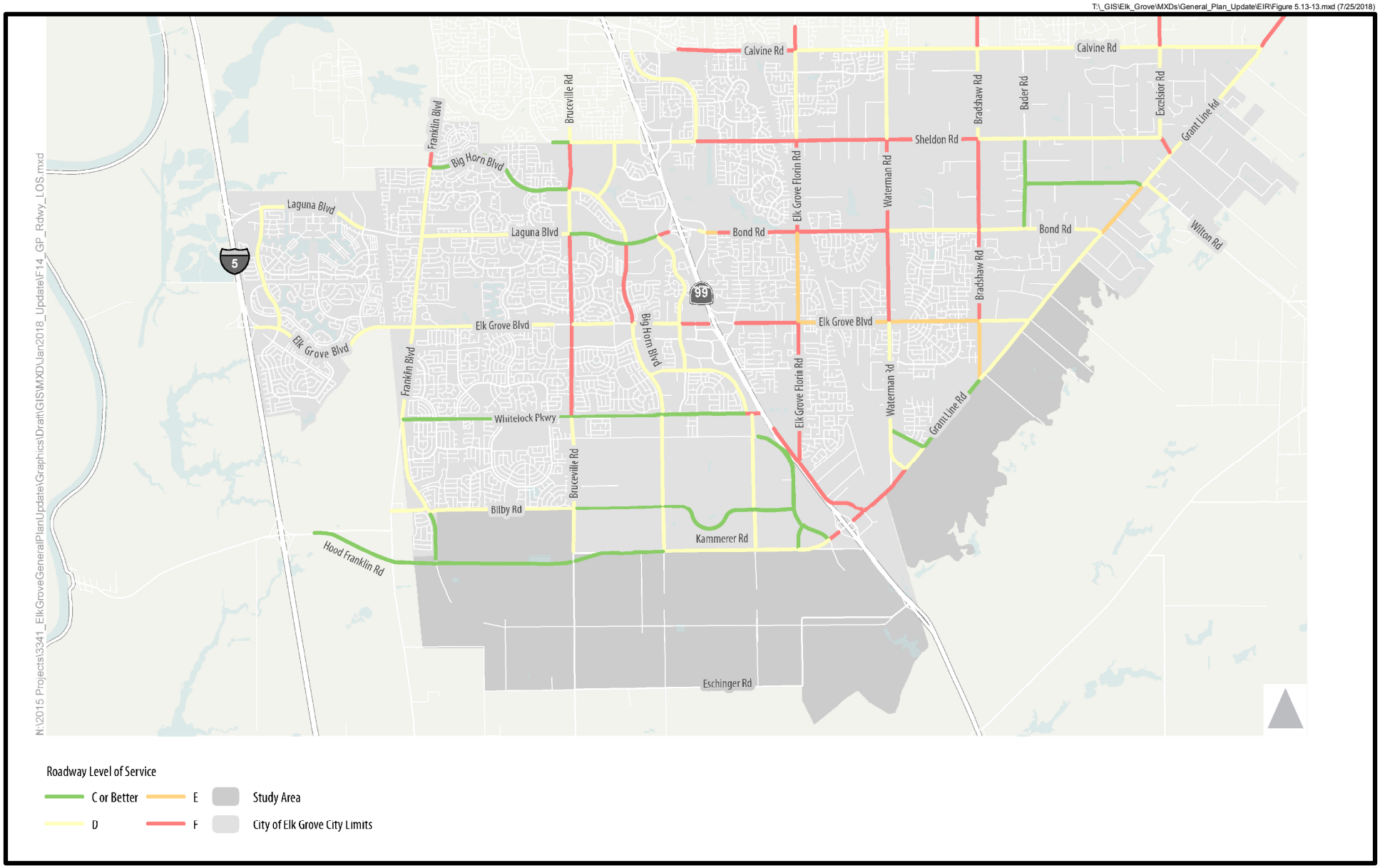

City of Elk Grove
Development Services

Figure 5.13-13
Full General Plan Buildout with Study Areas
Roadway Segment LOS

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TABLE 5.13-7
INTERSECTION LEVEL OF SERVICE – EXISTING AND CUMULATIVE CONDITIONS

Intersection	Control	Minimum Acceptable LOS	Existing Conditions				Cumulative Conditions			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS
1. Elk Grove Florin Rd/Calvine Rd	Traffic Signal	D	**74**	**E**	**90**	**F**	**123**	**F**	**122**	**F**
2. Waterman Ave/Calvine Rd	Traffic Signal	D	**69**	**E**	33	C	**184**	**F**	**106**	**F**
3. Bradshaw Rd /Calvine Rd	Traffic Signal	D	26	C	20	C	**81**	**F**	47	D
4. Excelsior Rd /Calvine Rd	AWSC	D	18	C	18	C	54	D	**98**	**F**
5. Grant Line Rd/Calvine Rd	Traffic Signal	D	11	B	9	A	**95**	**F**	**200**	**F**
6. Bruceville Rd/Sheldon Rd	Traffic Signal	D	38	D	48	D	**145**	**F**	**118**	**F**
7. Lewis Stein Rd/Sheldon Rd	Traffic Signal	D	24	C	25	C	**85**	**F**	**106**	**F**
8. SR 99 SB Ramps/W Stockton Blvd/Sheldon Rd	Traffic Signal	D	25	C	25	C	22	C	33	C
9. SR 99 NB Ramps/Sheldon Rd	Traffic Signal	D	8	A	11	B	38	D	34	C
10. E Stockton Blvd/Sheldon Rd	Traffic Signal	D	27	C	22	C	**57**	**E**	**80**	**F**
11. Power Inn Rd/Sheldon Rd	Traffic Signal	D	38	D	26	C	**75**	**E**	38	D
12. Elk Grove Florin Rd/Sheldon Rd	Traffic Signal	D	30	C	29	C	**84.4**	**F**	**89**	**F**
13. Waterman Rd/Sheldon Rd	Roundabout	D	**65**	**F**	**73**	**F**	**167**	**F**	**130**	**F**
14. Bradshaw Rd/Sheldon Rd	Roundabout	D	**77**	**F**	**51**	**F**	**119**	**F**	**164**	**F**
15. Bader Rd/ Sheldon Rd	AWSC	D	15	B	14	B	43	D	**102**	**F**
16. Grant Line Rd/Sheldon Rd	SSSC	D	12	B	10	A	45	D	30	C
17. Franklin Blvd/Dwight Rd/Big Horn Blvd	Traffic Signal	D	27	C	38	D	26	C	35	C
18. Bruceville Rd/Big Horn Blvd	Traffic Signal	D	44	D	**100**	**F**	**80**	**F**	**65**	**E**
19. Grant Line Rd/Wilton Rd	Traffic Signal	D	49	D	34	C	**60**	**E**	50	D
20. Harbour Point Dr/Laguna Blvd	Traffic Signal	D	32	C	27	C	54	D	41	D
21. Dwight Rd/Babson Dr/Laguna Blvd	Traffic Signal	D	19	B	24	C	22	C	31	C

Intersection	Control	Minimum Acceptable LOS	Existing Conditions				Cumulative Conditions			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS
22. Franklin Blvd/Laguna Blvd	Traffic Signal	D	**64**	**E**	**79**	**E**	53	D	**70**	**E**
23. Bruceville Rd/Laguna Blvd	Traffic Signal	D	47	D	46	D	**90**	**F**	**76**	**E**
24. Big Horn Blvd/Laguna Blvd	Traffic Signal	D	31	C	54	D	**60**	**E**	**82**	**F**
25. Laguna Springs Dr/W Stockton Blvd/Laguna Blvd	Traffic Signal	D	33	C	32	C	44	D	32	C
26. SR 99 SB Ramps/Laguna Blvd	Traffic Signal	D	14	B	21	C	19	B	22	C
27. SR 99 NB Ramps/Bond Rd	Traffic Signal	D	10	B	19	B	24	C	27	C
28. E Stockton Blvd/Bond Rd	Traffic Signal	D	27	C	32	C	**57**	**E**	**59**	**E**
29. Elk Crest Dr/Bond Rd	Traffic Signal	D	18	B	24	C	**81**	**F**	54	D
30. Elk Grove Florin Rd/Bond Rd	Traffic Signal	D	**56**	**E**	**59**	**E**	**96**	**F**	**85**	**F**
31. Waterman Rd/Bond Rd	Traffic Signal	D	26	C	22	C	79	D	**63**	**E**
32. Bradshaw Rd/Bond Rd	Traffic Signal	D	29	C	19	B	**69**	**E**	38	D
33. Bader Rd/ Bond Rd	Traffic Signal	D	**40**	**D**	19	B	**99**	**F**	31	C
34. Grant Line Rd/Bond Rd/Wrangler Dr	Traffic Signal	D	19	B	18	B	31	C	24	C
35. I-5 SB Ramps/Elk Grove Blvd	SSSC	D	8	A	**—**	**F**	40	D	29	C
36. I-5 NB Ramps/Elk Grove Blvd	SSSC	D	11(12)	B (B)	4 **(39)**	A **(E)**	29	C	19	B
37. Harbour Point Dr/W Taron Dr/Elk Grove Blvd	Traffic Signal	D	25	C	26	C	29	C	29	C
38. Four Winds Dr/Elk Grove Blvd	Traffic Signal	D	21	C	10	A	17	B	10	B
39. Franklin Blvd/Elk Grove Blvd	Traffic Signal	D	37	D	34	C	**67**	**E**	43	D
40. Backer Ranch Rd/Elk Grove Blvd	Traffic Signal	D	10	A	15	B	15	B	17	B
41. Bruceville Rd/Elk Grove Blvd	Traffic Signal	D	30	C	36	D	**57**	**E**	47	D
42. Wymark Dr/Elk Grove Blvd	Traffic Signal	D	24	C	3	A	24	C	21	C
43. Big Horn Blvd/Elk Grove Blvd	Traffic Signal	D	21	C	22	C	52	D	**72**	**E**
44. Laguna Springs Dr/Elk Grove Blvd	Traffic Signal	D	22	C	19	B	**121**	**F**	**84**	**F**

Intersection	Control	Minimum Acceptable LOS	Existing Conditions				Cumulative Conditions			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS
45. Auto Center Dr/Elk Grove Blvd	Traffic Signal	D	21	C	25	C	**73**	**E**	**104**	**F**
46. SR 99 SB Ramps/Elk Grove Blvd	Traffic Signal	D	23	C	30	C	**63**	**E**	**71**	**E**
47. SR 99 NB On-Ramp/Elk Grove Blvd	Traffic Signal	D	3	A	4	A	23	C	27	C
48. SR 99 NB Ramps/E Stockton Blvd	Traffic Signal	D	18	B	21	C	**77**	**E**	**80**	**F**
49. E Stockton Blvd/Emerald Vista Dr/Elk Grove Blvd	Traffic Signal	D	32	C	29	C	**122**	**F**	**143**	**F**
50. Elk Grove Florin Rd/Elk Grove Blvd	Traffic Signal	D	35	D	26	C	**93**	**F**	**65**	**E**
51. Waterman Rd/Elk Grove Blvd	Traffic Signal	D	23	C	24	C	**59**	**F**	**56**	**E**
52. Bradshaw Rd/Elk Grove Blvd	AWSC	D	22	C	18	C	41	D	40	D
53. Grant Line Rd/Elk Grove Blvd	AWSC	D	29	D	14	B	30	C	19	B
54. Bruceville Rd/Backer Ranch Rd/Civic Center Dr	Traffic Signal	D	19	B	22	C	26	C	31	C
55. Wymark Dr/Civic Center Dr	AWSC	D	12	B	9	A	31	D	11	B
56. Big Horn Blvd/Civic Center Dr	Traffic Signal	D	17	B	15	B	31	C	31	C
57. Big Horn Blvd/Denali Cir	Traffic Signal	D	7	A	5	A	20	C	16	B
58. Big Horn Blvd/Denali Cir/Lotz Pkwy	Traffic Signal	D	21	C	19	B	**61**	**E**	45	D
59. Big Horn Blvd/Whitelock Pkwy	Traffic Signal	D	17	B	16	B	44	D	37	D
60. Laguna Springs Dr/ Wolf Pack Lane/Lotz Pkwy	Traffic Signal	D	14	B	13	B	**74**	**E**	40	D
61. Franklin Blvd/Willard Pkwy/Whitelock Pkwy	Traffic Signal	D	23	C	14	B	38	D	22	C
62. Bruceville Rd/Whitelock Pkwy	Traffic Signal	D	23	C	27	C	46	D	46	D
63. I-5 SB Ramps/Hood Franklin Rd	SSSC	D	5 (10)	A (A)	8 (11)	A (B)	18	B	43	D
64. I-5 NB Ramps/Hood Franklin Rd	SSSC	D	2 (11)	A (B)	2 (11)	A (B)	28	C	25	C
65. Willard Pkwy/Bilby Rd West	Traffic Signal	D	25	C	23	C	**111**	**F**	55	D
66. Willard Pkwy/Bilby Rd East	Traffic Signal	D	30	C	24	C	48	D	32	C
67. Bruceville Rd/Bilby Rd	Traffic Signal	D	17	B	9	A	47	D	41	D

Intersection	Control	Minimum Acceptable LOS	Existing Conditions				Cumulative Conditions			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS
68. Bruceville Rd/Kammerer Rd/Driveway	SSSC	D	10(19)	A(C)	10 (15)	B (C)	116	F	71	E
69. Lent Rench Pkwy/Kammerer Rd	Traffic Signal	D	4	A	4	A	46	D	37	D
70. Promenade Pkwy/Kammerer Rd	Traffic Signal	D	10	A	13	B	**151**	**F**	**88**	**F**
71. SR 99 SB Ramps/Kammerer Rd	Traffic Signal	D	8	A	8	A	**80**	**E**	45	D
72. SR 99 NB Ramps/Grant Line Rd	Traffic Signal	D	10	A	9	A	61	E	41	D
73. E Stockton Blvd/Survey Rd/Grant Line Rd	Traffic Signal	D	28	C	32	C	**189**	**F**	**178**	**F**
74. Waterman Rd/ Grant Line Rd	Traffic Signal	D	12	B	8	A	**234**	**F**	**76**	**E**
75. Mosher Rd/Mosher Cattle Ranch/Grant Line Rd	Traffic Signal	D	3 (27)	A (D)	2 (20)	A (C)	14	B	12	B
76. Bradshaw Rd/Grant Line Rd	Traffic Signal	D	4 (13)	A (B)	5 (15)	A (C)	**261**	**F**	**199**	**F**
77. Whitelock Pkwy & Lotz Pkwy	Traffic Signal	D	—	—	—	—	**117**	**F**	**150**	**F**
78. Poppy Ridge Rd & Big Horn Blvd	Traffic Signal	D	—	—	—	—	21	C	20	B
79. Lotz Pkwy & Poppy Ridge Rd	Traffic Signal	D	—	—	—	—	**76**	**E**	**76**	**E**
80. Bilby Rd & Big Horn Blvd	Traffic Signal	D	—	—	—	—	41	D	35	D
81. Lotz Pkwy & Bilby Rd	Traffic Signal	D	—	—	—	—	28	C	23	C
82. Kammerer Rd & Big Horn Blvd	Traffic Signal	D	—	—	—	—	**169**	**F**	**90**	**F**
83. Kammerer Rd & Lotz Pkwy	Traffic Signal	D	—	—	—	—	**105**	**F**	**78**	**E**

Source: Fehr & Peers 2017
Note: 1. LOS and delay are reported in seconds per vehicle.

Applying the policies of the existing General Plan would require expanding the capacity of the impacted roadways and intersections. Capacity expansion beyond the lanes identified on **Figure 5.13-10** was not considered feasible by the City due to right-of-way impact, environmental impacts including induced travel (i.e., increased VMT), and inconsistency with both complete street concepts to accommodate all modes and users, and community values like maintaining the unique character of the City. Therefore, the proposed Project makes policy accommodations that support complete street concepts and community values and also eliminates LOS as a significance threshold for the evaluation of transportation projects under CEQA, consistent with the requirements of SB 743 and pending State guidance. These policies of the proposed Project are explained below.

The City considered the guidance from OPR when developing the policy direction of the proposed Project. The City recognizes that VMT reductions may be achieved through the implementation of individual development projects in the future and has included General Plan Policy MOB-1-1, which requires future development projects to demonstrate a 15 percent reduction in VMT from existing (2015) conditions. Policy MOB-1-1 includes VMT per service population metrics by land use category, VMT limits for development in the existing City limits, and VMT limits for the Study Areas.

To support the VMT reductions incorporated into Policy MOB-1-1, the proposed Project includes policies to support development of complete streets (MOB-3-1 through MOB-3-9), mobility for all system users (MOB-3-10 through MOB-3-13), managed parking supply (MOB-3-14 through MOB-3-17), improvements to the bicycle and pedestrian network (MOB-4-1 through MOB-4-3), transportation demand management (MOB-4-4 through MOB-4-5), and transit (MOB-5-1 through MOB-5-10).

Policy MOB-3-1 establishes roadway performance targets for roadways and intersections for use in project analysis not related to CEQA. The roadway performance targets include daily volume for roadways and delay for intersections and are used to evaluate a project's consistency with the Transportation Network Diagram, to maintain the safety of the transportation system, and to preserve the character of neighborhoods.

By incorporating these policies, the proposed Project would result in a transportation system that allows greater utilization of the roadway system, which would minimize the need to expand existing capacity, so that the City can focus on building complete streets, improving walking and biking as a viable travel option, and making transit more effective. These goals are directly related to the City's desires to improve community health, create livable neighborhoods, reduce air pollution, and minimize greenhouse gas emissions. A key part of these changes is a shift from automobile LOS to the VMT metrics embedded in Policy MOB-1-1, which will require new development projects to reduce VMT, which may contribute to lower peak hour traffic volumes. However, even with implementation of these policies and potential lower peak hour traffic volumes, the proposed Project would still result in decreases in LOS in the City and would result in a **significant** impact related to LOS.

Mitigation Measures

No additional feasible mitigation available beyond compliance with proposed General Plan policies.

While increasing roadway capacity would improve level of service on affected roadways, the increased capacity would result in other physical environmental effects associated with increased VMT, such as increased emissions of criteria pollutants and greenhouse gases. Because increased roadway capacity contributes to increased VMT, it would also be inconsistent with Project objective #5, which is intended to reduce vehicle miles traveled, improve air quality, and reduce

energy usage. No measures are available. This impact on level of service conditions at some intersections and on some roadway segments would be **significant and unavoidable**.

Conflict with an Applicable Plan, Ordinance or Policy Establishing Measures of Effectiveness for the Performance of the Circulation System by Resulting in Unacceptable Levels of Service on Caltrans Roadways - Caltrans Roadways (Standards of Significance 1 and 2)

Impact 5.13.2 Implementation of the proposed Project would exacerbate unacceptable (LOS F) conditions on SR 99 and I-5. This impact is considered **potentially significant**.

The proposed Project includes land use and transportation network changes that would increase future traffic volumes on SR 99 and I-5. As shown in **Table 5.13-6**, all study segments of SR 99 and I-5 would operate at LOS F in 2036. Implementation of the proposed Project would contribute to unacceptable operations on these facilities.

As discussed above, the City of Elk Grove considered the guidance provided by OPR when developing the policy of the proposed Project. The City recognizes that VMT reductions may be achieved through the implementation of individual development projects as the General Plan is implemented and has proposed General Plan Policy MOB-1-1 (included above) that provides VMT metrics to guide new development that require development projects to demonstrate a 15 percent reduction in VMT from existing (2015) conditions. Policy MOB-1-1 includes VMT per service population metrics by land use category, VMT limits for development in the existing City, and VMT limits for Study Areas.

To support the VMT reductions incorporated into Policy MOB-1-1, the General Plan includes policies to support development of complete streets (MOB-3-1 through MOB-3-9), mobility for all system users (MOB-3-10 through MOB-3-13), managed parking supply (MOB-3-14 through MOB-3-17), improvements to the bicycle and pedestrian network (MOB-4-1 through MOB-4-3), transportation demand management (MOB-4-4 through MOB-4-5), and transit (MOB-5-1 through MOB-5-10).

As discussed under Impact 5.13-1, the goals and policies in the General Plan minimize potential impact by supporting efficient vehicle movement and reduced traffic congestion through reduction of trip making and VMT. In addition, the City recognizes the need for the construction of the roadway system shown on **Figure 5.13-10** to support the population and employment growth that is part of the proposed Project. Therefore, the General Plan includes Policy MOB-7-2 and Policy MOB-7-5 that address coordination with regional partners, including Caltrans, for shared roadway improvements that may include joint planning efforts, roadway construction, and funding of improvements on SR 99 and I-5. However, even with implementation of these policies and potential lower peak hour traffic volumes, the proposed Project would still result in decreases in LOS in the City and would result in a **significant** impact related to LOS on Caltrans facilities.

Mitigation Measures

No additional feasible mitigation available beyond compliance with proposed General Plan policies.

Proposed policies address coordination with regional partners, including Caltrans, for shared roadway improvements that may include joint planning efforts, roadway construction, and funding of improvements on SR 99 and I-5. However, even with implementation of these policies and potential lower peak hour traffic volumes, the proposed Project would still add trips to and negatively affect LOS on Caltrans facilities and the impact would be **significant and unavoidable**.

Conflict with an Applicable Plan, Ordinance, or Policy Establishing Measures of Effectiveness for the Performance of the Circulation System by Resulting in increased Vehicle Miles of Travel (Standards of Significance 1)

Impact 5.13.3 Implementation of the proposed Project would result in increased VMT. This impact is considered **potentially significant**.

The proposed Project would allow for population growth that would result in in an increase in VMT compared to existing baseline conditions. **Table 5.13-8** compares buildout of the proposed General Plan Land Use Diagram to existing (2015) baseline conditions.

TABLE 5.13-8
EXISTING AND PROJECTED DAILY VMT

Scenario	Acres	Dwelling Units	Population	Jobs	Jobs/Housing Ratio
Existing Development[1]	31,238	53,829	171,059	45,463	0.84
Preferred Land Use Map[2]	31,238	101,665	328,378	122,802	1.21
Growth	0	47.836	157,319	77,339	—

Notes:

1. *Existing development represents 2017 population and dwelling unit information and 2013 jobs data. These are the latest datasets that are available.*
2. *Preferred Land Use Map refers to the buildout of the proposed General Plan Land Use Diagram. See Project Description.*

The transportation network identified to support the population and employment growth summarized in **Table 5.13-8** is shown in **Figure 5.13-10.** The circulation diagram shows the expected future number of lanes on each roadway.

Table 5.13-9 compares existing daily VMT to the projected daily VMT with the proposed Project at buildout with regional growth in 2036 when analyzed with the transportation improvements displayed on **Figure 5.13-10**.

TABLE 5.13-9
EXISTING AND PROJECTED DAILY VMT

Scenario	VMT[1]
Existing (2015)	3,023,300
Proposed Project (2036)	6,874,500

Source: Fehr & Peers 2017

Note: 1. Includes travel from all vehicles. The allocation of VMT includes 100 percent responsibility for all trips with both trip ends in the City and 50 percent responsibility for trips with only one end in the City.

VMT performance, measured as VMT per service population, is displayed on **Figure 5.13-14**. As shown on **Figure 5.13-14**, areas identified in white have been determined to result in an average service population VMT 15 percent below the City's existing baseline limit (average VMT per service population is 12.0) and would satisfy the thresholds presented in Policy MOB-1-1, if new development is built to the specifications consistent with the General Plan Land Use Diagram. Areas shown in green exceed the 15 percent per service volume threshold and would require project modification or other reduction strategies to satisfy the threshold.

The City considered the guidance from OPR when developing the policy direction of the proposed Project. The City recognizes that VMT reductions may be achieved through the implementation of individual development projects in the future and has included General Plan Policy MOB-1-1, which requires future development projects to demonstrate a 15 percent reduction in VMT from existing (2015) conditions. Policy MOB-1-1 includes VMT per service population metrics by land use category, VMT limits for development in the existing City limits, and VMT limits for the Study Areas.

To support the VMT reductions incorporated into Policy MOB-1-1, the proposed Project includes policies to support development of complete streets (MOB-3-1 through MOB-3-9), mobility for all system users (MOB-3-10 through MOB-3-13), managed parking supply (MOB-3-14 through MOB-3-17), improvements to the bicycle and pedestrian network (MOB-4-1 through MOB-4-3), transportation demand management (MOB-4-4 through MOB-4-5), and transit (MOB-5-1 through MOB-5-10).

By incorporating these policies, the proposed Project would result in a transportation system that allows greater utilization of the roadway system, which would minimize the need to expand existing capacity, so that the City can focus on building complete streets, improving walking and biking as viable travel options, and making transit more effective. These goals are directly related to the City's desires to improve community health, create livable neighborhoods, reduce air pollution, and minimize greenhouse gas emissions. A key part of these changes is a shift from automobile LOS to the VMT metrics embedded in Policy MOB-1-1, which will require new development projects to reduce VMT. However, as shown on **Figures 5.13-14**, many areas (shown in green) will exceed the 15 percent per service population threshold. Projects in areas indicated in **Figure 5.13-14** as likely to exceed the 15 percent below baseline limit will be required to conduct a VMT analysis as described in the City's Transportation Analysis (TA) Guidelines. New land use plans or development projects must demonstrate through the TA that VMT produced by the proposed project does not exceed established VMT limits for the applicable land use designation. **Table 5.13-10** includes potential VMT reduction strategies that individual projects can use to achieve additional reductions beyond those incorporated in the proposed Project.

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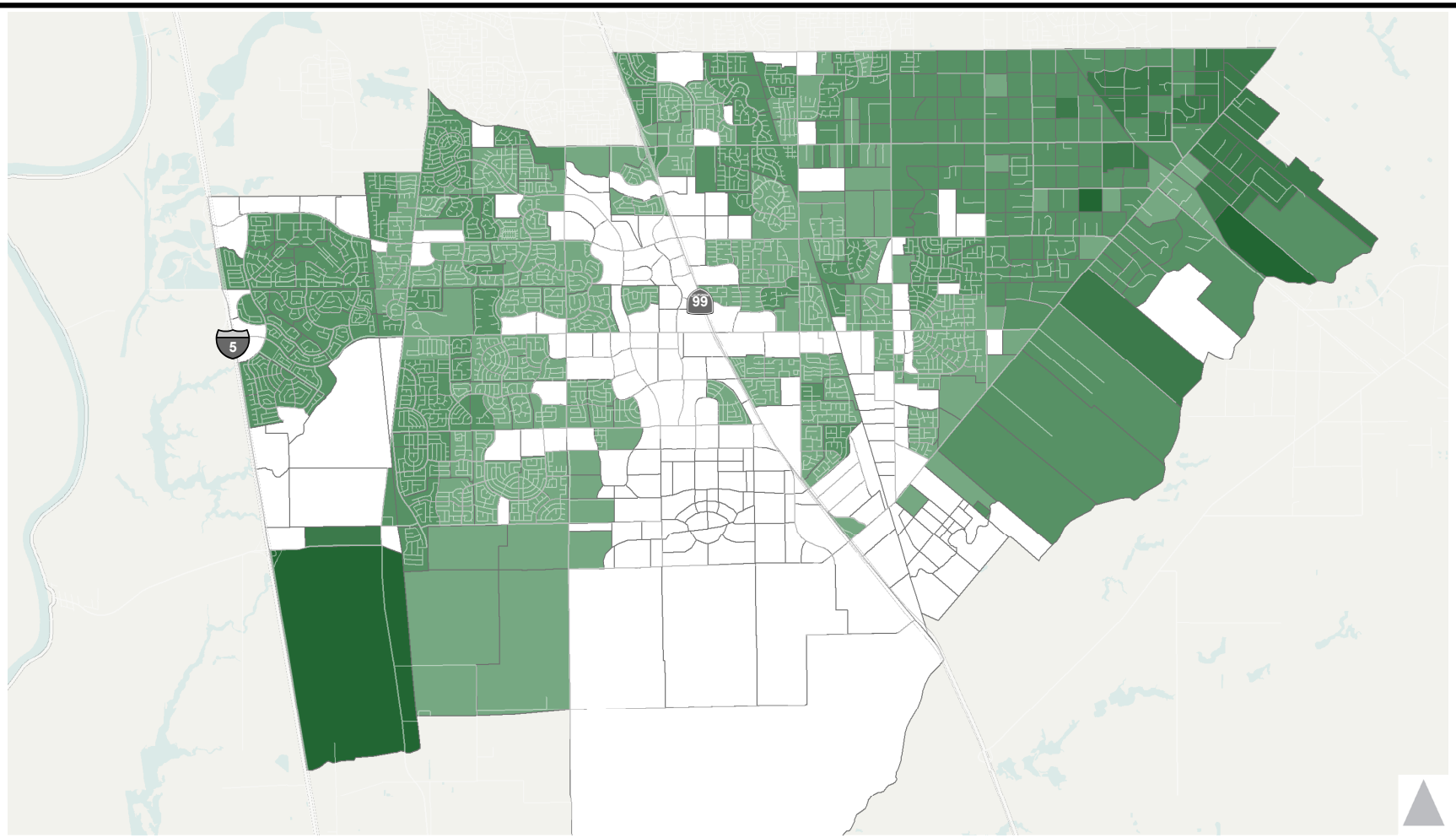

Residential and Work VMT
Average = 12.0
85% of Average = 10.2

- ≤ 85% of Average VMT
- >10.2 - 12 miles
- 13 - 17 miles
- 18 - 20 miles
- > 20 miles

Source:Fehr and Peers, 2018

ELK GROVE
PROUD HERITAGE. BRIGHT FUTURE.

City of Elk Grove
Development Services

FIGURE 5.13-14
Residential and Work VMT
by Traffic Analysis Zone

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TABLE 5.13-10
VMT REDUCTION STRATEGIES

Data Set	Description
Land Use/Location	Land use-related components such as project density, location, and efficiency related to other housing and jobs; and diversity of uses within the project. Also includes access and proximity to destinations, transit stations, and active transportation infrastructure.
Site Enhancement	Establishing or connecting to a pedestrian/bike network; traffic calming within and in proximity to the project; car sharing programs; shuttle programs.
Transit System Improvement	Improvements to the transit system including reach expansion, service frequency, types of transit, access to stations, station safety and quality, parking (park-and-ride) and bike access (to transit itself and parking), last-mile connections. (Can be achieved through Travel Demand Management program measures.)
Commute Trip Reduction	For residential: transit fare subsidies, education/training of alternatives, rideshare programs, shuttle programs, bike share programs. For employer sites: transit fare subsidies, parking cash-outs, paid parking, alternative work schedules/telecommute, education/training of alternatives, rideshare programs, shuttle programs, bike share programs, end of trip facilities. (Can be achieved through Travel Demand Management program measures.)
In-Lieu Fee	A fee is leveed that is used to provide non-vehicular transportation services that connect project residents to areas of employment or vice versa. This service may be provided by the project applicant in cooperation with major employers.

Source: Fehr & Peers 2017

In addition, transportation and the future of travel is going through transformative changes that will influence the future forecasts upon which the impact analysis is based. Emerging technology and mobility services are increasingly becoming a factor in decisions regarding transportation investment and system performance. Vehicle availability is growing through car sharing, transportation network companies (e.g., Uber, Lyft, and similar) and micro-rentals (e.g., Zipcar), while public transportation infrastructure faces funding challenges related to investment priorities.

The proposed Project analysis extends to 2036 when autonomous vehicles are expected to be part of the network. Fully autonomous vehicles (e.g., driverless vehicles) are not expected to require parking spaces, but could increase vehicle use, demand for curb space to drop off and pick up passengers and goods, and VMT, while causing reductions in transit demand. Research quantifies some of the potential travel behavior responses, but many questions remain about how future networks will be designed and operated (Fehr & Peers 2016).

Mitigation Measures

No additional feasible mitigation available beyond compliance with proposed General Plan policies.

To support the VMT reductions incorporated into Policy MOB-1-1, the proposed Project includes policies to support development of complete streets (MOB-3-1 through MOB-3-9), mobility for all system users (MOB-3-10 through MOB-3-13), managed parking supply (MOB-3-14 through MOB-3-17), improvements to the bicycle and pedestrian network (MOB-4-1 through MOB-4-3), transportation demand management (MOB-4-4 through MOB-4-5), and transit (MOB-5-1 through MOB-5-10), which support the VMT reductions incorporated into Policy MOB-1-1. However, even with these measure, some areas in the Planning Area will still not achieve the VMT reductions

specified in Policy MOB-1-1 and the effectiveness of VMT reductions strategies is not certain. In addition, disruptive changes occurring in transportation, such as transportation network companies (i.e., Uber, Lyft), autonomous vehicles, Mobility as a Service (i.e., ride-sharing, car-sharing), Amazon (increased deliveries), may increase VMT. This impact related to VMT would be **significant and unavoidable**.

Air Traffic Patterns (Standards of Significance 3)

Impact 5.13.4 Implementation of the proposed Project includes land use changes that would have only a limited influence on air traffic patterns. This impact is considered **less than significant**.

There are seven public airports in Sacramento County. Each airport has an Airport Land Use Compatibility Plan (also referred to as a Comprehensive Land Use Plan) that identifies hazard zones surrounding the airport. No portion of the Planning Area is located within noise contours or land use overlay areas for any airport in Sacramento County. One public airport (Franklin Field) and two private airports (Skyway Estates Airport and Borges-Clarksburg Airport) are located within 3 miles of the Planning Area. While the proposed Project would change land use patterns, it would not to a degree that would negatively affect existing air traffic patterns. In addition, the proposed Project includes policies intended to avoid or minimize compatibility issues between urban development and airports adjacent to the City. Policy MOB-2-1 requires that the City consider the recommendations in the plans for airports, and Policy MOB-2-2 ensures that new development near airports is designed to protect public safety. With implementation of the proposed Project, this impact would be **less than significant**.

Mitigation Measures

None required beyond implementation of proposed General Plan policies.

Hazards (Standards of Significance 4)

Impact 5.13.5 Implementation of the proposed Project will modify the existing transportation network to accommodate existing and future users, which could change existing travel patterns or traveler expectations. This impact is considered **less than significant**.

The proposed Project would modify the existing transportation network to expand existing facilities or construct new facilities to accommodate planned population and employment growth. All existing facility modifications and new facilities resulting from the proposed circulation diagram improvements would be constructed based on industry design standards consistent with Policy MOB-3-10, which stresses that the safety of the most vulnerable user is a priority. In addition, Policy MOB-3-1 focuses on the implementation of a balanced transportation system to ensure the safety of all users. Implementation of the proposed Project would not increase hazards due to design features of transportation facilities and this impact would be **less than significant**.

Mitigation Measures

None required beyond compliance with proposed General Plan policies.

Emergency Access (Standards of Significance 5)

Impact 5.13.6 Implementation of the proposed Project would alter land use patterns and increase travel demand on the transportation network, which may influence emergency access. This impact is considered **less than significant**.

The proposed Project would modify the existing transportation network to expand existing facilities or to construct new facilities to accommodate planned population and employment growth. The proposed Project contains various policies to ensure that adequate emergency response is provided as needed to accommodate this growth. Policy MOB-3-8 provides for a thorough and well-designed wayfinding system. Also, Policy MOB-6-1 includes the planning and pursuit of funding for strategic grade-separated crossings of rail corridors, and Policy MOB-7-8 addresses the use of technology to improve the operation of the City's transportation network. In addition, Policy MOB-7-4 requires new development projects to fund or construct infrastructure improvements needed to accommodate planned growth. With implementation of the proposed policies, the transportation system would be well planned and constructed to ensure that there would be adequate emergency access. This impact would be **less than significant**.

Mitigation Measures

None required beyond compliance with proposed General Plan policies.

Bicycle, Pedestrian, and Transit Facilities (Standard of Significance 6)

Impact 5.13.7 Implementation of the proposed Project would not result in conflicts with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. This impact is considered **less than significant**.

The proposed Project contains provisions that would enhance public transit, bicycle, or pedestrian facilities to encourage greater use of transit and more walking and bicycling in the future. All new facilities shown in the circulation diagram would be constructed to applicable design standards that have been created to minimize the potential for conflicts or collisions. Proposed General Plan policies are designed to accommodate travel growth by providing adequate facilities, including complete streets. Policy MOB-1-2 encourages consideration of all transportation modes when evaluating transportation design. Policy MOB-3-1 calls for implementation of a balanced transportation system to ensure the safety and mobility of pedestrians, cyclists, motorists, children, seniors, and people with disabilities. Policies MOB-3-7 and MOB-3-8 call for a complete and connected network of sidewalks, crossings, paths, and bike lanes and a wayfinding signage system. To encourage the use of transit, Policy MOB-5-4 supports mixed-use and high-density development applications close to existing and planned transit stops, while Policies MOB-5-6 and MOB-5-7 encourage the provision of the appropriate level of transit service in all areas of the City and the extension of bus rapid transit and/or light rail service (referred to as "fixed transit") to existing and planned employment centers. Implementation of these policies would improve the bike, pedestrian, and transit networks in the City and foster their use. With implementation of the proposed policies, the proposed Project would not conflict with adopted policies, plans, or programs for transit, bicycle, or pedestrian facilities nor would it adversely affect performance or safety of such facilities. This impact would be **less than significant**.

Mitigation Measures

None required beyond compliance with proposed General Plan policies.

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